On September 4, 2021 Texas A&M Forest Service (TAMFS) resources were assisting the city of Lamesa with thunderstorm damage by removing blow down and hazard trees. During the initial steps of a tree felling operation, a snag uprooted and fell, nearly striking the sawyer.

Narrative

On September 3, 2021 TAMFS resources responded to Lamesa, Texas to support the clearing of blow down from a severe thunderstorm. The responding resources included an Incident Commander (ICT5), one FAL2, one FAL3, and two swampers with a chipper. The lead sawyer, the FAL2, worked with the Lamesa Fire Chief (local IC) to survey the area and identify what needed to be cut. During that time, the FAL2 informed the local IC that there were numerous hazard trees that would not be taken due to close proximity to infrastructure such as buildings and utilities. One hazard tree, located near a park, was in close proximity to a power pole and had inactive power lines running through the limbs. The FAL2 decided not to cut the tree that afternoon due to those hazards. Later that evening the local IC had a city utility crew remove the power lines from the tree and power pole.

Figure 1:Picture of root plate and tree near the power pole.

On the morning of September 4th TAMFS resources completed limbing and bucking operations on blow down and were asked to reassess the snag near the power pole. Upon arriving in the area, the FAL2 and FAL3 both assessed the tree. During size-up, it was determined that the tree, an 18' tall Siberian Elm with a DBH of 18 ¼", had been dead for several years. The tree had no bark and multiple overhead limbs with a well-defined lean that would not impact the power pole. However, one large limb was growing behind the power pole and would prevent the tree from falling with the lean. The FAL2 decided to use a pole saw to remove the 6"-diameter limb from the tree so it could be felled with the lean. It appeared that the limb had been rubbing the pole, but it was not supporting the weight of the tree. The FAL2 and FAL3 determined it would be best for the sawyer to cut the limb from a location that would allow the power pole to act as a barrier, should the limb react unexpectedly. This put the sawyer under the predominant lean of the tree, which had not yet been cut.

The FAL2 retrieved the pole saw while the FAL3 (acting as the swamper) moved away from the tree. The FAL2 returned to the tree and began to remove the limb while the FAL3 watched from a distance of approximately 40' away. The FAL2 completed the cut and the limb fell to the ground as expected. The FAL2 turned away from the tree, took a few steps, and stopped to shut off the pole saw. At the same time, the FAL3 and TAMFS IC noticed the tree start to fall toward the sawyer, yelled the FAL2's name and exclaimed "RUN! RUN!". The FAL2, startled by the yelling, looked up at the FAL3. Realizing what was happening, the FAL2 ducked and ran at a 45˚ angle away from the direction of the trees lean. The tree landed a few feet behind the sawyer as he was clearing the area.

Following the near miss, the resources discussed what happened and reevaluated the tree. It was determined the root system had failed, allowing the tree to fall unexpectedly. Both the FAL2 and FAL3 were confident in their tree size up and the decisions on cutting sequence. The FAL2 decided that he would not fell any more trees during that day's operations.

Lessons Learned

- As sawyers we are taught to do a systematic size up prior to felling operations. Are you thoroughly assessing ground hazards and potential root issues as part of your size up?

- We should treat limbing, brushing, and felling as one process in regards to escape routes and safe zones. Do you plan your cutting sequence in a way that limits exposure to the fullest?

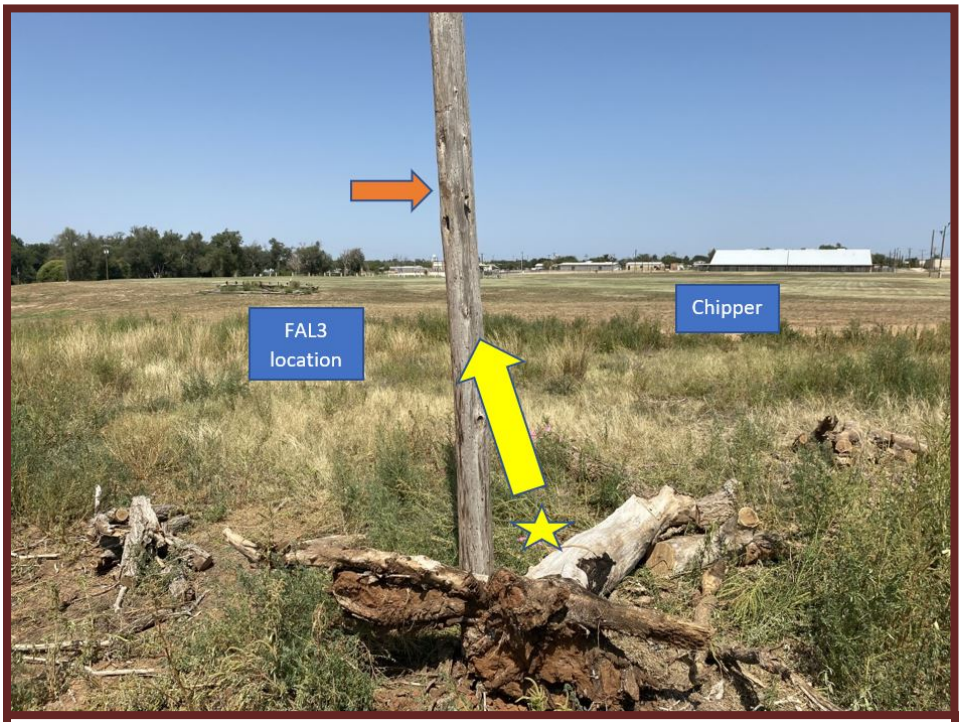

Figure 2: Yellow star and arrow indicate FAL2's location and direction of escape. Orange arrow indicates wear on pole from removed limb.

- Sawyers often base their body positioning on the expected movement or reactive forces of what is being cut. While experience doesn't always provide insight to every potential outcome, it does better prepare us to asses these situations and incorporate worse case scenarios into planning cutting procedures. In your planning of falling operations do you allow for open dialog between the sawyer and swamper on potential hazardous outcomes?

- Saw operations on all-hazard incidents can quickly transition from limbing and bucking of blow down to hazard tree removal. Sawyers should ensure that all individuals involved are briefed on current operations when objectives change. How does the operational tempo affect the need for production? How can resources efficiently manage production while balancing risk vs. reward?

For more information on Wildland Fire Chainsaw Operations please reference the NWCG PMS 212 at the following link: https://www.nwcg.gov/publications/212