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## Chapter 6—Field Proficiency

The instructor will work with the students using the techniques taught in the classroom. Students will perform limbing, bucking, and felling under the guidance of a qualified instructor and will be evaluated on their skill level.

### Instructor's Responsibilities

The instructor must take an active role in training and certifying the students. *The instructor needs to demonstrate the proper skills and work with the students to ensure that they gain the skills needed to operate chain saws and crosscut saws safely.*

The instructor needs to make honest, constructive assessments when evaluating students. The instructor is responsible for certifying that the students demonstrate the operational skills to do the work safely. If they don't, the instructor should document the additional training needed on their sawyer evaluation forms.

The instructor can restrict the students' operational activities (limbing, brushing, slashing, bucking, felling) to specific sizes and types of trees in specific locations or regions.

Students must understand that further training may be required before sawing in different regions because of the differences in tree species, wood properties, and tree sizes.

During the field training sessions, safety should be the number one concern of instructors and students. Instructors must do a thorough job of planning before beginning the field training sessions.

- Do not mix bucking and felling sessions.
- When selecting a cutting area, determine the needs of the students. Work with district or forest staff to locate a site that is suitable, has good access, and does not have safety hazards that cannot be mitigated. Obtain all proper clearances through the environmental analysis process.
- Recommended class size is 12 students per instructor.
- Prepare a job hazard analysis in advance that includes first-aid procedures and emergency evacuation plans. Use the *Health and Safety Code Handbook* and safety information in this chapter to help develop these plans.
- Conduct a tailgate session that includes all safety aspects of the field proficiency exercises, first-aid procedures and emergency evacuation plans.
- Ensure that all students have all safety items listed on the sawyer evaluation form (figure 6-1).

# Sawyer Evaluation Form

Name \_\_\_\_\_ Date \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_

District/agency \_\_\_\_\_ Forest \_\_\_\_\_

Previously certified? \_\_\_\_\_ Chain saw? \_\_\_\_\_ Level \_\_\_\_\_ Where \_\_\_\_\_ Year \_\_\_\_\_

*Instructors: All blanks need to be filled in. Use G for Good, F for Fair, and P for Poor to rate proficiency in each area. N/A means applicant was not tested in this area.*

## SAFETY EQUIPMENT

- \_\_\_ Hardhat
- \_\_\_ Long-sleeved shirt (optional for crosscut saw)
- \_\_\_ Gloves
- \_\_\_ Boots
- \_\_\_ Wedges
- \_\_\_ Eye protection
- \_\_\_ Ax
- \_\_\_ Chaps (optional for crosscut saw)
- \_\_\_ Hearing protection (chain saw only)
- \_\_\_ Saw sheath

## HAZARD ANALYSIS

- \_\_\_ Top
- \_\_\_ Widow maker
- \_\_\_ Bark
- \_\_\_ Leaners
- \_\_\_ Hangups
- \_\_\_ Determine soundness and lean(s)
- \_\_\_ Snags/green-tree hazards
- \_\_\_ Root wads/loose logs
- \_\_\_ Other

## SAW USE

- \_\_\_ Saw and ax condition
- \_\_\_ Safe, comfortable body position
- \_\_\_ Throttle lock use (chain saw only)
- \_\_\_ Thumb placement (chain saw only)
- \_\_\_ Starting procedure
- \_\_\_ Bar tip use, general (chain saw only)
- \_\_\_ Boring, specific (chain saw only)
- \_\_\_ Handle placement (crosscut saw only)
- \_\_\_ Ax/saw selection
- \_\_\_ Cut preparation, bark removal (crosscut saw only)
- \_\_\_ Saw passing (crosscut saw only)

## FELLING PROCEDURE

- \_\_\_ Escape routes/safety zones
- \_\_\_ Swampout
- \_\_\_ Plumbing lean
- \_\_\_ Thumb placement (chain saw only)
- \_\_\_ Undercutting
- \_\_\_ Wedging procedure
- \_\_\_ Warning shout
- \_\_\_ Back cutting
- \_\_\_ Cutting with head up
- \_\_\_ Handle removal (crosscut saw only)
- \_\_\_ Gunning cut
- \_\_\_ Use of gunning sights

- \_\_\_ Use of escape route/safety zone
- \_\_\_ Leave it

## STUMP ANALYSIS

- \_\_\_ Felled to desired lay
- \_\_\_ Felled to other lay
- \_\_\_ Undercut positioning
- \_\_\_ Back cut
- \_\_\_ Horizontal cut
- \_\_\_ Sloping cut
- \_\_\_ Undercut as a whole
- \_\_\_ Holding wood
- \_\_\_ Stump shot, height
- \_\_\_ Stump shot, holding wood
- \_\_\_ Dutchman, one corner
- \_\_\_ Dutchman, both corners

## FELLING AREA

- \_\_\_ Crew safety
- \_\_\_ Secure area
- \_\_\_ Communication
- \_\_\_ Cleanup

## LIMBING

- \_\_\_ Overhead dangers
- \_\_\_ Body positioning
- \_\_\_ Thumb placement (chain saw only)
- \_\_\_ Spring poles/tension/compression
- \_\_\_ Limb removal sequence
- \_\_\_ Use of bar tip (chain saw only)
- \_\_\_ Use of ax

## BUCKING

- \_\_\_ Overhead analysis
- \_\_\_ Ground/hazard analysis
- \_\_\_ Bind/tension/compression analysis
- \_\_\_ Thumb placement (chain saw only)
- \_\_\_ Use of pie-shaped cuts (chain saw only)
- \_\_\_ Wedge techniques
- \_\_\_ Cutting sequence
- \_\_\_ Kerf observation
- \_\_\_ Release cut movement
- \_\_\_ Protection of saw (crosscut saw only)
- \_\_\_ Double bucking (crosscut saw only)
- \_\_\_ Compound cut
- \_\_\_ Underbucking (crosscut saw only)
- \_\_\_ Single bucking (crosscut saw only)
- \_\_\_ Offset cutting (crosscut saw only)

Figure 6-1—Sawyer evaluation form.

# Sawyer Evaluation Form

## COMMENTS

Use this space to make additional comments about such things as attitude, technical skills, verbal skills (weak, strong, and so forth).

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## SKILL LEVEL

Chain saw rating \_\_\_\_\_ (A = Apprentice, B = Intermediate, C = Advanced)

Crosscut saw rating \_\_\_\_\_ (A = Apprentice, B = Intermediate, C = Advanced)

Instructor/certifier for: Chain saw \_\_\_\_\_ Crosscut saw \_\_\_\_\_ Level \_\_\_\_\_

## RESTRICTIONS (if any)

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Classroom instruction given at \_\_\_\_\_ Date \_\_\_\_\_

Instructor's signature \_\_\_\_\_ Title \_\_\_\_\_ Level \_\_\_\_\_

Recommended by (if applicable) \_\_\_\_\_ Title \_\_\_\_\_

Field examination given at \_\_\_\_\_ Date \_\_\_\_\_

Examiner's signature \_\_\_\_\_ Title \_\_\_\_\_ Level \_\_\_\_\_

Supervisor's signature \_\_\_\_\_ Title \_\_\_\_\_ Level \_\_\_\_\_

Figure 6-1—(continued).



## Personal Protective Equipment

- Hardhat.
- Eye protection.
- Hearing protection (for chain saw use only).
- Gloves (cut resistant for chain filing).
- Long-sleeved shirt (optional for crosscut saw use).
- Chain saw chaps (recommended to overlap boots by at least 2 inches, optional for crosscut saw use). Only saw chaps provided by the General Services Administration meeting the most current Forest Service specifications (6170-4) are approved for purchase and use.
- Heavy-duty, 8-inch-high, laced cut-resistant or leather boots with nonskid soles and adequate ankle support.

## General Equipment

- Type IV first-aid kit.
- Fire extinguisher (for chain saw use only).
- Proper saw for the job (for chain saws, a full-wrap handlebar is recommended for felling).
- Fully operational chain brake.
- Chain (filed and maintained).
- Chain saw wrench.
- Approved safety container for fuel.
- Chain and bar oil container (clearly marked).
- Proper wedges for the work project (wooden wedges not permitted).
- Single-bit ax or maul (3 to 5 pounds).
- Bumper spikes (for chain saw use only).

The instructor must be aware of the activities taking place in all cutting areas and ensure that students follow correct safety procedures at all times.

Many safety issues are specific to tree felling. These issues must be discussed by the instructor and the student before each tree is cut. In addition, the instructor must discuss the safety procedures to follow in case of an accident.

A fully qualified instructor must be at the base of the tree within a few feet of the sawyer to monitor the process and prevent accidents. Justification for having a second person at the base of the tree must be documented in the JHA.

## Conducting Field Training for Sawyers

### Secure Felling Area

Many safety issues can be addressed by establishing a secure felling area, which must be identified and managed. The area needs to be at least two-and-one-half times the height of the tree being felled, in all directions. On hillsides with steep slopes, the entire downhill side will be included in the secure area.

No one shall be allowed in the secured felling area without authorization by the sawyer and instructor.

A safety zone will be established outside the secure area. Everyone must remain there until all felling is completed and the sawyer has shouted *All clear*.

Whenever practical, the safety zone should be opposite the direction of the planned fall, and at least two-and-one-half times the height of the tree being felled.

One person shall be responsible for maintaining reliable communications with the sawyer and with people in the safety zone to ensure that no one enters the secured felling area.

A road or trail guard will be set up on all roads and trails entering and leaving the secured felling area to prevent members of the public or other employees from entering



the area. Effective communications must exist between the guards and the sawyer.

Before leaving the secured felling area, the sawyer needs to ensure that no hazards remain (such as hangups, unstable logs, or other dangers).

To protect the lives of employees, contractors, and the public, the sawyer must adhere to these standards. Supervisors and all employees must understand and follow these standards.

### Monitoring Cutting Procedures

The instructor needs to monitor cutting procedures and take corrective actions or discontinue cutting if problems develop. Common problems include:

- Inaccurate gunning (sighting) that may cause the tree to fall in the wrong direction or get hung up in another tree.
- Too deep an undercut that may cause a tree to go over backward or fall before the undercut is complete.
- A potential barber chair. Recognize this situation before it occurs.
- Accidental or intentional removal of all or part of the holding wood.
- Any changes in the wind or the tree's lean. Is the student aware of these changes?
- Wedging too late or other improper wedging.

### Skill Demonstrations

**Brushing and Bucking**—Students shall:

- Demonstrate the proper starting method (for chain saws only).
- Demonstrate the ability to analyze special hazards associated with limbing, brushing, and bucking.
- Demonstrate the ability to brush out an area safely, limb a tree or log, and buck a log.

**Tree Felling**—Students shall:

- Demonstrate the ability to determine and prepare a safe felling area.
- Demonstrate the ability to identify correctly any special hazards associated with tree felling.
- Demonstrate the ability to fell safely a tree to a pre-determined lay.
- Demonstrate the ability to do a stump analysis of the student's evaluation tree.

When students have successfully completed training, the instructor will award a chain saw or crosscut training certificate. Students also will receive the appropriate pocket-size certification card. Instructors shall include any restrictions or endorsements on the sawyer evaluation form and the certification card.