



OSHA REGIONAL NOTICE

U.S. DEPARTMENT OF LABOR

Occupational Safety and Health Administration

DIRECTIVE NUMBER: CPL 02-07-01C | **EFFECTIVE DATE:** October 1, 2011

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

REGIONAL IDENTIFIER: Region VII

ABSTRACT

Purpose: This Notice continues the Local Emphasis Program (LEP) policies and procedures for the purpose of conducting inspections of logging industry activities and sawmills within the St. Louis Area Office jurisdiction. The employers to be targeted are in the logging industry (SIC Code 2411), saw and planing mills (SIC code 2421), hardwood dimension and flooring mills (SIC code 2426), special product sawmills (SIC code 2429), and millwork (SIC code 2431) and corresponding NAICs codes 113310, 321113, 321911, 321912, 321918, 321920, 321999, 337215.

Scope: This Notice applies to the St. Louis Area Office.

References: OSHA Instruction CPL 04-00-001, Procedures for Approval of Local Emphasis Programs, November 10, 1999; OSHA Instruction CPL 02-00-150, Field Operations Manual (FOM), April 22, 2011; OSHA Instruction 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995; CPL 02-00-051, Enforcement Exemptions and Limitations under the Appropriations Act, May 28, 1998; and OSHA's Website for electronic tools (eTools) @www.osha.gov/SLTC/eTools

Action Office: St. Louis Area Office – Region VII

Originating Office: Kansas City Regional Office

Contact: Enforcement Programs (816) 283-8745

By and under the authority of:

Charles E. Adkins, CIH
Regional Administrator

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- I. Purpose. This Notice continues the policies and procedures for implementing a local emphasis program (LEP) which ties in the entire logging and sawmill industries by involving loggers, sawyers and employees. This LEP hopes to achieve a reduction in the severity and number of injuries and fatalities occurring in these occupations. It will utilize an approach which encompasses training, education and enforcement.
- II. Scope. This Notice applies to the St. Louis Area Office jurisdiction. This LEP establishes OSHA's procedure for programmed comprehensive safety and health inspections of establishments engaged in logging and sawmill activities (SIC Codes 2411, 2421, 2426, 2429, 2431 and corresponding NAICs codes 113310, 321113, 321911, 321912, 321918, 321920, 321999, 337215) pursuant to the provisions contained in the Field Operations Manual (FOM).
- III. References.
 - A. OSHA Instruction CPL 02-00-150, Field Operations Manual, April 22, 2011
 - B. OSHA Instruction CPL 02-00-025, Scheduling System for Programmed Inspections, January 4, 1995
 - C. OSHA Instruction CPL 02-00-051, Enforcement Exemptions and Limitations under the Appropriations Act, May 28, 1998
 - D. OSHA Instruction CPL 04-00-001, Procedures for Approval of Local Emphasis Programs, November 10, 1999
 - E. OSHA's Website for electronic tools (eTools) @ www.osha.gov/SLTC/etools.
- IV. Expiration. This Notice expires September 30, 2012.
- V. 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. The St. Louis Area Office conducted 4 fatality inspections in the logging industry (SIC Code 2411) from 1999 through 2004. Two of these fatalities occurred in 2004. In addition, the St. Louis Area Office conducted 2 fatality inspections since 1974 in saw and planing mills (SIC Code 2421) and 1 fatality inspection in 2002 in hardwood dimension and flooring mills (SIC Code 2426).

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.

According to the U.S. Department of Labor, Bureau of Labor Statistics, in the years 2002 and 2003, logging workers had the highest fatality rate in the nation. Due to the unique and potentially life threatening hazards presented by this industry, a local emphasis program (LEP) in this area was initiated in 2005 for all logging and sawmill employers. This LEP, 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, has been renewed annually.

From inception through FY 2009, 120 inspections were conducted under the LEP, with an average of 2.7 violations per inspection. The percent of violations cited Serious was 76.6%. During that time period, 88.3% of the inspections which resulted in the issuance of a citation involved a serious, willful, and/or repeat violation.

During FY 2010, 7 inspections were conducted under this LEP, with an average of 1.7 violations per inspection. During this timeframe, 71.4% of the inspections which resulted in the issuance of a citation involved serious, willful, and/or repeat violations.

From October 1, 2010 to August 25, 2011, 17 inspections were conducted under this LEP, with an average of 2.0 violations per inspection. During this timeframe, 46% of the inspections that resulted in the issuance of a citation involved serious, willful, and/or repeat violations.

According to the most recent U.S. Department of Labor, Bureau of Labor Statistics, in 2008 logging workers had the second highest fatality rate in the nation. Due to the continued high number of fatalities in this industry, and the serious nature of hazards inherent in logging/sawmill activities, the St. Louis Area Office will continue this LEP.

- VI. Procedures. The following procedures have been utilized to notify affected employers about the program.
 - A. Outreach. Prior to the initiation of inspection activity under this LEP, the St. Louis Area Office mailed information to the targeted employers. The information included 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 Missouri 21(d) Consultation Program.

The St. Louis Area Office will utilize their resources to assist all the logging

and sawmill companies on the inspection list, as follows:

1. Provide a package of materials 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 Missouri 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 eTool Advisors:
 - (a) OSHA Training Institute Course No. 3070: Sawmills and Logging Operations
 - (b) OSHA eTools:
 - OSHA's Wood Products: Logging eTool
 - OSHA's Wood Products: Sawmills eTool
 - OSHA's Wood Products: Woodworking eTool

Employers will be encouraged to take a pro-active approach towards safety and health on the job to reduce the number of injuries and fatalities by developing a program to:

- (a) Conduct complete and comprehensive safety and health audits of their logging and/or sawmill operations and activities and maintain written documentation of all findings.
- (b) Ensure that the following practices are not found 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 B for glossary of logging terms).
- (c) Use proper felling techniques (See Logging eTool, User Guide, Lesson 4. Tree Falling at www.osha.gov/SLTC/eTools) to provide no bypass notching, properly placed back cuts, adequate hinge wood, and a retreat path (See Appendix B).
- (d) Address first aid/CPR training.
- (e) Maintain adequate separation of logging operations (maintain audible/visual distances and communication).

- (f) Ensure that the following are maintained during machine operation:
 - Safe distance
 - Operator cab enclosures/seat belt
 - Set parking brakes
 - Ground movable elements when dismantled
 - Safe operations on slopes
 - Machine maintenance procedures to include lockout/tagout.
- (g) Identify and abate machine guarding and amputation hazards including but not limited to struck-by, caught-in and rotating parts.
- (h) Focus on and immediately correct the hazards and deficiencies found during the audit.
- (i) Develop and implement a comprehensive safety & health program and training for employees in logging operations and sawmills.

B. Site Selection. The St. Louis Area office generated an establishment list of all known employers involved in logging and sawmill operations in the St. Louis Area Office jurisdiction. The list was generated from information sources, such as the U.S. Forest Service, HARRIS INFOSOURCE (2005 Missouri Directory of Manufacturers), Missouri Department of Natural Resources, Missouri Workers Compensation Administration, Internet site (www.Smartpages.com with the keywords "Sawmills" and "Logging" in Missouri), and the Missouri Manufacturer's Association. The master list was first sorted by county and secondly by establishment within the counties.

NOTE: Establishments employing ten or fewer employees are being potentially targeted by this LEP, since many logging sites and sawmills in the St. Louis Area Office jurisdiction employ ten or fewer employees. The SIC codes of 2411, 2421, 2426, 2429, and 2431, as well as their corresponding NAICS codes of 13310, 321113, 321911, 321912, 321918, 321920, 321999, 337215, are not included on the current list of codes on the Enforcement Exemptions and Limitations under the Appropriations Act as described in OSHA Instruction CPL 02-00-051, Appendix A, or successor guidance, which restricts OSHA's ability to inspect employers in certain industries which have 10 or fewer employees.

C. Inspection Cycles. The Random Sample Function of Microsoft Access, a relational database program, was used to develop inspection cycles from the master list. This function was used to select a random sample of two (2) counties from the master list of counties. All establishments located in these two randomly selected counties constituted the first inspection cycle. Establishments within a 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. Carry-overs will be allowed, as provided in OSHA Instruction CPL 02-00-025, paragraph B.1.b.(1)(e).

Subsequent cycles were developed, and will continue to be developed, in the same manner. Once a county has been selected and the inspections completed, it will be removed from the master list of counties. Nineteen cycles have been completed under the prior versions of this LEP, and this renewal of the LEP will continue with cycle 20.

1. Additions.

- a. While in the process of conducting inspections under this LEP, if a CSHO observes a logging or sawmill site that is not on their current county inspection cycle, but it is in the county covered by their current county inspection cycle, the site will be added and an inspection will be conducted.
- b. While in the process of conducting inspections under this LEP, if a CSHO observes a logging or sawmill site that is not on their current county inspection cycle, and it is not in the county covered by their current county inspection cycle, the site will be added to the appropriate county inspection cycle upon their return to the office. If the county inspection cycle involved has already been completed, the site will not be added.

2. Deletions. Companies that have had a comprehensive safety and health inspection within the past 24 months, and companies that have gone out of business, will be removed from the list.

D. Inspection Procedures.

1. All inspections scheduled at logging and sawmill sites will be comprehensive safety and health inspections 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.
2. Noise exposure and hearing conservation shall be addressed during all comprehensive inspections.
3. Because of the remote locations of most logging sites and sawmills, inspections will normally be conducted by a team of two CSHOs. CSHOs are authorized to contact the U.S. Department of Agriculture, Forest Service, Mark Twain National Forest, 401 Fairgrounds Road, Rolla, MO 65401, (573) 364-4621 to obtain Forest Rangers assistance, if available.

Forest Rangers are familiar with the location and status of the logging camps. They are also equipped to handle emergencies, i.e. snake bites, etc. However, Forest Rangers will not be participating in OSHA's inspection procedures.

4. If the inspection site has multiple employers, a comprehensive safety and health inspection will be conducted for all employers present.
5. Unprogrammed inspections related to fatalities/catastrophes, complaints or referrals will be conducted in accordance with the FOM.

VII. IMIS Coding.

- A. Inspections that are targeted as a result of this LEP will be coded as "LOGSAW" in block 25c and as Programmed Planned in block 24.
- B. Inspections that are conducted as a CSHO referral and inspected during the current inspection cycle will be coded as LOGSAW in block 25c and Programmed Related in block 24.
- C. Inspections that are conducted as a result of a complaint, referral by another agency, or fatality/catastrophe will be coded as LOGSAW in block 25c and appropriate unprogrammed activity in block 24.
- D. Where "Program Related" inspections are conducted, they will be so indicated on the OSHA-1.

VIII. Evaluation. Annual evaluations of the program will be submitted by the Area Director in accordance with CPL 04-00-001. This evaluation will be forwarded to the ARA/EP, no later than November 15, 2012.

Charles E. Adkins, CIH
Regional Administrator, Region VII

Date

Office of the Solicitor Concurrence

Date

Distribution: Regional Solicitor
Directorate of Enforcement Programs
Regional Administrator/Deputy Regional Administrator
Assistant Regional Administrators
Area Directors
Supervisory Investigator
Labor Liaison

APPENDIX A

SAMPLE LETTER TO EMPLOYER

Date

Dear Employer,

On _____, the Occupational Safety and Health Administration (OSHA) St. Louis Area Office will begin the implementation of a Local Emphasis Program (LEP) to reduce workplace safety and health hazards associated with logging and sawmill operations. All operational sites within the St. Louis Area Office jurisdictional boundaries 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 and/or remote and isolated work sites where health care facilities are not immediately accessible. Two such fatalities were caused by many of these factors within the last year.

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.

It is OSHA's desire that employers 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 Missouri On-Site Safety and Health Consultation Service and is operated separately from OSHA'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 consultation program for Missouri by calling (573) 751-3403.

The enforcement activities associated with this LEP will commence 30 days from the date of this letter. We look forward to working with you in implementing this important program. Please contact our office at (314) 425-4249 if you have any questions.

Sincerely,

William D. McDonald, CSP
Area Director

Appendix B - 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 falling 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.

BLOWN-DOWN: An area of standing timber which has been blown over by strong winds or storms.

BLOW-DOWN: Trees that have been blown down as a result of wind.

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 OR SWAMP-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.

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 OR BULLBUCKER: 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.

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 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: see [Bypass](#)

DUTCHMAN (As Used In Falling): 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: 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:

- Strong winds (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;
- Impaired vision – 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;

- Hazardous snow or icing conditions – Snow or ice conditions which prevent escape from hazards such as falling trees, moving logs, vehicles or similar hazards; or lightning.

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 backcutting.

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 bucker 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 OR 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. (See Spar)

HEALTH CARE PROVIDER: A health care practitioner operating within the scope of his/her license, certificate, registration 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 and/or HITCHHIKERM.: 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.

JACKSTRAWED: Trees or logs piled in an unorderly 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.

KNOB: A metal ferrule attached to the end of a line.

LANDING: Any place where logs are laid after being yarded and before transport to the worksite.

LAY: Refers to either the position in which a felled tree is lying or the intended falling place of a standing tree.

LEAD: 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.

LEAD: 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.

LEAN: 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.

LEANER: A tree that leans excessively, not growing straight.

LEG PROTECTOR: 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.

LIFT TREE: An intermediate support for skylines.

LIGHTNING STRIKE: Tree that has been struck by lightning.

LILY PAD: A thin slice of wood, sometimes taken off the stump and used to cover the saw if it's to be left out.

LIMB LOCK: 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.

LIMB LOCK: 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.

LIMBING: To cut branches off felled trees.

LOADING BOOM: Any structure projecting from a pivot point to guide a log when lifted.

LODGED TREE (Hung Tree): A tree leaning against another tree or object which prevents it from falling to the ground.

LOG: A segment sawed or split from a felled tree, such as, but not limited to, a section, bolt, or tree length.

LOG DUMP: 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.

LOGGING MACHINE: 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.

LOGGING OPERATIONS: 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.

LOG STACKER: 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.

LONG-BUTT: After a tree is felled a section of the butt-end may be sawn off because of rot.

LONG STICKS: An overlength log that creates a hazard by exceeding the safe perimeters of the landing.

MACHINE: 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.

MATCHCUTTING: 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 matter, 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 bucker working together.

SET OR GANG: May consist of one faller who fells and bucks timber. Might be one faller and one bucker working as a team. (This term was used in "hand" falling era also; i.e., two fallers, two buckers, 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. See [Spring Pole](#).

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.

SIWASH: 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.

SLACKLINE: A form of skyline where the skyline cable is spooled on a donkey drum and can be raised or lowered.

SLACKPULLER: 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.

SNIPE 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.

STRAWLINE: 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.

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 water-proofed.

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 (As Used in Loading): Changing of logs in a unit from one mode of transportation to another.

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) (Other than for Directional Falling Use): 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.

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.

(1) Definitions from OSHA Logging Standard 29 CFR 1910.266

(2) Definitions from WAC Safety Standards Chapter 296-54-505

(3) Source: Paul Cyr and Emil Golias