



Logger Safety Initiative Quarterly Training

Why am I receiving this LSI Safety Training Packet?

As an LSI participant, you are required to annually attend approved LSI Employer Logger Safety program training. There are two parts to the required training: Formal Training and Safety Training (see the attached LSI Training Requirements for more details). This packet satisfies one of the four required Safety Trainings. You must also ensure that all of your workers receive four LSI required trainings per year.

How do I provide the training to my employees?

You and your delegated supervisors, if delegated, and all employees engaged in manual logging operations must participate in at least four LSI trainings on an annual basis. If you have employees that do ground operations, even if only occasionally, review the “In the Clear Rigging” safety training (found on our website) materials in detail and discuss the scenarios with employees.

What documentation is required?

You will need to document that the training took place as part of your safety minutes. Be sure staff has signed the safety meeting sign-in sheet. The completion of the training will be assessed at the annual DOSH LSI Consultation.

WASHINGTON STATE LOGGER SAFETY INITIATIVE

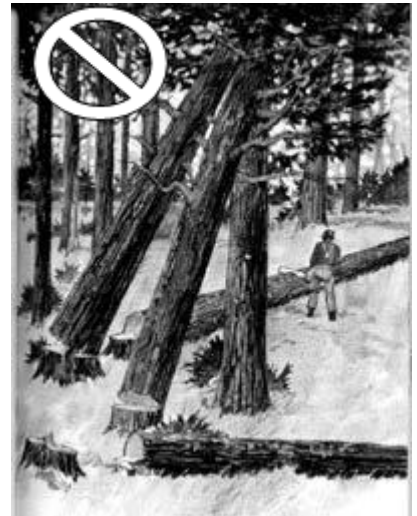
Keeping Washington loggers safe.

Overcoming Falling Difficulties

May 18, 2016

Many investigations of fatal timber falling accidents reveal that the fallers who were killed had numerous cut-up trees in their working area. The "cut-ups" were sitting back on a wedge or on the stump until one of them came down unexpectedly. The purpose of this training is to help shed some light on various types of difficult timber falling situations and hopefully prevent a life being lost

During the course of a work day a cutter can encounter situations that may be considered "difficult." It could be a problem snag, an extreme leaner or a jackpot. With experience and proper skills most of these situations can be resolved. However, cutters *must never overestimate their ability*. In difficult situations assess the problem carefully. Consider the complications and the alternatives. If there is any doubt as to how to get the job done safely, don't do it.



The Loggers Safety Initiative Accident Prevention Program requires that:

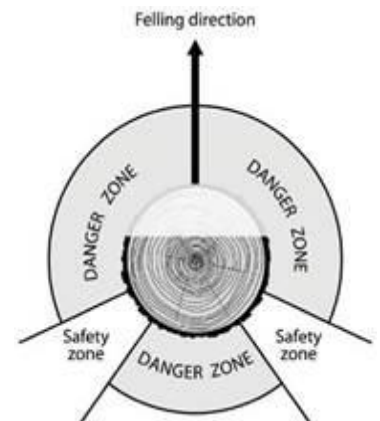
A competent person, properly experienced in this type of work, must be placed in charge of falling and bucking operations. Inexperienced workers must not be allowed to fall timber, buck logs or windfalls unless working under the direct supervision of an experienced cutter.

It is imperative that the following criteria are met when assessing a falling difficulty:

If a cutter has determined a tree cannot be safely fell, the work must stop until the cutter has conferred with a supervisor or an experienced cutter and determined the safest possible work method or procedure.

Before walking away the cutter must do the following:

- Lodged trees must be clearly marked and identified
- Trees with face cuts and/or back cuts must not be left standing unless all the following conditions are met:
 - Cutter clearly marks the trees that are cut
 - Discontinues work in the hazardous area
 - Notifies other workers who might be endangered and
 - Takes appropriate measures to ensure that the tree is safely fell

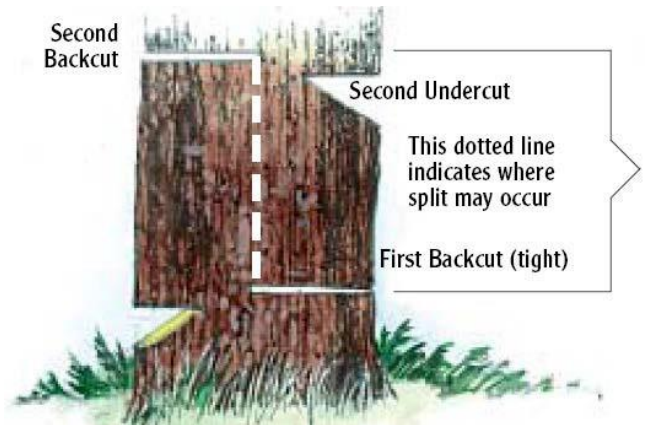


- before other work is undertaken in the hazardous area
- Don't work under or turn your back on a hung up/cut up trees!

Getting Started

Before falling or bucking, check for defects such as rot and cat faces, widow makers or other overhead material, location of other trees, lean of the tree, wind, etc.

- In all cases, you must assess each tree or snag to be felled. Check for material lying on the ground in the immediate area.
- Plan your escape route and an alternative route in case the tree does not fall according to plan.
- Choose and clear out an escape path in back of, uphill and at an angle away from the stump. Your escape path must allow you to move at least 10 feet from the stump.
- While felling a tree, avoid cutting from under the lean.
- Trees must be felled into the open whenever conditions permit. Brushing other trees creates widow makers, hang-ups, and material being thrown back toward the cutter.



Common Falling Difficulties

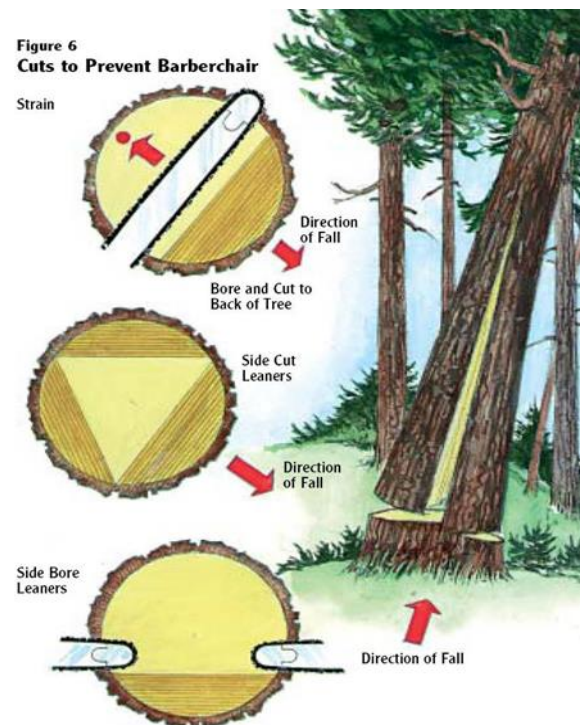
What can you do if the tree sits back while completing the back cut?

- Re-fall the tree.
- Notify your "buddy" of the problem, and then notify your supervisor.

Re-Fall the Tree.

The best way to do this is to face the cut-up tree and brush-out the escape route toward it, always keeping an eye on the tree in case it starts to fall while never turning your back on a cut-up tree. Attempt to make the second cut as high above the initial cut as safely as possible. This is to help alleviate the potential for splitting.

Remember, you are working with a tree that has been crippled; never position your body in front or behind a side that has been cut. If the wind changes, the tree could suddenly fall in its original intended direction, or snap off backwards.



Leaners

Most trees have some lean. If the lean is slight and in the same direction as the falling face opened up, falling is straight forward. However, if the tree is leaning heavily, or must be felled against the lean, the situation is more hazardous and requires special consideration:

- While felling a tree, avoid cutting from under the lean.
- Heavy lean develops enormous tension. When an undercut is sawn into the tree in the direction of the lean this tension increases. As soon as a conventional back cut is started, the tension is immediately relieved and the tree starts to fall. However, if too much holding wood remains this will cause the tree trunk to split vertically from where the back cut was started. A huge slab will develop and kick backward at the same time, causing a "Barber- Chair."
- In falling heavy leaners, do not attempt a deep undercut. The undercut should be no more than one-quarter of the tree's diameter. To prevent barber-chairing, leave the part of the wood which is most under tension, located behind the lean, until more of the holding wood is sawn out.

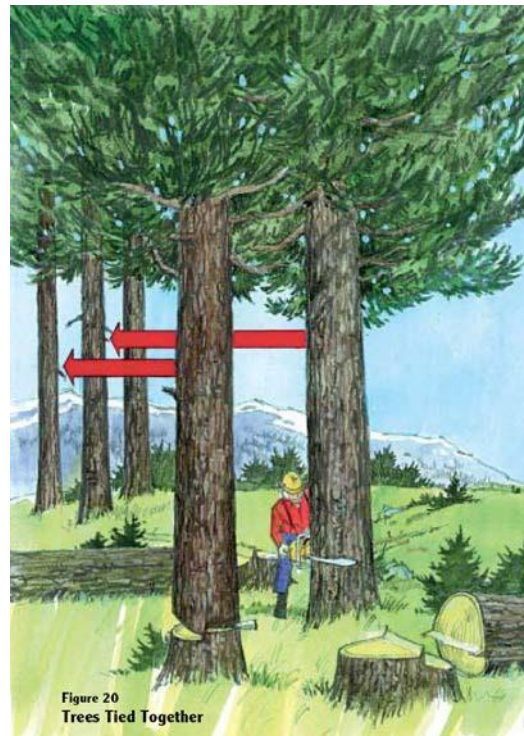
Boring the back cut of a leaner

After the undercut block has been removed, the tip of the saw bar is bored into the tree above the horizontal plane of the undercut. The faller must ensure that they leave a few inches of holding wood between the start of the boring cut and the back of the undercut. It may be necessary to bore in from both sides if the tree is wider than the length of the bar. The saw is worked backwards, cutting from the inside out, until the point is reached where the normal back cut would have been started.

Follow these safety guidelines when boring:

While boring, the wood directly behind the lean will be under enormous tension, as all other holding wood has been severed. Trees have been known to fall before the saw has cut through, pulling a large section of root out of the ground.

- 1) Make sure the lay of the tree (the direction it wants to go) is unobstructed.
- 2) Don't try to swing the tree.
- 3) Brush-out an escape route and an alternative route if necessary.
- 4) Put in as deep an undercut as possible, one-eighth to one-quarter of the tree's diameter.
- 5) Cut the corners of the back cut. Start with the corner opposite to your escape route. Don't cut too close to the corners, however, as the saw may get struck.
- 6) Start cutting the back cut. Cut as rapidly as possible.
- 7) Watch for barber-chair or root pull. Sections of root can be pulled out and flail around.
- 8) Continue cutting until the tree breaks off and



begins to fall.

Trees Tied Together

Trees standing close together and tied in by limbs should be felled together (see illustration). If the cutter cannot see all the limbs they must assume the trees are tied together and, therefore, should be felled together.

Under such conditions, if wedges are used to drop the front tree, a limb or dry top may break and fall, endangering the cutter.

Procedure

- Cut up the front tree and place wedge. Make sure you maintain enough holding wood.
- Start falling the second tree, allowing both trees to fall together.

Hang-ups

Hang-ups are caused by:

- Poor planning of the work area
- Loss of directional control. Losing control of the falling tree can be caused by:
- Cutting off the corner of holding wood
- Stump pull or rot
- "Dutchman" left in undercut
- Wind
- Failing to use wedges where required.

If possible, keep the trunk of the supporting tree between you and the hang-up(s). In other words, if the hang-up is held by limbs on one side of the supporting tree, fall the supporting tree from the opposite side. If you are on steep ground, and the hang-ups are on the uphill side of the supporting tree, fall the tree by blasting or another safe alternative method.

Safety is always number one

Keep in mind some of these practices, such as domino falling, are dangerous. Domino falling does not include the falling of a single tree into a danger tree to overcome a falling difficulty. State and Federal laws are set in place to ensure that cutters are not making these exceptions an everyday practice with the intent to bypass safety and increase production.

Please spend time reviewing these scenarios, talk as a group with your cutting partners, know when to walk away, and never take unnecessary chances. Safety is always first, come home to your families, and walk proud - you're a cutter!