



# WASHINGTON STATE LOGGER SAFETY INITIATIVE

Keeping Washington loggers safe.

## Logger Safety Initiative Safety Training – In the Clear Cutting Packet

### Why am I receiving this LSI Safety Training Packet?

LSI participants 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. The LSI employer must ensure that all workers receive four LSI required trainings per year.

### How do I provide the training to my employees?

LSI Employers and supervisors, if delegated, and all employees engaged in manual logging operations must participate in at least four (4) Logger Safety Initiative (LSI) trainings on an annual basis. If you have employees that do cutting, review the “In the Clear Cutting” safety training materials in detail and discuss the scenarios with employees.

### What documentation is required?

LSI employers will document that the training took place as part of their safety minutes. Be sure that staff have signed the safety meeting sign-in sheet. The completion of the training will be assessed at the annual DOSH LSI Consultation.

### Safety Questions

An LSI Landowner developed the following questions, based on the lessons learned from a recent fatality investigation, and can be used as part of the training discussion:

- a. Have there been any near misses lately? When was the last time you reported a hazard observation?
- b. What do you consider a hazard? How are you identifying hazards?
- c. Show me a hazard you identified and what is your safe work plan for the hazard?
- d. How far ahead have you planned on this strip?
- e. What conditions would cause you to stop work?
- f. What conditions would cause you to ask for an experienced second opinion? When was the last time you called for a second opinion?
- g. Do you always embrace safe work practices regardless if someone is watching or not?
- h. Have you ever violated a safety rule? Why?
- i. Have you ever read an incident report that caused you to change your own practices?
- j. Have you seen another cutter doing something you considered to be unsafe? Did you speak up, stop them, or tell your supervisor?
- k. What are some additional recommendations you’d have in these situations?

### Questions

If you have any questions regarding the training requirements, please contact the LSI Program Office by calling (360) 902-5008 or via email at [LoggerSafety@lni.wa.gov](mailto:LoggerSafety@lni.wa.gov).





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## In the Clear Cutting– LSI Training

**Case 1:** A cutter with 25 years of experience was falling a tree length job. The ground was not too steep and the timber averaged 21” in diameter. He had previously fallen a snag to get the hazard on the ground. The felled snag was laying out in front of the tree he was about to fall. When he fell the tree it hit the snag that was on the ground and a 5” diameter 12’ long chunk of that snag flew back and struck the cutter. He was knocked out and when he came to he radioed another cutter that was 2.5 tree lengths away for help. The other cutter came over and assisted in getting him to the hospital. He was hit in the head and shoulders with the snag chunk but not hospitalized.

### **Safety Requirements and Safe Practices**

Cut away windfalls, logs or other debris that could be thrown back toward you by the falling tree.

Check for debris in front of the tree being felled. If debris can be thrown back at you, clear the debris prior to falling.

**Case 2:**<sup>1</sup> A 55 year-old logger, working as a faller, was struck and killed by the tree he was falling. The tree struck a snag on the way down and the butt-end sprung backwards 12 feet into the faller’s work zone. The faller was using a standard Humboldt face cut, but the backcut was too low, giving the butt and insufficient step to push off, which is known to increase the risk of a kickback.

### **Safety Requirements and Safe Practices**

Make backcut higher than undercut.

- The backcut, also known as the safety cut, needs to be higher than the horizontal plane of the undercut. The higher backcut helps to prevent the base of the tree from kicking back off the stump and coming back into the work zone on the way down. Specialty cuts for certain situations should be used by experienced fallers.

Watch for impacts

Get away from the stump

- An estimated 90% of falling injuries occur at the base of the tree. As soon as the tree is committed to fall, get away by your escape route. Move as far back as possible before the tree hits the ground. Keep an eye out for flying debris. Never turn your back to a falling tree.

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<sup>1</sup> Case from Oregon Fatality Assessment and Control Evaluation program; *Fallers Logging Safety*, OHSU, 2007.

**Case 3<sup>2</sup>:** A 24 year old novice logger, working as a faller, was killed by the kickback of a tree while helping an experienced faller. The tree was a 65 foot pine, 23 inch diameter. The novice faller was responsible for hammering a wedge into the tree to make it fall uphill. The experienced faller saw the tree was beginning to fall and yelled twice for his partner to get away. Busy driving the wedge, the victim moved too late. The butt of the tree rose over his head and struck him.

### **Safety Requirements and Safe Practices**

#### Plan before you cut

- Communication in advance is always a critical feature of working safely, more so with inexperienced workers and difficult circumstances. Even for experienced loggers, advance planning and communication help to keep work partners alert to hazards. At the tree, a sudden hazard may require immediate action to escape. Prepare signals in advance, stay alert to signals from your partner, and be ready to move immediately.

#### Train before you cut

- Tree falling is one of the most dangerous occupations in the United States. Training is vital. New fallers should be aware of special conditions – as in felling trees uphill, where there is a very high risk the tree will travel downhill when it strikes the ground or an object on the way down.

#### Protect your hinge

- The hinge created by the relative positioning of the face-cut and backcut is crucial to avoid kickback. Keep your hinge wood one-tenth the diameter of the tree. As an additional precaution, avoid working in the zone directly at the back of the tree.
- On slopes over 50% grade, tree(s) must be at least quartered to a degree that prevents cutters from being exposed to the possibility of sliding.

#### **Case 4: Timber cutter severely injured when struck by snag (attached Fatality Narrative)**

<http://www.lni.wa.gov/Safety/Research/Files/92112014TimberCutterInjured.pdf>

#### **Case 5: Timber cutter injured when struck by a hung-up tree (attached Fatality Narrative)**

<http://www.lni.wa.gov/Safety/Research/Files/92132015CutterInjuredbyHungUpTree.pdf>

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<sup>2</sup> Case from Oregon Fatality Assessment and Control Evaluation program; *Fallers Logging Safety*, OHSU, 2007.

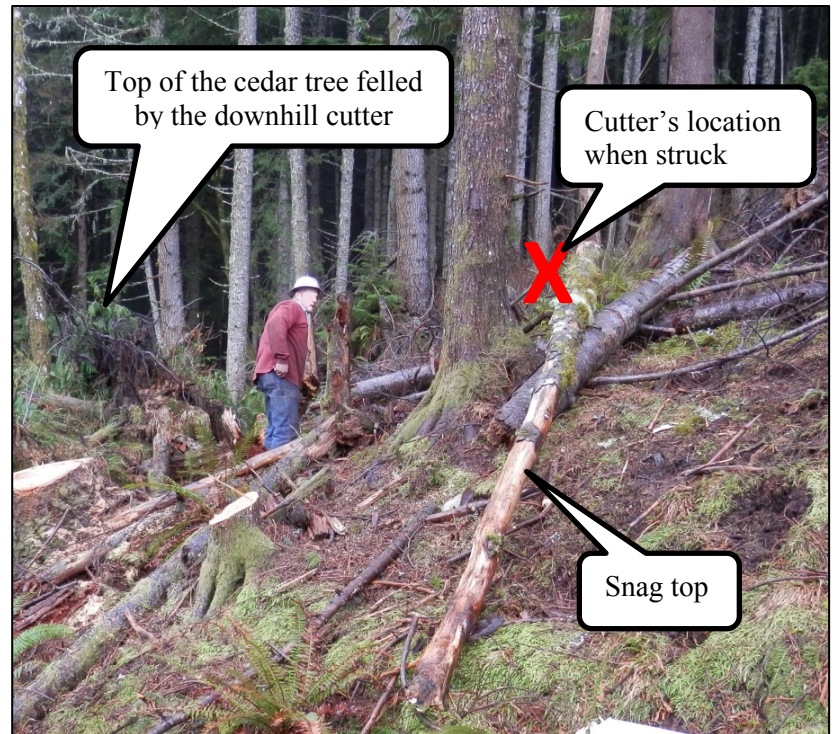
## Timber Cutter Severely Injured when Struck by Snag

**Task:** Falling trees

**Occupation:** Timber cutter

**Release Date:** August 22, 2014

On January 7, 2014, a 56-year-old timber cutter was severely injured when he was struck by the top of a falling snag. Two cutters, each with over 20 years' experience, were working at a jobsite. One of these cutters, the victim, was preparing to cut a tree. Working downhill from the victim, the other cutter felled a 59 foot 6 inch tall cedar tree. As this tree was falling, it fell several feet uphill from the cutter's intended direction and hit a dead alder snag, knocking it over. Part of the top of the snag broke off as the snag was falling and struck the victim on his head. He suffered a severe traumatic, disabling brain injury. The incident investigator determined that the two cutters were working 81 feet from each other, less than the required minimum two tree lengths, which in this incident would have been 120 feet.



### Safety Requirements

During cutting operations:

- The employer must assign work areas so that the distance between work areas is at least two tree lengths of the trees being felled.

See [WAC 296-54-539\(1\)\(b\)](#).

### Recommended Safe Practices

- Safe falling means planning ahead. Ensure that all workers are clear of the hazardous area before falling begins.
- Poor work practices can lead to injuries. Your safety and that of other crew members depends on decisions that you make about how you do your work.

### Resources\*

- Free workplace safety and health consultations are available from L&I at: [www.SafetyConsult.Lni.wa.gov](http://www.SafetyConsult.Lni.wa.gov)
- Free video from Labor & Industries, "Be Safe in the Woods" at: [www.LNI.BeSafeintheWoods](http://www.LNI.BeSafeintheWoods)
- Accident Prevention Program for Cutting Operations. Washington State Logger Safety Initiative at: [www.lni.wa.gov/Safety/TrainingPrevention/Programs/files/LSICuttingOperationsSampleAPP.doc](http://www.lni.wa.gov/Safety/TrainingPrevention/Programs/files/LSICuttingOperationsSampleAPP.doc)

\*These internet links have been shortened for publication and will not operate in your web browser as written. To access these resources, please go to the SHARP publications page at [www.lni.wa.gov/Safety/Research/Pubs/](http://www.lni.wa.gov/Safety/Research/Pubs/), click on *Logging*, open this document and follow the links from there. Prepared by Randy Clark, WA State Fatality Assessment and Control Evaluation (FACE) Program and the Division of Occupational Safety and Health (DOSH), WA State Dept. of Labor & Industries. The FACE Program is supported in part by a grant from the National Institute for Occupational Safety and Health (NIOSH grant# 5 U60 OH008487-09).



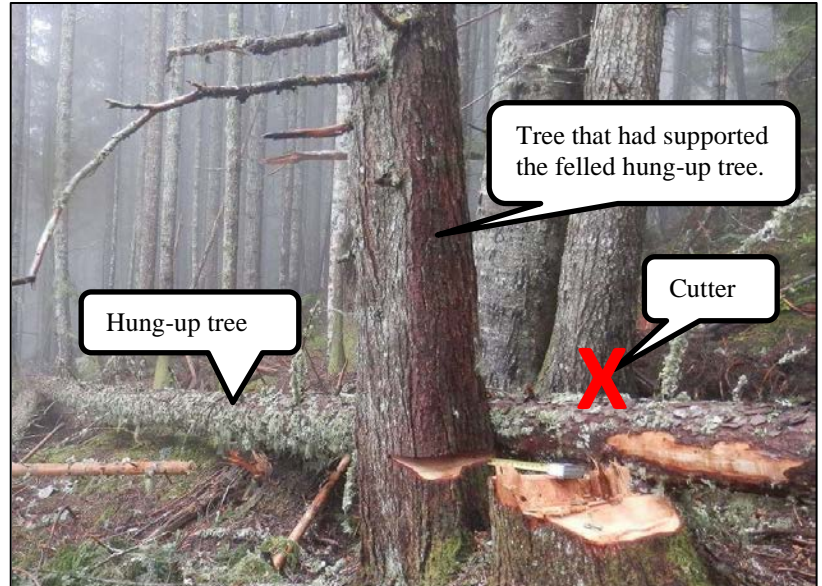
# Timber Cutter Injured When Struck by a Hung-up Tree

**Task:** Cutting a tree

**Occupation:** Cutter

**Release Date:** January 19, 2015

A 31-year-old timber cutter was hospitalized after being struck by a hung-up tree he had previously cut that then fell on him. He had 2 years of cutting experience, but this was his first thinning job. It was his second day on the strip. When he felled a 13 inch diameter 99 foot tall hemlock, it hung-up in another standing tree 37 feet away. The cutter then felled a tree next to the tree supporting the hung-up tree. As he was making an undercut in the tree in which the hemlock had become lodged, the hung-up hemlock fell on him. The tree struck him on his arms. If the tree fallen a few inches further uphill, it would have struck his head.



The cutter was struck by a falling hung-up tree he had previously cut. As he was making an undercut in the tree supporting the hung-up tree, the hung-up tree fell on him.

## Safety Requirements

- Trees with face cuts and/or back cuts must not be left standing unless all the following conditions are met: a) The cutter clearly marks the tree; b) Discontinues work in the area; c) Notifies all workers in the hazardous area; and d) Takes appropriate measures to ensure that the tree is safely fell before other work is undertaken in the hazardous area. See WAC 296-54-53910(16).

- 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. See WAC 296-54-539(7).

## Recommended Safe Practices

- Train cutters: a) in the hazards and safe work procedures of cutting operations that they are not familiar with; b) how to safely fall hung-up trees; c) to never work in front of a cut-up tree.
- Go over hazards of a falling operation in the pre-job safety meeting.
- If a tree becomes hung-up in another tree, special care must be taken when falling the tree supporting the hung-up tree: 1) Assess the situation carefully; 2) If possible, keep the trunk of the supporting tree between you and the hang-up. For example, if the hang-up is held by limbs on one side of the supporting tree, fall the supporting tree from the opposite side; 3) If you are on steep ground and the hang-up is on the uphill side of the supporting tree, fall the tree by blasting or another safe alternative.

## Resources\*

- Free workplace safety and health consultations are available from L&I at: [www.SafetyConsultants.Lni.wa.gov](http://www.SafetyConsultants.Lni.wa.gov)
- Free video from Labor & Industries, "Be Safe in the Woods" at: <https://fortress.wa.gov/lni/shrl/VideoDetails.aspx?VideoID=1490>
- Accident Prevention Program for Cutting Operations. Washington State Logger Safety Initiative at: [www.lni.wa.gov/Safety/TrainingPrevention/Programs/files/LSICuttingOperationsSampleAPP.doc](http://www.lni.wa.gov/Safety/TrainingPrevention/Programs/files/LSICuttingOperationsSampleAPP.doc)

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## Logger Safety Initiative Safety Training Requirements

LSI participants are required to annually attend approved LSI Employer Logger Safety program training. If the employer delegates supervision and or training responsibilities, those individuals must also attend the formal training sessions. This document outlines what the training requirements are and how LSI participants can meet them.

### Formal Training Sessions

A minimum of 4-hours of formal training, specific to safety, is required in each calendar year. For LSI purposes, formal training is a course, program, seminar, conference, or convention. Credit will be provided for safety related content only, for example, when you attend an 8-hour class and 2-hours are related to safety, you'll receive two safety credit hours.

Employers are required to submit documentation to the LSI Program Office to show they've fulfilled their training requirement. For each training attended, the employer must submit the following information: a description of the training, the training provider, and date attended.

Examples of approved formal training may include:

- WCLA Safety Conference
- L&I Governor's Safety and Health Conference
- Master Logger's Safety Training
- L&I Safety Training Workshop
- LSI Landowner Safety Day or Trainings
- Oregon Governor's Conference
- Western Pulp, Paper, & Forest Products Safety and Health Conference
- Intermountain Logging Conference
- Pacific Logging Congress
- Associated Oregon Loggers Annual Statewide Safety Conference
- Or other training as approved by the LSI Taskforce

### Safety training (Four trainings a year)

Training materials will be created for LSI and provided to LSI participants to complete. The employer and supervisor, if delegated, and all employees engaged in manual logging operations must receive at least four (4) of the LSI trainings. Training can be conducted by any of the employees or an outside person and can be done as part of regular safety meetings.

LSI participants will complete and document that the training took place as part of their safety minutes. The completion of training will be assessed at the annual comprehensive DOSH consultation.

### Questions

If you have any questions regarding the training requirement, please contact the LSI Program Office by calling (360) 902-5008 or via email at **[LoggerSafety@lni.wa.gov](mailto:LoggerSafety@lni.wa.gov)**.