



**VOSH PROGRAM DIRECTIVE: 14-215**

**ISSUED: 1 July 2011**

**SUBJECT:**           **Logging and Sawmill Industries - Local Emphasis Program (LEP)**

**Purpose.**               This Directive re-establishes a specific Local Emphasis Program for the Logging (pulpwood and timber) and sawmill Industries with policies and procedures for the purpose of conducting inspections of logging industry activities and sawmills within VOSH's jurisdiction.

The intent is to achieve a reduction in the severity and number of injuries and fatalities of the loggers, sawyers and other hardwood and flooring mill employees occurring in these occupations.

*This Program Directive is an internal guideline, not a statutory or regulatory rule, and is intended to provide instructions to VOSH personnel regarding internal operation of the Virginia Occupational Safety and Health Program and is solely for the benefit of the program. This document is not subject to the Virginia Register Act or the Administrative Process Act; it does not have general application and is not being enforced as having the force of law.*

**Scope.**               This Directive applies VOSH-wide, and specifically to Occupational Safety Compliance and Consultation Services personnel.

**References.**        OSHA Instruction CPL 02-07-01B (Region VII) (1 Oct. 2010)  
OSHA Instruction CPL 04 (2010-2011) (Region III) (1 Oct. 2010)  
OSHA Instruction CPL 04-00-008 (Region X) (12 July 2006)  
OSHA Instruction CPL 04-00-006 (Region X) (06 July 2006)

**Cancellation.**      VOSH Program Directives: 14-222B (1 March 2005)

**Effective Date.**    1 July 2011

**Action.**             Directors and Managers shall ensure that the policies and procedures established in this Directive are adhered to when scheduling and conducting inspections under this LEP.

Courtney M. Malveaux  
Commissioner

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## I. Background.

Employees involved in logging and sawmill industry work are exposed to safety and amputation hazards which often lead to serious physical harm and death. VOSH first initiated a statewide Local Emphasis Program for logging in 1991 in response to the occurrence of eight fatalities and an illness and injury rate of 12.8 in the logging industry (NAICS 113310) during the previous calendar year.

VOSH has maintained some form of logging, sawmill, tree trimming and/or forest products industry LEP annually since that time. From FY 2000 through FY 2010, 170 inspections were conducted under the various prior versions of this LEP with an average of 3.5 violations per inspection.

VOSH has conducted 20 fatality inspections in the logging and sawmill industries from 2000 through 2010. The percent of violations for both industries that was cited as “serious” violations was 72%. During that time period, 71% of the inspections which resulted in the issuance of a citation involved a serious, willful, and/or repeat violation.

The causal factors for the deaths continue to be related to the most frequently cited standards, including but not limited to logging operations, sawmill operations, machine guarding, saws and lockout/tagout, indicating that a sustained enforcement effort is needed to change work attitudes and habits. The current general industry scheduling procedures do not give the logging or sawmill industries the attention which they require.

In 2009, according to the U.S. Department of Labor, Bureau of Labor Statistics, logging had the highest non-maritime (i.e., fishing industry) fatality rate in the nation at 61.8 per 100,000. Due to the unique and potentially life-threatening hazards presented by this industry, this revised and more specific local emphasis program (LEP) is being re-instituted for logging and sawmill employers. The LEP was developed to assist small and large logging contractors and sawmill employers in the development and implementation of their safety and health programs, training and hazard auditing processes.

This LEP, in conjunction with the new unique VOSH tree trimming standard (*see VOSH PD 12-255*) and its related tree-trimming LEP (*see VOSH PD 14-234*), will more precisely target VOSH inspection activity given the serious nature and recurring high rates of hazards inherent in these activities. This Directive re-institutes such a narrowly focused LEP.

## II. Initial Activities.

### A. NAICS Codes Covered By the LEP.

113310	Logging
321113	Sawmills
321911	Wood Window & Door Mfg
321912	Cut Stock, Resawing Lumber & Planing
321918	Other Millwork (incl. flooring)
321920	Wood Container & Pallet Mfg.
321999	All Other Misc. Wood Product Mfg.
337215	Showcase, Partition, Shelving, & Locker Mfg

## B. Outreach.

Prior to the initiation of inspection activity under this LEP, VOSH will mail informational material to all employers on the master inspection list for logging and sawmills. The information shall include a letter explaining the purpose of the program and materials relevant to the industry. The information package will continue to be made available upon request to employers, professional associations, and labor organizations. As an additional resource for achieving compliance employers will be encouraged to utilize the VOSH 21(d) Consultation Program.

VOSH will provide the following assistance to logging and sawmill employers:

1. Provide a package of material that focuses directly on safety and health in the logging and/or sawmill industry, including how to establish a comprehensive safety and health program. The material will provide guidance and simplify the process for the smaller employer.
2. Refer employers to resources that will provide training in safety and health programs. This training will be accomplished in conjunction with industry stakeholders and the VOSH 21(d) Consultation Program.
3. Encourage the logging and sawmill companies to contact and use the following training resources and offer resources for employers to contact for assistance on how to use OSHA's Wood Products eTools:
  - Logging eTool: <http://www.osha.gov/SLTC/etools/logging/index.html>
  - Sawmills eTool: <http://www.osha.gov/SLTC/etools/sawmills/index.html>
  - Woodworking eTool: <http://www.osha.gov/SLTC/etools/woodworking/index.html>

## C. Employer Safety and Health Program Development.

Prior to any inspection cycle development, all employers covered by this LEP shall be encouraged to take a pro-active approach towards safety and health on the job to reduce the number of injuries and fatalities. This can be accomplished by the development and implementation of a comprehensive safety and health program and training for employees in logging operations and sawmills to:

1. Conduct complete and comprehensive safety and health audits of their logging and/or sawmill operations and activities and maintain written documentation of all findings.
2. Focus on and immediately correct the hazards and deficiencies found during the audit.
3. Ensure that the following situations, occurrences or practices are minimized or eliminated within their logging operations: setback trees; setting trees back as a logging method; working near standing dead trees; stubs; widow makers; lodged trees; and spring poles (*See Appendix "C" for Glossary of Logging Terms*).
4. Use proper felling techniques (*See Logging eTool, User Guide, Lesson 4. Tree Falling at [www.osha.gov/SLTC/eTools](http://www.osha.gov/SLTC/eTools)*) to provide no bypass notching, properly placed back cuts, adequate hinge wood, and a retreat path (*See Appendix "C"*).
5. Address first aid/CPR training.

6. Maintain adequate separation of logging operations (*maintain audible/visual distances and communication*).
7. Ensure that the following are maintained during machine operation:
  - Safe distances
  - Operator cab enclosures / seat belt
  - Set parking brakes
  - Ground movable elements when dismantled
  - Safe operations on slopes
  - Machine maintenance procedures to include lockout/tagout.
8. Identify and abate machine guarding and amputation hazards including but not limited to struck-by, caught-in and rotating parts
9. Develop and implement a comprehensive safety and health program and training for employees in logging operations and sawmills.

### **III. Inspection List**

The procedures listed below shall be used when developing the targeted inspection list of all employers under this LEP:

#### **A. Master Inspection List.**

Each VOSH regional office, with the assistance of the Central Office as needed, shall generate a master establishment list comprised of all known employers involved in logging and sawmill operations within its jurisdiction.

#### **B. Information Sources.**

This establishment list shall be generated from multiple neutral information sources that may be available, such as: the HARRIS Selectory Database, local knowledge, past inspection reports, local media reports, past accident reports, information from trade journals, Virginia Department of Environmental Quality, Virginia Workers' Compensation Commission, Virginia Manufacturer's Association, and the internet site ([www.Smartpages.com](http://www.Smartpages.com) with the keywords "Sawmills" and "Logging" within the State of Virginia).

### **IV. Site Selection**

#### **A. Federal Exemption and Limitations of NAICS Codes.**

Each Region shall check to determine if any of the NAICS codes covered by this LEP: 113310, 321113, 321911, 321912, 321918, 321920, 321999, and 337215, are included on the current list of codes on the Enforcement Exemptions and Limitations under the latest Federal Appropriations Act memorandum as described in VOSH Program Directive 02-003K (*or its successor*), which restricts VOSH's ability to inspect employers in certain industries which have 10 or fewer employees. If so, establishments in such affected codes shall be deleted from the inspection list being developed.

B. Ten or Fewer Employees.

Establishments employing ten or fewer employees are being included in the targeting by this LEP since many logging sites and sawmills in Virginia may employ ten or fewer employees.

C. Coverage of Other Employers at Site.

All establishments classified under NAICS 113310 (i.e., logging camps and logging contractors), will be considered eligible for programmed safety and health inspections under the LEP. Additional employers working at a selected logging work site will also be eligible for inspection if they have engaged in logging operation activity as described in Appendix "A", or if their employees have been exposed to hazards related to those activities.

V. Inspection Activity.

The VOSH Safety Director in consultation with the Regional Director/Compliance Manager of each Region shall determine, as part of the program plan, the number and schedule of logging inspections that will be conducted during the federal (VOSH) fiscal year in each region.

A. Inspection Cycles.

1. Cycle Size. The Program Director and the Compliance Manager shall determine the number of annual inspections to be carried out annually beginning on 01 October of each year. The number of establishments in the cycle should reflect that minimum number plus an additional percentage to cover any "no inspections" that is necessary to meet that goal. Should the annual cycle be completed prior to the 30 September end of federal fiscal year (FFY), a second cycle, if desired, sufficient to cover the remainder of the FFY may be developed, as above, from the remaining master inspection list.
2. Randomization. Once the master establishment list has been created, the inspection cycle for the year must be developed. The Random Sample Function of Microsoft Access, a relational database program, or other similar randomizing program may be used to develop a randomized master inspection list from the original master list of all establishments. The list of random numbers and associated procedure from federal OSHA in Appendix "D" may also be used. (*Whichever method used shall be documented*).
3. Inspection Order. Establishments within the annual cycle may be inspected in any order that makes efficient use of resources; however all establishments within a cycle must be inspected prior to initiating a new cycle for the subsequent year. Carry-overs will be allowed, as per the procedure for the general inspection schedule. Unprogrammed inspections, i.e., complaints, fatalities, catastrophes, etc., will be made in accordance with procedures in the VOSH FOM. Those work sites that receive an unprogrammed inspection shall be removed from the LEP inspection list for that year.
4. Additions to the Inspection Schedule. In the process of conducting inspections under this LEP, a CSHO may observe or randomly encounter a logging or sawmill site that is not on the current inspection cycle. The Compliance Manager shall emphasize to the CSHO that such a site shall be evaluated for possible immediate inspection or addition to the master inspection list for the LEP once the CSHO becomes aware of it. In no case shall the CSHO search or otherwise specifically seek to locate a particular employer or worksite not on the inspection list.

- a. No Previous Comprehensive Inspection. Upon checking with the Compliance Manager, if it is determined that a comprehensive safety and health inspection of the site has not occurred in the previous 24 months, the site will be added to the current inspection cycle and an inspection will be conducted.
  - b. Previous Comprehensive Inspection. Upon checking with the Compliance Manager, if it is determined that a comprehensive safety and health inspection of the site has occurred in the previous 24 months, no inspection will be conducted at that time. Upon return to the office, the establishment and location will be added to the initial master list of all establishments for the next year or the subsequent year, depending on the date of the most recent inspection.
5. Deletions to the Inspection Schedule. Companies on the current inspection cycle that have had a comprehensive safety and health inspection within the past 24 months will be removed from this inspection cycle.

B. Scheduled Inspection Procedures.

The following guidelines apply to scheduling inspections under this LEP:

1. All establishments in the inspection cycle shall be inspected, unless deleted from the list pursuant to the VOSH FOM.
2. All safety and health inspections scheduled at logging and sawmill sites shall normally be comprehensive in scope unless the site was inspected in the previous two years. If the site received a comprehensive inspection in the previous two years, only unprogrammed inspections shall be conducted.
3. Opening and closing dates are the same date when no inspection is conducted.
4. Establishments selected for inspection may be scheduled in any order that makes efficient use of available resources.
5. Noise exposure and hearing conservation shall be addressed during all comprehensive inspections.
6. If the inspection site has multiple employers, a comprehensive safety and health inspection will be conducted for all employers present.
7. Unprogrammed inspections related to fatalities/catastrophes, complaints or referrals will be conducted in accordance with the VOSH FOM.
8. When an inspection is not conducted because the employer has refused entry or consent has not otherwise been obtained, a warrant shall be sought in accordance with the current VOSH FOM procedures for handling such cases. As is the case for other inspections, if the violations are in plain view, a warrant may not be necessary. In such situations, the Compliance Manager shall notify the Program Manager and contact the Division of Legal Support for guidance.



C. Non-Scheduled Inspection Procedures.

In addition to the programmed planned inspections, all compliance personnel, in the course of their routine travel to or from work, or on the job, other than for this LEP, shall be on the lookout for logging and sawmill activities. In no case, however, shall a CSHO specifically cruise, troll, search, or otherwise travel about for the specific purpose of discovering either worksites or a particular employer with activities related to this LEP.

1. Regardless of whether a violation is observed, whenever a CSHO sights or receives any other notice of a logging or sawmill operation, including other government referrals and reports from members of the public, the CSHO shall:
  - a. Make note of the state and condition of the work operation insofar as it is known, including any apparent serious hazards.
  - b. Note the name and address or location of the worksite and the owner, operator or contractor (where applicable) performing the operation, if known.
2. All related work activities shall be inspected. The CSHO shall immediately notify the Compliance Manager that an inspection has been opened pursuant to this LEP.
3. Complaints and other referrals involving logging or sawmill operations where violative activities are occurring shall be scheduled as unprogrammed inspections under this LEP conducted in accordance with procedures found in the VOSH FOM. Such notices, therefore, need not be responded to with the usual letter to the employer.
4. Sightings of such activities will normally be those which occur during the course of routine travel during duty or non-duty hours. As such, the discovery of these work activities may be the result of travel to other unrelated activities, such as a regular General Industry or Construction Industry programmed inspection, or responding to a complaint follow-up. Verification of information received from sources other than CSHO observation, as indicated in this Directive, is also permitted under this LEP.
5. Documentation of the events leading up to the observation or the reporting of applicable activities shall be maintained by the Regional Office in case of denial of entry.
6. When an inspection is not conducted because of denial of entry, a warrant shall be sought in accordance with the current procedures for handling such cases as is detailed in Section V.B.8., above.
7. The scope of such non-scheduled inspections conducted under this LEP shall normally be limited to the specific logging or sawmill. If the inspection is to be expanded, the procedures given in the VOSH FOM shall be followed.

V. Database Entry Coding.

- A. Planned/Targeted Inspections. LEP Inspections of firms that are planned or targeted as a result of this LEP, inspection type will be coded as “**Programmed Planned**” and then classification coded as a LEP specifically indicating either “LOGGING” or “SAWMILLS” (whichever is most appropriate).

- B. **Referral Inspections.** Inspections that are conducted as a referral and inspected during the current inspection cycle under this LEP will be coded as “**Programmed Related**” and then classification coded as an LEP specifically indicating either “LOGGING” or “SAWMILLS” (whichever is most appropriate). *Where “Program Related” inspections are conducted, they will be so indicated on the VOSH-1.*
- C. **Complaint Inspections.** Inspections under this LEP that are conducted as a result of a complaint or fatality/catastrophe will be coded as “**Unprogrammed Related**” and then classification coded as an LEP specifically indicating either as “LOGGING” or “SAWMILLS” (whichever is most appropriate).

## VI. **Evaluation.**

An annual evaluation of the program, either on a fiscal or calendar year basis, will be made to assess its efficiency and effectiveness in carrying out its specified mandate during the previous year. Such evaluation will incorporate:

- A. **Statistical Information.** Basic statistical information consisting of number of inspections conducted, number and types of violations issued, geographic distribution of establishments, company size, incident rate, number of no-inspections, number of contests and number of denials of entries.
- B. **Problems.** Any special problems which may have surfaced and any new solutions.
- C. **New Procedures.** Any procedures developed by a regional office which may be helpful to other regions.
- D. **Comments / Recommendations.** Any other issues, comments or ideas regarding the LEP and recommendations for its change, continuance or elimination.

## Appendix A

### Typical Logging Operations

The Following Are Typical Logging Operations:

**I. Pre-logging Operations**

- \* Logging road construction
- \* Layout of logging operations
- \* Equipment selection

**II. Felling and Bucking Operations**

- \* Brush clearing
- \* Tree cutting
- \* Snag felling operations
- \* Bucking at felling site
- \* Bucking and limbing at the landing
- \* Miscellaneous bucking activities

**III. Chain Saw Operations**

- \* Transporting chain saws to cutting areas
- \* Fueling operations
- \* Saw operations in the woods and at the landing

**IV. Log Transportation - in Forest**

- \* Skidder operations (both rubber-tired and tracked vehicles)
- \* Skylines operations
- \* Cable yarding
- \* Cable rigging
- \* Choker setting operations
- \* Log haulage
- \* Other cable yarding methods
- \* Use of cranes and other log manipulation machines
- \* Helicopter

**V. Log Loading**

- \* Manual loading
- \* Grapple loading
- \* Fork loading
- \* Log Scaling and marking
- \* Log sorting
- \* Truck Loading operations

**VI. Miscellaneous/Related Operations**

- \* Fuel storage
- \* Fire prevention

## APPENDIX B

### SAMPLE LETTER TO EMPLOYER

*(Date of letter)*

*(Employer Name and Address)*

Dear Employer,

On *(insert effective date)*, the VOSH Enforcement Program will begin the implementation of a revised specific Local Emphasis Program (LEP) to reduce workplace safety and health hazards associated with logging, sawmill, and sawmill related operations. All operational establishments within the Commonwealth of Virginia and under VOSH jurisdiction will be affected.

By many measures, logging is the most dangerous occupation in the United States. The tools and equipment used in logging, such as chain saws and logging machines, pose hazards to employees wherever they are used. As loggers use their tools and equipment, they are dealing with massive weights and irresistible momentum of falling, rolling, and sliding trees and logs.

The hazards are even more acute when dangerous environmental conditions are factored in, such as uneven, unstable, or rough terrain; inclement weather including rain, snow, lightning, winds, and extreme cold. Also, remote and isolated work sites where health care facilities are not immediately accessible present additional hazards.

Working in a sawmill can be just as dangerous in many respects. The equipment poses numerous hazards. Massive weights and falling, rolling, and/or sliding logs can be very dangerous. The woodworking operations of a sawmill can also be hazardous to employees, particularly when machines are used improperly or without proper guarding. Employees working in sawmills have traditionally suffered from the following types of injuries and/or illnesses: amputations, lacerations, blindness, electric shock, hearing loss, and exposure to hardwood dust causing dermal and respiratory diseases. Manufacturers who have operations involving the sawing of wood or wood products may encounter similar employee hazards.

It is VOSH's desire that employers engaged in these activities take the necessary steps to ensure that adequate safeguards are provided to protect employees. Enclosed with this letter is a CD that contains interactive eTools for the logging and sawmill industries.

Industry-wide practices are examined and the applicable OSHA standards are explained. Both eTools will provide you and your employees with expert assistance in identifying and abating hazards. Another excellent way for employers with 250 or fewer employees to address safety and health in their workplace is to ask for assistance from VOSH Consultation Services which is operated separately from VOSH's enforcement program. Designed for small employers, the Consultation Program can help you identify hazards in your workplace and find effective and economical solutions for eliminating or controlling them. These consultants can even assist you in developing and implementing a safety and health management system for your workplace. You can reach the VOSH Consultation Program by calling 804.786.8707.

The enforcement activities associated with this LEP will commence approximately 30 days from the date of this letter. We look forward to working with you in implementing this important program. Please contact our regional office at *(office phone number)* if you have any questions.

Sincerely,

*(Name)*

Regional Director

## Appendix C

### Glossary of Logging Terms

A - FRAME:	A structure made of two independent columns fastened together at the top and separated by a reasonable width at the bottom to stabilize the unit from tipping sideways.
AN OPERATION:	Any place where logging or log related activities are taking place.
APPROVED:	Approved by the appropriate authority or testing laboratory.
ARCH:	An open-framed trailer or built-up framework used to suspend the leading ends of trees or logs when they are skidded.
AUTHORIZED PERSON:	A person approved or assigned by the employer to perform a specific type of duty(s) or to be at a specific location at a certain time(s).
AXE:	A part of the faller's safety equipment which serves many pounding and chopping functions. Can also be used to plumb the lean of a tree and gauge the height of the tree.
BACKCUT (Felling Cut):	The last of the three cuts required to fall a tree. Located on the opposite side of the tree from the face and minimally 1" above the horizontal cut of the face. The 1" is referred to as stump shot and prevents the tree from kicking back over the stump toward the faller. The backcut must never be continued to a point at which no holding wood remains. Variations of backcutting are discussed in: face-boring backcut, side-boring backcut, and side notching backcut.
BACK LEAN/SIDE LEAN:	Weight of tree is opposite or opposed to the intended felling direction.
BALLISTIC NYLON:	A nylon fabric of high tensile properties designed to provide protection from lacerations.
BAR OR BLADE:	That part of the chain saw upon which the cutting chain travels. Long, thin projection of the chain saw upon which the saw chain travels. Improper use of the bar results in kickbacks and saw cuts. It is the extreme top and bottom of the bar's nose that is sensitive.
BARRIER:	A fence, wall or railing to prevent passage or approach.
BARBER-CHAIR:	Vertical split of a tree during the felling procedure. Generally a result of improper facing and/ or backcutting. Characterized by a portion of the fallen tree being left on the stump.
BASE OF TREE:	That portion of a natural tree not more than three feet above ground level.
BEAVER-TAILING:	Burying the whole bar of the saw while cutting.
BED:	The intended position in which a tree will be felled.
BIGHT OF THE LINE:	Any area where a person is exposed to a controlled or uncontrolled moving line.
BIND OR BOUND:	Series of pressures in a felled tree resulting from objects (terrain, stumps, windfalls, etc.), which prevent the tree from lying flat on the ground. The two major components of bind are impression and tension. It is their directional pressures that determine the technique and procedure used while bucking.
BINDER:	A hinged lever assembly for connecting the ends of a wrapper to tighten the wrapper around the load of logs or materials.
BLOW-DOWN:	Trees that have been blown down as a result of wind.
BLOWN-DOWN:	An area of standing timber which has been blown over by strong winds or storms.
BOOMBOAT:	Any boat used to push or pull logs, boom, bundles, or bags, in booming ground operations.
BOOMSCOOTER:	A small boat, usually less than fourteen feet in length, equipped with an outboard motor, having directional pushing capabilities of 360 degrees.

BORING:	Method of using the nose or tip of the bar to saw into the tree while falling or bucking.
BOTTOM BIND:	One of the five basic tree positions commonly encountered while bucking. A tree in a bottom bind situation is tensioned on the top and compressed on the bottom.
BRAILING:	When tiers of logs, piles, or piles are fastened together with a type of dogline and the ends of the side members are then fastened together for towing.
BROW LOG:	A log or a suitable substitute placed parallel to any roadway at a landing or dump to protect the carrier and facilitate the safe loading or unloading of logs, timber products, or materials.
BRUSH-OUT:	To clean out brush and other material around the base of trees to be felled or logs to be bucked. Gives protection against saw kickback and provides safe footing. ( <i>Same as SWAMP-OUT</i> )
BUCK:	To cut a felled tree into logs.
BUCKING:	Process of sawing a felled tree into sections called logs. Length of the log is dependent on the species of the tree and what type of product it will be made into.
BULLBUCK :	Supervisor of the fallers. Among his responsibilities are assignment of fallers to working areas and insurance that work is done safely and efficiently.
BULLBUCKER:	A foreman or supervisor of falling and bucking operations. ( <i>Same as BULLBUCK</i> ).
BUSHELING:	Method of payment in which the faller is paid for how many trees he falls and bucks. Generally the number of trees is converted into thousands of board feet and a specific amount paid for each thousand board feet.
BUTT:	Bottom of a felled part of a tree.
BUTT LOG:	Portion of a felled tree from the butt to the first bucking cut.
BUTT WELDING:	The practice of welding something end to end.
BYPASS (Dutchman):	Situation created when the two cuts of the undercut (free cut) do not meet exactly, i.e. one bypasses the other. Creates undesirable results such as barber chairing, cracked tree butts, excessive fiber pull and misdirected fall of the tree.
CABLE YARDING:	The movement of felled trees or logs from the area where they are felled to the landing on a system composed of a cable suspended from spars and/or towers. The trees or logs may be either dragged across the ground on the cable or carried while suspended from the cable.
CALKS OR CHALKS:	Heavy leather boots containing numerous steel calks or spikes. A part of 12 the fallers safety equipment used to promote secure footing.
CAT-FACE:	Scar or deformed section at the base of a tree caused by rot or fire.
CLEAR-CUT:	An area in which all of the trees have been or will be felled, bucked and skidded in one operation. When all trees in a given area are felled.
CHOCK:	A block, often wedge shaped, which is used to prevent movement; e.g., a log from rolling, a wheel from turning.
CHOCKER:	A sling used to encircle the end of a log for yarding. One end is passed around the load, then through a loop eye, end fitting or other device at the other end of the sling. The end that passed through the end fitting or other device is then hooked to the lifting or pulling machine.
CHOKER:	A length of wire rope with attachments for encircling the end of a log to be yarded.
COMPETENT PERSON:	One who is capable of identifying hazards in the surrounding or working conditions which are unsanitary, hazardous or dangerous.
CONVENTIONAL FACE:	One of the three types of faces commonly used to fall a tree; the face or undercut is taken from the butt of the tree.
CORNER-NIPPING:	Special technique of partially cutting the extreme outside holding wood corners to prevent root pull, slabbing and alteration of the desired falling direction.

CORNERS:	The extreme outside position of the holding wood on either side of the tree.
CORNERS:	1) Left and right side of the holding wood. 2) Corner of the falling "face".
CORNER BLOCK:	The first block the haulback passes through on its way to the tail block.
CROSSING THE LEAD:	Intentional or unintentional falling of a tree across the established lead of falling direction. Although crossing the lead may be caused by wind, it generally is a result of improper falling technique.
CROTCH LINE:	Two short lines attached to the same ring or shackle, used for loading or unloading.
CRUMMY:	Vehicle used to transport fallers to and from the falling and bucking area.
CULL:	A tree or log which is considered unmerchantable because of defects.
CUT-UP:	Tree or log left standing or suspended with the falling or bucking cuts almost completed.
CUTTER:	One whose primary job is to fall, buck or limb trees before they are moved to the landing area.
DANGER TREE:	A standing tree that presents a hazard to employees due to conditions such as, but not limited to, deterioration or physical damage to the root system, trunk, stem or limbs, and the direction and lean of the tree.
DAY WORK:	Method of payment in which the faller is paid a specific amount for working a day.
Dbh:	Diameter of the tree at breast height.
DEBARK:	To remove bark from trees or logs.
DECK:	A stack of trees or logs.
DESIGNATED PERSON:	An employee who has the requisite knowledge, training and experience to perform specific duties.
DOGS:	A metal plate containing 3 to 5 points or fingers which are located in front of the chain saw protruding parallel with the bar. Dogs allow the saw to be pivoted while falling or bucking.
DOG LINE:	Type of line used to fasten logs or timber products together by the use of dogs.
DOMINO FALLING:	Placing undercuts and backcuts in a series of trees, then "pushing" them with another tree. Domino falling is a dangerous, unacceptable practice.
DOMINO FELLING:	The partial cutting of multiple trees which are left standing and then pushed over with a pusher tree.
DOUBLE ENDED LOGS:	Two logs end to end on the same lay.
DROPLINES:	A short line attached to the carriage or carriage block which is used as an extension to the main line.
DRUM:	A mechanical device on which line is spooled or unspooled.
DUTCHMAN (1):	Situation created when the two cuts of the undercut (free cut) do not meet exactly, i.e. one bypasses the other. Creates undesirable results such as barber chairing, cracked tree butts, excessive fiber pull and misdirected fall of the tree. ( <i>see Bypass</i> ).
DUTCHMAN (2):	( <i>As Used In Falling</i> ): A method used to pull a tree against its lean by leaving a section of the undercut on one corner of the face. The portion left consists of a single saw kerf in one side of the face cut. A single saw kerf must never extend completely across the stump
DUTCHMAN (3):	General reference made to a special falling technique in which the constant relationships of the face, holding wood and backcut are intentionally altered to solve a particular falling problem. (Refer to Kerf Dutchman, Step Dutchman, and Swing Dutchman.)
END BIND:	One of the five basic tree positions commonly encountered while bucking. An end bind situation occurs on steep terrain where the force of gravity closes the bucking cuts.
ESCAPE ROUTE:	A predetermined path of exit used by fallers when falling or bucking. The essential components of an escape route are: selection of the desired direction and distance, prior to falling or bucking and a well-cleared path through which to escape. Also known as retreat path.

EXPERIENCE PERSON:	A person who has been trained and has participated in the subject process for a period of time, long enough to thoroughly acquaint the person with all facets of the process.
EXTREME WEATHER CONDITIONS:	Includes, but is not limited to:  <u>Strong winds</u> (applies to timber areas only) – Wind velocity that reaches sufficient force to blow limbs from standing trees or cause windfalls or prevent cutters from falling of trees in the desired direction;  <u>Impaired vision</u> – Conditions such as falling snow, sleet, mist, fog, rain, dust or darkness which substantially impair visibility to the extent that employees cannot clearly see signals, moving vehicles, equipment and lines, falling trees or other hazards;  <u>Hazardous snow or icing conditions</u> – Snow or ice conditions which prevent escape from hazards such as falling trees, moving logs, vehicles or similar hazards; or lighting.
F.O.P.S.:	Falling object protective structure.
FACE:	Edge of area formed along standing timber as timber is felled.
FACE:	A section of wood sawn and removed from a tree's base. Its removal allows the tree to fall and assists in direction where it will fall. The face is comprised of two separate cuts which have constant relationships; the horizontal cut must be at least 1/3 the diameter of the tree, the sloping cut must be angled enough to allow a wide opening and the two cuts must not cross each other. See notch cut and undercut.
FACE-BORING BACKCUT:	Special alteration of standard backcutting procedure used to handle particular trees such as those which are large or leaning heavily. Face-boring reduces the amount of wood remaining to be cut prior to the final back cutting.
FAIR LEAD:	Sheaves, rolls, or a combination thereof arranged to receive a line coming from any direction for proper lone spooling on to a drum.
FALLER:	Timber faller-bucker (coastal) or tree faller (interior).
FALLER:	Specialist who falls and bucks trees in a safe manner while utilizing as much of the tree as possible. In some areas the faller only cuts the trees down and a buckler saws them into logs.
FELL (Fall):	To cut down trees.
FELLER (Faller):	An employee who fells trees.
FRONT END LOADER:	A mobile machine mounted on a wheeled or tracked chassis, equipped with a grapple, tuck, bucket, or fork-lift device, and employed in the loading, unloading, stacking, or sorting of logs or materials.
GROUNDING:	The placement of a component of a machine on the ground or on a device where it is firmly supported.
GUARDED:	Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable enclosures, covers, casings, shields, troughs, railings, screens, mats, or platforms, or by location, to prevent injury.
GUARD RAIL:	A railing to restrain a person.
GUNNING/SIGHTING:	Technique of aligning the handle bars and/or gunning mark with the desired falling direction. Since the gunning mark and handle bars are at a 90-degree angle to the bar, exact position of the face, in relation to the desired falling location, can easily be established.
GUYLINE:	A line used to support or stabilize a spar.
GYPSY DRUM:	A mechanical device wherein the line is not attached to the drum and is manually spooled to control the line movement on and off the drum.
HANG-UP:	Situation in which a tree is lodged in another and prevented from falling to the ground. Results from a number of causes such as improper facing and/or backcutting and wind. Can be very dangerous.
HAULBACK:	A line used to pull the buttrigging and mainline to the logs to be yarded.
HAULBACK BLOCK:	Any block the haulback line passes through including the corner block and tailblock.



HAYRACK:	A type of loading boom where two tongs are used and logs are suspended. A transporting vehicle with multiple sets of bunks attached to a rigid frame usually used for hauling logs.
HAZARDOUS FALLING AREA:	The area within a circle centered on the tree being felled and having a radius not less than twice the height of that tree.
HEAD LEAN:	One of the two natural leaning forces found in most trees. Head lean is the most prominent outward slant or lean of a tree in reference to its base.
HEAD TREE:	The tree where yarding and/or loading takes place. ( <i>See Spar</i> )
HEALTHCARE PROVIDER:	A health care practitioner operating within the scope of his/her license, certificate or legally authorized practice.
HEEL BOOM:	A type of loading boom where one tong is used and one end of the log is pulled up against the boom.
HIGH LEAD:	A system of logging wherein the main line is threaded through the main line block, which is attached near the top of the spar, to obtain a lift of the logs being yarded.
HOBO LOG or HITCHHIKER:	A free or unattached log that is picked up by a turn and is transported with the turn.
HOLDING WOOD:	Section of wood located between the face and the backcut. Its purpose is to prevent the tree from separating from the stump until it has been committed to the face. It also helps direct where the tree will fall. The holding wood must never be completely sawn off.
HOOKTENDER:	The worker that supervises the method of moving the logs from the woods to the landing.
HORIZONTAL FACE CUT:	First of the two cuts required to face a tree. Its depth is minimally 1/3 the diameter of the tree and level.
HUMBOLDT FACE:	One of the two types of faces commonly used to fall a tree. The face section is removed from the stump of the tree.
HUNG/LODGED TREE:	See Hang-up.
HYDRAULIC JACK:	A mechanical device, powered by internal pressure, used to control the direction in which a tree is to be felled.
HYDRAULIC JACK PAD:	Thick steel pad which is placed between the hydraulic jack plunger and butt of the tree to distribute the upward push over a larger area.
IN THE CLEAR:	A position within the work area where the probability of hazardous contact with falling trees, moving logs, rootwads, chunks, material, rigging and equipment is minimized by distance from the hazards and/or use of physical barriers, such as stumps, trees, terrain or other objects providing protection.
JACK-POT:	An area in which the trees have not been felled in any particular lead or direction. Such a situation is a result of poor falling technique.
JACK STRAWED:	Trees or logs piled in an unordered manner.
JAGGERS:	Any projecting broken wire in a strand of cable.
KERF:	Space resulting from the cutting of a saw chain. The width of a cut is referred to as the kerf.
KERF DUTCHMAN:	A special falling technique in which the constant relationships of the face, holding wood, and backcut are intentionally altered to solve a particular falling problem. The faller can, with the use of the Kerf Dutchman, force a tree to jump off the stump. If understood and properly used, the Kerf Dutchman can in specific instances solve problems of breakage and crossing roads or creeks.
KICK-BACK:	A strong thrust of the saw back toward the faller generally resulting from improper use of the nose of the bar or the pinching of the bar in a cut. Kickback causes loss of control of the saw and this in turn results in numerous saw cuts each year. Kick-back also refers to a tree jumping back over the stump toward the faller. This kind of kick-back generally results from a tree being felled into standing timber and/or lack of stump-shot.
KICKER:	A piece of the face, or an equivalent object, placed in one side of a face cut to pull the tree from its lean as it falls.

<b>KNOB:</b>	A metal ferrule attached to the end of a line.
<b>LANDING:</b>	Any place where logs are laid after being yarded and before transport to the worksite.
<b>LAY:</b>	Refers to either the position in which a felled tree is lying or the intended falling place of a standing tree.
<b>LEAD:</b>	Predetermined direction of falling the trees of a particular strip or area in regard to the relation of the trees to one another and their combined relationship to the surrounding terrain.
<b>LEAD:</b>	The established direction in which all trees in a quarter or strip are to be felled, usually governed by the terrain of the area, or its general slope or skid road system.
<b>LEAN:</b>	Refers to the directional tilt of a tree away from its vertical position. Many times two lean forces may be in play in the same tree. They are referred to as head lean and side lean. The lean, or leans, of a tree can be easily established with the use of a plumb-bob or axe handle.
<b>LEANER:</b>	A tree that leans excessively, not growing straight.
<b>LEG PROTECTOR:</b>	Ballistic nylon pad attached to one or both pant legs to protect the leg from contact with the saw chain. It can be attached to either the inside or outside of the pant leg.
<b>LIFT TREE:</b>	An intermediate support for skylines.
<b>LIGHTNING STRIKE:</b>	Tree that has been struck by lightning.
<b>LILY PAD:</b>	A thin slice of wood, sometimes taken off the stump and used to cover the saw if it's to be left out.
<b>LIMB LOCK (1):</b>	A series of cuts made on limbs to release back or side pressure and create a stay in the limb that will prevent the limb from either kicking back and striking the logger or pinching the saw.
<b>LIMB LOCK (2):</b>	Limbing technique used to more safely handle back pressure and sideways pressure on limbs in order to reduce the likelihood of a limb under pressure kicking back and striking the logger's leg or pinching the saw. Two bypassing cuts are made, one on the top side and one on the bottom side of the limb (top and bottom refer to the top and bottom of the limb as if the tree were standing up). The cut on the top of the limb is made closer to the trunk of the tree and the cut on the bottom is made further out on the limb. This creates a step in the limb which helps prevent the limb from kicking out or back toward the logger.
<b>LIMBING:</b>	To cut branches off felled trees.
<b>LOADING BOOM:</b>	Any structure projecting from a pivot point to guide a log when lifted.
<b>LODGED TREE: or (Hung Tree)</b>	A tree leaning against another tree or object which prevents it from falling to the ground.
<b>LOG:</b>	A segment sawed or split from a felled tree, such as, but not limited to, a section, bolt, or tree length.
<b>LOG DUMP:</b>	A place where logs are removed from transporting equipment. It may be either dry land or water, parbuckled over a brow log or removed by machine.
<b>LOGGING MACHINE:</b>	A machine used or intended for use to yard, move, or handle logs, trees, chunks, trailers, and related materials or equipment. This shall include self-loading log trucks only during the loading and unloading process.
<b>LOGGING OPERATIONS:</b>	Operations associated with felling and moving trees and logs from the stump to the point of delivery, such as, but not limited to, marking danger trees and trees/logs to be cut to length, felling, limbing, bucking, debarking, chipping, yarding, loading, unloading, storing, and transporting machines, equipment and personnel to, from and between logging sites.
<b>LOG STACKER:</b>	A mobile machine mounted on a wheeled or tracked chassis, equipped with a frontally mounted grapple, tusk, or forklift device, and employed in the loading, unloading, stacking or sorting of logs.
<b>LONG-BUTT:</b>	After a tree is felled a section of the butt-end may be sawn off because of rot.
<b>LONG STICKS:</b>	An overlength log that creates a hazard by exceeding the safe perimeters of the landing.
<b>MACHINE:</b>	A piece of stationary or mobile equipment having a self-contained power plant that is operated off-road and used for the movement of material. Machines include, but are not limited to, tractors, skidders, front-end

loaders, scrapers, graders, bulldozers, swing yarders, log stackers, log loaders, and mechanical felling devices, such as tree shears and feller-bunchers. Machines do not include airplanes or aircraft (e.g., helicopters).

MAINLINE:	The line attached to the buttrigging used to pull logs to the landing.
MATCH CUTTING:	The felling of trees without using an undercut.
MECHANIZED FALLING:	Falling of standing timber by a self-propelled mobile wheeled or tracked machine equipped with a shear or other powered cutting device.
MOBILE LOG LOADER:	A self-propelled log loading machine mounted on wheels or tracks.
MOBILE YARDER:	A logging machine mounted on wheels, tracks, or skids, incorporating a vertical or inclined spar, tower, or boom.
MUST:	The same as "shall" and is mandatory.
NEW AREA OR SETTING:	A location of operations when both the loading station and the yarder are moved.
NO-BIND:	One of the five basic tree positions commonly encountered while bucking. A tree in a no-bind situation is usually found in flat terrain.
OFFSIDE:	1) Side of tree opposite to which the faller stands when falling or bucking. 2) Side of body opposite to that normally used to hold saw.
PASS LINE:	A small line threaded through a block at the top of the spar to assist the high climber.
PEELER:	Logs used for peeling into thin layers called veneer for the manufacture of plywood.
PERMISSIBLE:	(As applied to any device, equipment or appliance)- such device, equipment or appliance has the formal approval of the United States Bureau of Mines, American Standards Association, or National Board of Fire Underwriters.
PLUMB:	To gauge or assess the various types of lean in a tree.
PLUMB-BOB:	Special tool used to establish the outward lean or slant of a tree in relation to its base. Generally a lead weight attached to piece of string is used.
PORTABLE SPAR OR TOWER:	A movable engineered structure designed to be used in a manner similar to which a wood spar tree would be used.
PUSHER OR DRIVER:	Use of a tree to drive or pushover another that does not fall although it has been faced and backcut. Such a situation results if a tree hangs-up, sits back or is skybound.
PUSHING:	When a tree has been undercut and backcut and will not fall, the faller may as a last resort "push" this tree by falling another into it.
QUALIFIED PERSON:	A person, who by possession of a recognized degree, certificate, professional standing, or by extensive knowledge, training, and experience, has successfully demonstrated ability to solve or resolve problems relating to the subject manner, the work, or the project.
QUARTER:	That area or portion of standing timber assigned to a faller.
RATED CAPACITY:	The maximum load a system, vehicle, machine or piece of equipment was designed by the manufacturer to handle.
REACH:	A steel tube or wood timber or pole connected to the truck and inserted through a tunnel on the trailer. It steers the trailer when loaded and pulls the trailer when empty.
RECEDING LINE:	The line on a skidder or slackline comparable to the haulback line on a yarder.
RELOAD:	An area where logs are dumped and reloaded or transferred as a unit to another mode of transportation.
RIGGING CREW:	Crew and equipment that drags logs to an area called a deck or landing. From the deck, logs are loaded onto trucks for transport.

RIGGING CUT:	The bucking of non-merchantable trees which have been felled or blown down to facilitate easier access to the area by the rigging crew.
RIGGING CUT OR WEAKENING CUT:	A tree may be lying in such a position that a normal bucking cut cannot be made safely. In order to facilitate yarding or skidding, the faller will make partial bucking cuts from a safe position, perhaps two log-lengths apart.
ROLLWAY:	Any place where logs are dumped and they roll or slide to their resting place.
ROOT PULL:	The pulling out of a portion of a tree's root system. Generally a result of not cutting up the corners of the holding wood close enough on a large or heavily leaning tree.
ROOTWAD:	The ball of a tree root and dirt that is pulled from the ground when a tree is uprooted.
R.O.P.S.:	Roll over protection structure.
RUNAWAY:	A tree that has rolled or slid downhill below previously felled and bucked timber.
RUNNING LINE:	Any line that moves.
RUSSIAN COUPLING:	An incomplete bucking cut as a result of an unsafe bucking situation. In such an instance the faller only partially cuts through the tree. This situation can be very dangerous to the rigging crew. If a Russian coupling is left, the tree should be marked and supervisors notified.
SAFETY FACTOR:	The ratio of breaking strength to a safe working strength or loading.
SAFETY GLASS:	A type of glass that will not shatter when broken.
SAIL BLOCK:	A block hung inverted on the sail guy to hold the tong block in proper position.
SAW LOG:	Logs taken to be manufactured in lumber.
SCALER:	The person who measures the diameter and length of the logs determines specie and grade, and makes deductions for footage calculations.
SCHOOL-MARM:	A tree stem that branches into two or more trunks or tops.
SEGMENTS:	Calculation arrived at by dividing the height (in feet) of a tree by the diameter at breast height (in feet). Used to determine whether or not a tree can be successfully wedged over against the lean.
SERVICEABLE CONDITION:	A state or ability of a tool, machine, vehicle or other device to operate as it was intended by the manufacturer to operate.
SET:	Combination of two fallers, or one faller and one buckler working together.
SET OR GANG:	May consist of one faller who fells and bucks timber. Might be one faller and one buckler working as a team. (This term was used in "hand" falling era also; i.e., two fallers, two bucklers, to form a four-man set or gang before chain saws came into use.)
SET-BACK:	Occurs when a tree settles back opposite to the intended direction of fall; hazardous situation when the faller loses control of a tree.
SHALL:	A requirement that is mandatory.
SHALLOW NOTCHES:	An undercut that has not been sawn deeply enough into the tree.
SHEAR LOG:	A log placed in a strategic location to divert passage of objects.
SHORE SKIDS:	Any group of timbers spaced a short distance apart on which logs are rolled.
SHOULDER PAD:	Leather, canvas or felt pad threaded throughout the suspenders on one shoulder to protect the body from contact with a saw being carried.
SIDE BIND:	One of the five basic tree positions commonly encountered while bucking. A tree in a side bind situation is compressed on one side and tensioned on the other.

SIDE-BORING BACKCUT:	Intentional alteration of the standard backcutting procedure to prevent loss of control of a tree and/or its barber-chairing. Side-boring is an effective technique of reducing the amount of holding wood required to fall a tree. The nose of the bar is pushed into the tree behind the face and 2" above the horizontal cut.
SIDE LEAN:	One of the two natural leaning forces found in many trees. Compared to head lean, side lean is the lesser pronounced lean.
SIDE-NOTCH:	Additional side saw cuts made to prevent "barber-chair" or to facilitate sawing large trees into logs.
SIDE-NOTCHING BACKCUT:	Another intentional alteration of standard backcutting to prevent loss of control and/or barber-chairing. This method also reduces the amount of holding wood remaining to be cut by cutting each side prior to the final across the back severing.
SIDEWINDER:	A limb or sapling that is bent under a tree that has been felled. Unintentionally cutting them is extremely dangerous. In some areas sidewinder refers to the falling of a tree in an unintended direction. ( <i>See Spring Pole</i> ).
SINGLE-JACK:	A faller who falls and bucks trees in an area by himself.
SIGNAL PERSON:	The person designated to give signals to the machine operator.
SIT-BACK:	Refers to a tree that settles back on the stump closing the kerf of the backcut. Generally a result of improper determination of the tree's lean and/or of wind.
SWASH:	The use of a natural physical object, such as a tree, to change the direction of a line rather than with a block.
SKIDDER:	A machine or animal used to move logs or trees to landing.
SKIDDING:	The yarding of trees or logs by pulling or towing them across the ground.
SKYBOUND:	A tree that fails to fall after being faced and backcut. Generally a result of picking the wrong lean.
SKYLINE:	The line suspended between two points on which a block or carriage travels.
SLACK LINE:	A form of skyline where the skyline cable is spooled on a donkey drum and can be raised or lowered.
SLACK PULLER:	Any weight or mechanical device used to increase the movement of a line when its own weight is inadequate.
SLABBING:	Generally a result of improper technique and/or sequence of bucking cuts which result in a lateral split of a log.
SLIPSHOD:	Poor procedure or technique of falling or bucking.
SLOPE (Grade):	The increase or decrease in altitude over a horizontal distance expressed as a percentage. For example, a change of altitude of 20 feet (6 m) over a horizontal distance of 100 feet (30 m) is expressed as a 20 percent slope.
SLOPING FACE CUT:	The second of the two cuts required to face or undercut a tree. It must be angled sufficiently to allow a wide mouthed face opening.
SNAG:	Any standing dead tree or portion thereof.
SNAG:	A dead or dying tree that is still standing. Snags must be felled prior to beginning work on an area. Special procedure must be observed when falling snags.
SNAP TOP:	Broken off top of a tree as a result of wind and/or rot.
SNIFE OR TRIM:	Allowance for falling and bucking cuts; extra length added to regular log length.
SPAR/SPAR TREE:	A device rigged for highlead, skyline or slackline yarding.
SPEEDER:	A small self-powered vehicle that runs on a railroad track.
SPIKE TOP:	A live tree that has a dead barkless top.
SPIKED TOP:	When the top of a tree dies and loses its branches, leaving a tall, dry spike of dead wood. Usually occurs in cedar.

SPRING BOARD:	Metal-toed plank used to elevate the faller above a large swelled butt or to allow him to fall on extremely steep ground. A notch is sawn into the side of the tree and spring board toe inserted into it. The faller stands on this plank to face and backcut.
SPRING POLE:	A tree, segment of a tree, limb, or sapling that is under stress or tension due to the pressure or weight of another object.
SQUARE LEAD:	The angle of 90 degrees.
SQUIRREL:	A weight used to swing a boom when the power unit does not have enough drums to do it mechanically.
SQUIRREL TREE:	A topped tree, guyed if necessary, near the spar tree in which the counter balance (squirrel) of a tree rigged boom is hung.
STAGGED OR BOBBED PANTS:	Pants whose cuffs are removed and length shortened to facilitate unrestricted movement for working and escaping.
STAGGED TROUSERS:	The faller's trousers are maintained without cuffs and are shortened to prevent tripping hazards.
STEP DUTCHMAN:	An intentional alteration of standard falling technique to solve problems of maintaining a lead. The Step Dutchman is put in play by sawing off the lean side holding wood and placement of a step (rock, wood) into the face to force the tree to pivot to the desired direction.
STIFF BOOM:	Two or more boom sticks wrapped together on which boom persons walk or work.
STINGER:	Metal nail-like affair attached to the end of a logger's measuring tape. After inserted, it will secure one end of the tape allowing the faller to proceed down the tree to accurately determine the desired length of the log.
STRAP:	Any short piece of line with an eye or "D" in each end.
STRAW LINE:	A small line used for miscellaneous purposes.
STRIP OR QUARTER:	Designated area of trees established by natural boundaries (roads, streams, etc.), or ribbons within which fallers are assigned.
STRIP LAYOUT:	Refers to the best method of falling the trees of an area in relation to themselves and the terrain. Strip layout is the faller's first consideration in the falling sequence.
STUB:	A standing dead tree characterized by a broken off top and very few or no remaining branches.
STUMP SHOT:	Two inches or more height difference between the horizontal cut of the face and the backcut. The difference in height establishes an anti-kick step that will prevent a tree from jumping back over the stump toward the faller.
SWAMPING:	The falling or cutting of brush around or along a specified place.
SWAMPOUT:	Refers to the clearing away from the base of a tree and bucking area loose debris that could hamper footing, use of tools, and/or escaping. Preparing the working and escaping area is an essential part of the falling procedure. ( <i>Same as BRUSH-OUT</i> )
SWIFTER:	A piece of equipment used to tie the side sticks of a log raft together to keep the raft from spreading.
SWING CUT:	A back cut in which the holding wood on one side is cut through.
SWING DUTCHMAN:	A special falling technique which, when used properly, allows the faller to minimize breakage and maintain a lead. As with the Step Dutchman, this alteration of falling technique caused the tree to swing. The swing results because the holding wood on the lean side has been severed. The swing Dutchman does not utilize a step and will not pivot a tree as much as will the Step Dutchman.
TAIL BLOCK:	The haulback block at the back end of the show.
TAIL HOLD:	An anchor used for making fast any line or block.
TAIL TREE:	The tree at the opposite end from the head tree on which the skyline or other type rigging is hung.
TANG:	Sharp or pointed end of chain saw file.

TEEPEE:	Unintentional lodging of two or more trees in another standing tree generally caused by improper or poor falling technique.
THIRD FACING CUT:	Special technique of making an "extra" facing cut to promote a proper face. Root protrusions, cat-faces and rot are some of the common sources that require a third facing cut.
THROW BACK:	Portions of trees or limbs propelled back toward the timber faller by the action of a tree falling through other standing trees.
TIE DOWN:	Chain, cable, steel strips or fiber webbing and binders attached to a truck, trailer or other conveyance as a means to secure loads and to prevent them from shifting or moving when they are being transported.
TIGHT LINE:	When either the mainline or haulback are held and power is exerted on the other or when power is transported.
TIN PANTS AND JACKET:	Outside clothing generally made of canvas material that is waterproofed.
TONG LINE BLOCK:	The block hung in a boom through which the tong line operates.
TONGUE:	A device used to pull and/or steer a trailer.
TONGUE AND GROOVE:	Bucking technique used to hold logs in place after bucking cuts are made. Used where trees can slide or roll after bucking.
TOP BIND:	One of the five basic tree positions commonly encountered while bucking. A tree in a top bind situation is compressed on top and tensioned on the bottom.
TOP LOCK:	Limbing technique used to cut off the tops of felled trees whose stem is under stress. Two offset and bypassing cuts are made in the stem near the top of the tree. The first cut is made on the side of the tree that is under compression. The second cut is offset from the first and made on the side of the tree that is under tension.
TOP LOCK:	Partial cutting of the top of a felled tree under compression or tension by using two offset and bypassed cuts.
TOPPING:	Cutting off the top section of a standing tree.
TRACTOR:	A machine of wheel or track design used in logging.
TRACTOR LOGGING:	The use of any wheeled or tracked vehicle in the skidding or yarding of logs.
TRANSFER:	Changing of logs in a unit from one mode of transpiration to another.(As Used in Loading)
TREE JACK:	A grooved saddle of wood or metal rollers contained within two steel plates, attached to a tree with a strap, used as a guide for skyline, sail guy, or similar static line. It is also formed to prevent a sharp bend in the line.
TREE JACK (SHOE):	A grooved saddle of rollers contained within two steel side plates attached to a tree with a strap as a guide for skyline, sail guy or similar static line.(Other than for Directional Falling Use)
TREE PLATES:	Steel bars sometimes shaped as elongated J's, which are fastened near the top of a tree to hold guyline and prevent them from cutting into the tree when tightened. The hooks of the J are also used to prevent the mainline block strap from sliding down the tree.
TREE PULLING:	A method of falling trees in which the tree is pulled down with a line.
TRIM:	An allowance of length added to the desired length of a log. (Example: desired length 17 feet, actual length cut 17 feet 6 inches).
TURN:	Any log or group of logs attached by some means to power and moved from a point of rest to a landing.
UNDERCUT:	A notch cut in a tree to guide the direction of the tree fall and to prevent splitting or kickback.
UPROOTED:	Trees that have been blown over as a result of wind.
VEHICLE:	A car, bus, truck, trailer or semi-trailer owned, leased or rented by the employer that is used for transportation of employees or movement of material.
VEHICLE/CREW BUS:	A car, bus, truck, trailer or semi-trailer owned, leased, or rented by the employer that is used for transportation of employees or movement of material.

WEDGE:	A plastic or metal tool used by a faller to prevent a tree from falling backwards, redistribute a tree's weight to a desired direction and to prevent the bar from being pinched while bucking.
WEDGE OR PIE:	A section sawn from a tree during the bucking sequence to allow for the directional pressures of various bind situations. Splits, slabs and excessive wood-pulling are minimized when a wedge is sawn.
WIDENING OR DAYLIGHTING:	Taking an additional strip of timber off the right-of-way or quarter after the road is in.
WIDOW MAKER:	Any loose overhead debris such as limbs or tree tops that may fall at any time. Widow makers are extremely dangerous and present the faller with a continual source of danger. Limb or other loose material dropped or thrown from a tree toward the faller as the tree is felled.
WINCHING:	The winding of cable or rope onto a spool or drum.
YARDING:	The movement of logs from the place they are felled to a landing.



## Appendix D

### Random Number List

The list of random numbers provided is designed to order randomly a list of logging/sawmill employers which contains 100 or fewer employers.

A larger list of random numbers can be supplied from the Office of Statistics\* upon request. The following table has been produced by ordering the integers from 1 to 100 randomly listed in five columns. For purposes of random selection, the attached random number lists may be used or any other authentic random number list available.

The procedure to be used is as follows:

1. Make all modifications to the establishment list.
2. Number the establishment list sequentially; i.e., assign "1" to the first employer on the list, "2" to the second, etc.
3. If the number of total employers is more than 100, obtain a larger table as necessary.
4. Cross out all numbers on the random number list which are greater than the number of employers on the establishment list.
5. Include all employers in the inspection cycle whose sequence number is listed in column I. If the size is larger than the size of column I, start at the top of column II and select enough numbers to fill out the inspection cycle
6. Draw a line after the last random number used; this will be the starting point for the next inspection cycle.

TABLE D -1 Random Number Table (100 Numbers)				
Column I	Column II	Column III	Column IV	Column V
94	98	89	20	83
64	97	80	57	58
18	33	15	65	41
90	11	45	25	93
92	52	85	54	46
16	40	84	6	26
74	75	49	71	87
22	37	13	44	62
47	72	29	70	21
14	82	19	48	30
100	63	8	78	34
39	35	73	88	23
77	56	55	9	28
86	69	2	60	99
51	79	32	43	7
38	42	81	95	59
67	12	96	91	3
24	68	31	53	66
1	61	27	17	36
5	76	50	10	4

#### EXAMPLE:

Suppose there are 70 firms on the establishment list and an inspection cycle containing 12 firms is needed.

Random number list one is selected and all numbers greater than 70 are crossed out.

The first inspection cycle would then contain firms with the following sequence numbers: 64, 18, 16, 22, 47, 14, 39, 51, 38, 67, 24 and 1.

Draw a line under the number 1 and start the next cycle with the numbers 5, 33, 11 on down Column II.

\* Prepared by the OSHA Office of Statistics October 11, 1994