



Event Type: Felling Injury

Date: June 6, 2018

Location: Prescribed Fire Prep,
Flagstaff Ranger District, Coconino National Forest

“I probably should’ve left the saw.”

Injured Sawyer

Summary of Incident

A Fuels Module crewmember was injured in a tree felling operation while prepping control lines on a prescribed fire burn block.

The assignment for the day was to prep dozer line, cut a canopy break along a handline, and continue with prepping a road that the handline tied into.

The saw prep primarily consisted of limbing, bucking, removal of small diameter trees, and felling any snags that would impact the control lines or affect the safety of personnel.

The Sawyer’s upper body was brushed by the bole of the tree as it came down from swinging in the air. The tree then landed on the ground and pinned the Sawyer’s lower left leg as the individual attempted to use his escape route.

Cutting Procedure

The tree that caused the injury was a ponderosa pine snag approximately 50 feet in height and 26 inches DBH. After completing a “size-up,” under the direct supervision of a qualified C Faller, the Sawyer began his face cut on the right side of the tree in relation to the direction of the fall. The individual then moved to the left side of the tree to finish the face cut as the diameter of the tree was longer than the chainsaw bar and required a “double cut”. At this point, the Sawyer was on the uphill side of the tree when the back cut was started. This required the individual to get on one knee to put the back cut at the appropriate height in relation to the face cut.

The Sawyer began his back cut, but noticed it was sloped and began another back cut under the original attempt. While working the back cut, the Sawyer also attempted to bore the heart wood and unintentionally cut through all the intended holding wood.

While the saw was still in the tree and the Sawyer was still working on the back cut, the nearby C Faller yelled “It’s Going!” and the Sawyer began to stand and attempted to pull the saw from the stump and

access the escape route. However, the tree was already hitting the ground as the Sawyer attempted to flee the stump.

The C Faller immediately ran to the pinned Sawyer, grabbed the chainsaw, and bucked out the section that was trapping the Sawyer.

Tree Lands on Sawyer’s Leg

As the tree’s top brushed another tree, it made the bole rise into the air and roll off the stump onto the Sawyer’s leg before he was able to vacate the cutting area.

The C Faller immediately ran to the pinned Sawyer, grabbed the chainsaw, and bucked out the section that was trapping the Sawyer.

Two EMTs were shortly on scene to assess the patient. They determined that the patient was stable. The Supervisor made the assessment that self-transport to a medical facility was the quickest and most appropriate action.

A cell phone call was made to the Duty Officer to keep them apprised of the situation. The Duty Officer made other notifications at the Forest level.

The Sawyer's injuries were all sustained to the lower left leg. Those injuries included a fibula break, a puncture wound, and a torn muscle.

LESSONS

Contributing Factors

Escape Routes

The Sawyer did not vacate the stump before the tree hit the ground. A contributing reason for not using the escape route fast enough was the fact that the saw was stuck in the kerf of the back cut. Therefore, the Sawyer did not leave the tree as it was falling because he was attempting to remove the saw.

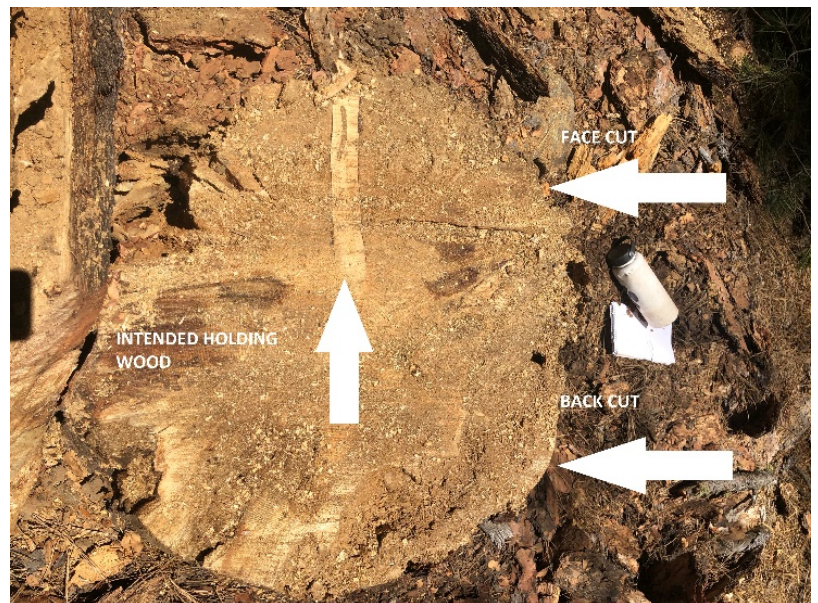
Another consideration, the Sawyer was attempting to finish the back cut from the uphill side of the tree. This caused the Sawyer to cut on one knee, which will affect the time it takes to escape because the Sawyer must stand up before being able to start walking away from the stump.

The escape route also had large rocks in the cutting area which may have contributed to slower egress, as well as two smaller diameter trees within the area of the escape route that limited travel through two narrow "alleys."

Holding Wood

Upon analysis of the stump, all of the holding wood was removed during the back cut process except for a small sliver which remained on the side that the Sawyer finished on (left side from the lay).

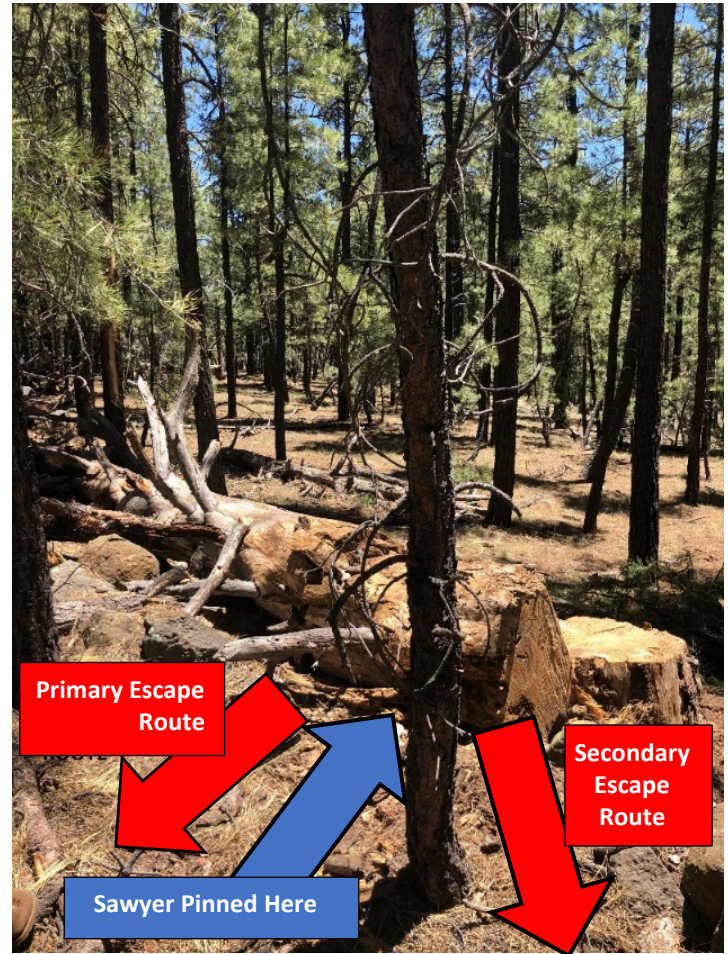
This resulted in the tree missing its lay, grazing another tree, and pushing the bole to the Sawyer's side of the stump, thus onto the Sawyer's lower left leg.



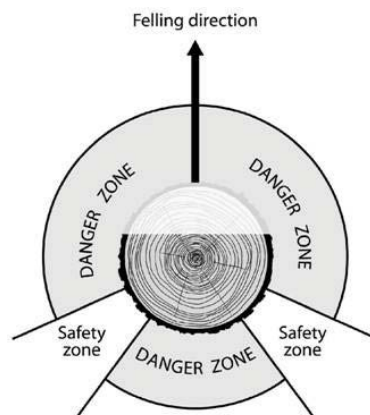
Top view of stump. Sawyer has finished his face cut and back cut (on the left side of this photo).

What was Done Well

- ❖ The Sawyer was under direct supervision of a qualified C Faller. Additionally, the Sawyer met all minimum training and qualifications to operate chainsaws per national and regional policy.
- ❖ All of the following were current and on record: Chainsaw Evaluation Sheets, Chainsaw Operators Card, Blood Borne Pathogens, S-212 Wildfire Chainsaws, First Aid/CPR, and Chainsaw Operation Job Hazard Analyses (JHA).
- ❖ The Sawyer was released from the tree under one minute of being pinned and was attended to by crew EMTs within one minute of the incident.
- ❖ There was prompt communication with the Duty Officer which resulted in the activation of the Hospital Liaison program.
- ❖ Quick decisions were made to rapidly get the injured Sawyer to next level of definitive care.



RECOMMENDED ESCAPE ROUTE LOCATIONS



Key Lessons Learned

- ❖ Identify and use escape routes early enough to avoid the unpredictable and to escape the stump of the tree—where most falling accidents occur.
- ❖ Ensure the use of proper cuts and maintain proper holding wood to keep the integrity needed for directional control of the tree as it falls.
- ❖ If the bar of the chainsaw is pinched, leave the chainsaw and utilize the escape route.
- ❖ Ensure that the Medical Incident Report (M.I.R.) is used to prompt the incident IC with secondary transport options and to ensure that the local Dispatch is notified.

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