PCTA Trail Skills College Curriculum

Field Reference

Course 103. Basic Saw Crew Training

STUDENT SKILL OUTCOMES:

- "Trail Eyes" to see the PCT trail corridor and clearing limits
- Safe use of crosscut saws and axes, including commitment to PPE
- Effective sawing and chopping skills that maximize efficiency
- A commitment to saw and axe Safety Awareness, specifically situational awareness

KEY TERMS:

Blow Down: (aka ***wind fall***) any trees fallen across a trail, though usually the result of high winds, most commonly in the winter storm season.

Clearing Limits: (aka ***clearing specifications, trail specs***) exactly how wide and how high to cut tree limbs, shrubs, blow down and tree saplings to open the trail corridor for users. For the PCT, from the ground to 24" high, cut an opening 3' wide. From 24" to 10' cut an opening 8' wide. This large corridor allows from some vegetation regrowth before packstock are obstructed. Other kinds of trails have different specifications.

Design Parameters: Specific guidelines for the design and construction of trails that are based on the intended users, trail class and difficulty level of the trail. See http://www.fs.fed.us/recreation/Chapter_20.pdf (especially p. 16-19)

Go/No Go: analysis to determine if trail workers should proceed with a task or walk away to insure their safety. Crew leaders sometimes exercise such judgement for a group, but it is essential that every trail worker develop these critical thinking skills for times when they work on their own. Such analysis evaluates all the hazards present and balances them against the skills they have. For a decision to proceed, a trail worker should be able to predict with a high confidence level, exactly what will happen during the task (such as which way logs will move in a series of cuts in a pile up). If they are unable to predict the outcome with confidence they should walk away.
The most important thing every trail worker needs to know is that it is totally OK, and they show the very best judgement, when they walk away from danger without completing a task. Of course, it is essential to report the need for a more skilled crew to complete the hazardous work.

Kerf: the opening in a log cut by a saw. A wedge is often placed behind the saw to prevent the kerf from closing and pinching the blade.

Log Out: trail work removing blow down; usually in the spring to open the trail for high use season. In Wilderness areas the work is done with hand tools such as crosscut saws; while elsewhere it is usually done with chain saws.

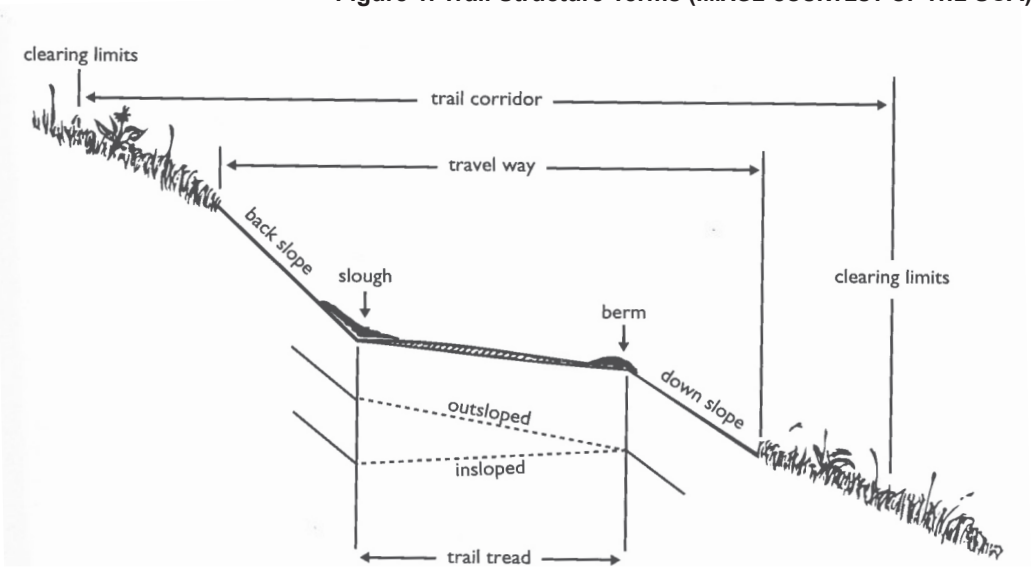
Situational Awareness: a subset of Safety Awareness that refers to safety concerns specific to crosscut and chain saws. http://www.fhwa.dot.gov/environment/fspubs/04232822/page16.htm#sit

Trail Corridor: (aka ***travel corridor*** or ***trail prism***) best thought of as a tunnel through the woods, it includes all the elements of a trail affected by construction and maintenance workers including the excavated back-slope and tread, and the entire area within the clearing limits.

KEY CONCEPTS:

1) Safety Documents and Concerns:
   - Personal Protective Equipment (PPE), Job Hazard Analysis (JHA)/ Tailgate Safety Session (TSS), Emergency Action Plan (EAP)
2) Trail Crew Leave No Trace: Have a positive impact on the land through trail work and be sensitive to off trail and camping impacts.
3) Proper/ Improper Tool Care and Use:
   - Hand saw, Pulaski, axe, sledge hammer, wedge, crosscut saw
4) Develop "Trail Eyes":
   - Visualize trail corridor large enough for delivery truck to pass through
   - Standard clearing limits:
     – 3' wide up to knee height, 8' wide up to 10' height
     – Typical alterations for wet/ dry conditions
5) Crosscut Saw Information:

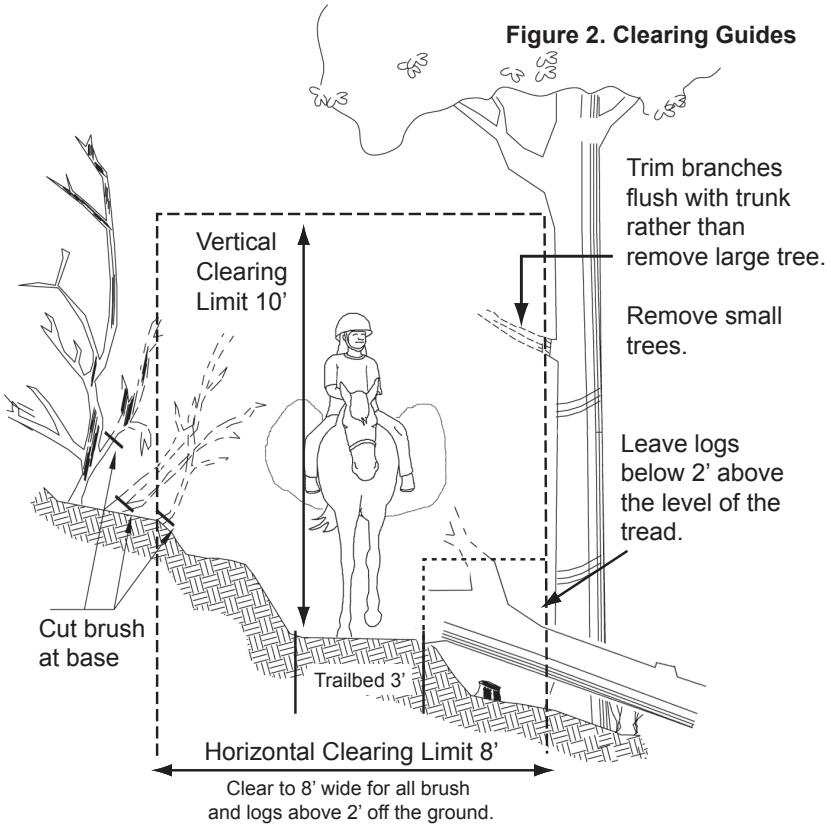
Figure 1. Trail Structure Terms (Image courtesy of the SCA)



- Situational Awareness
- Recognize and safely remove spring poles, assess overhead hazards, escape routes
- Tension, Compression, and Side Binds
  – Sawing process:
    - Designate a lead sawyer and assign duties
    - Decide location of cut and remove limbs/ bark from cutting area
    - Smooth pulling strokes with good communication between sawyers
- Techniques to avoid pinching
  > Compound cuts, cross or top wedge, underbucking, lever poles
- Remove any logs obstructing flow of outfall ditches

6) Report work promptly

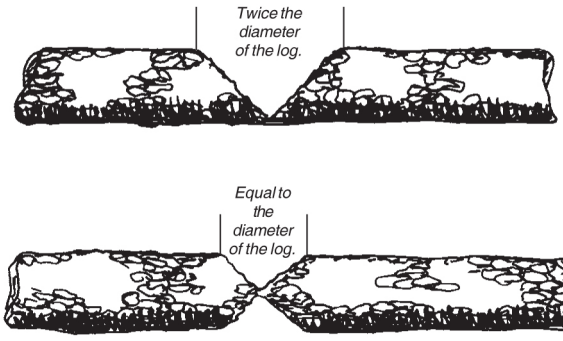
Figure 2. Clearing Guides



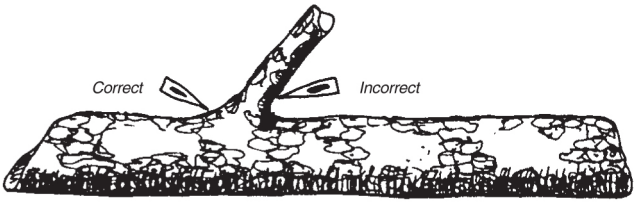
** These are general trail-wide clearing guidelines. Please work with your local land manager to determine if different guidelines are used in your local area.*

Figure 3. Limbing (IMAGE COURTESY OF THE SCA)

Figure 4. Chopping through logs (top) and using an ax for limbing (bottom). (IMAGE COURTESY OF THE USFS)

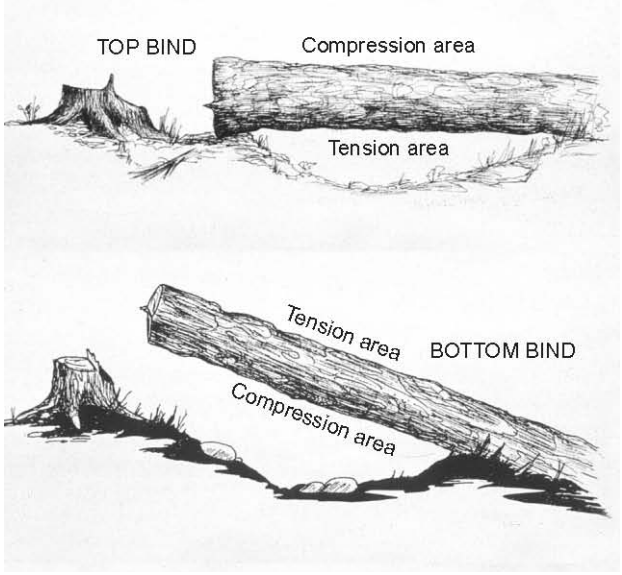


Chopping through logs.



Using an ax for limbing.

Figure 5. Four types of binds. (IMAGE COURTESY OF THE USFS)



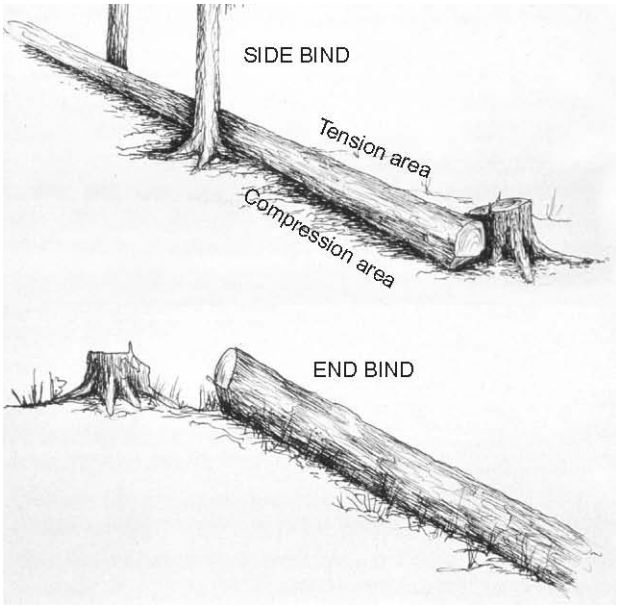


Figure 8. Three basic cuts. (IMAGE COURTESY OF THE USFS)

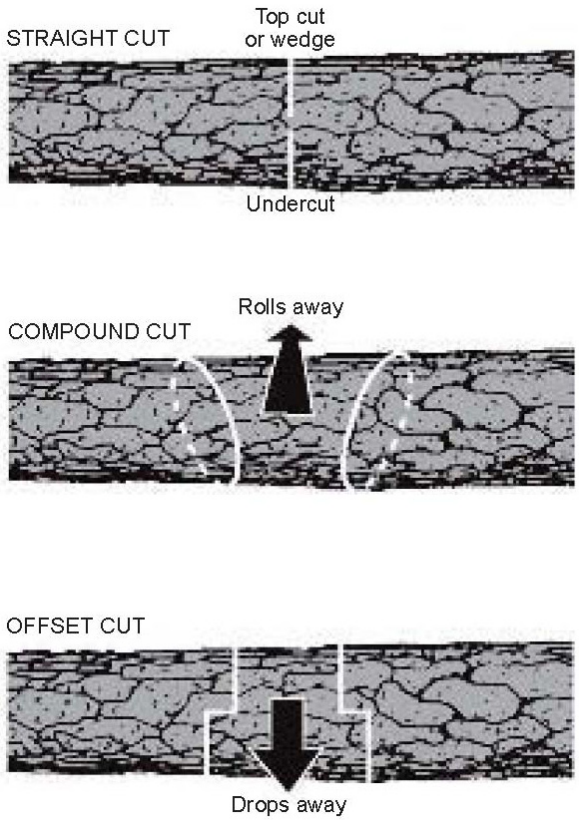


Figure 10. A protective sheath for a crosscut saw can be made of split fire hose. (IMAGE COURTESY OF THE SCA)

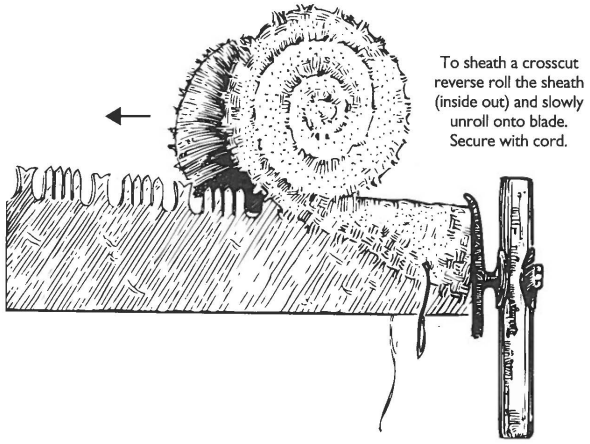


Figure 11. Interlacing. (IMAGE COURTESY OF THE SCA)

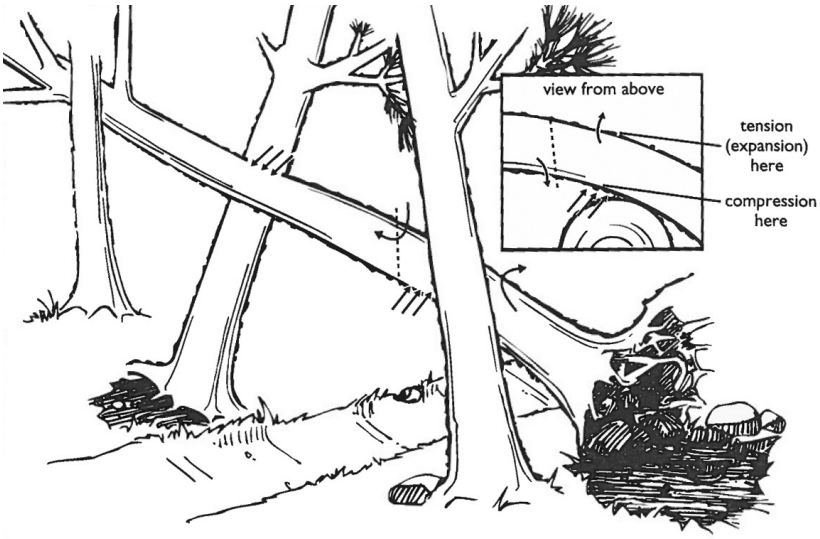


Figure 9. Parts of a crosscut saw. (IMAGE COURTESY OF THE USFS)