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January 27, 2010

To: All Regional Directors, All Regions
Attention: All Regional Fire Management Officers

From: Director, Branch of Wildland Fire Management

Subject: Updated Chainsaw Operator Policy

A handwritten signature in cursive script that reads "Lyle Corliss".

Branch of Wildland Fire Management employees perform a variety of job duties requiring the use of a chainsaw. The Bureau of Indian Affairs, National Interagency Fire Center (BIA-NIFC) has updated policy related to the training and certification of these employees. This program was developed in accordance with requirements of the Occupational Safety and Health Administration (OSHA).

The objectives of the program are to:

1. Utilize a chainsaw operation training and certification program that meets OSHA requirements for all Branch of Wildland Fire Management employees that operate chainsaws as part of their job duties.
2. Ensure Branch of Wildland Fire Management employees operating chainsaws are trained in the safe operation of a chainsaw and use of personal protective equipment.
3. Ensure Branch of Wildland Fire Management supervisors understand OSHA regulations and their responsibility to provide employees with personal protective equipment, training and certification in chainsaw operation.
4. Establish written documentation of OSHA compliance by maintaining training records and providing employees with a Job Hazard Analyses.
5. Prevent accidents and injuries to employees by providing ongoing training, safety refreshers and periodic re-certification of qualifications through proficiency testing.

The attached documents have been updated recently and collectively represent the Branch of Wildland Fire Management's policy on chain saw operations and certifications. The first attachment is a general program description which, in part, specifies OSHA requirements, roles and responsibilities, and the training and certification process. The second attachment is the excerpt from the Blue Book which includes training and currency parameters. The

third attachment is the current Evaluation Form to be used during proficiency testing. A sample Job Hazard Analysis is attached which can be edited as necessary or used as-is. Finally, the current list of BIA-recognized C-Certifiers is attached for those units who want to host a C-Faller course.

If you have any questions please contact Dave Koch at (208) 387-5577.

Attachments:

1. Program Description
2. Extract from Blue Book
3. Evaluation Form
4. Job Hazard Analysis
5. BIA Recognized C-Certifier List

Chainsaw Training and Certification Program

Branch of Wildland Fire Management

I. Purpose and Need

Branch of Wildland Fire Management employees perform a variety of jobs requiring the use of chainsaws. Among these are firefighting, timber stand improvement, road maintenance, trail clearing and other maintenance activities. Currently, the Branch of Wildland Fire Management has a national standard for training employees in the safe use and operation of chainsaws. In addition there are specific federal regulations relating to chainsaw safety, operation and training requirements developed by the Occupational Safety and Health Administration (OSHA).

OSHA is the primary federal agency responsible for development of regulations regarding work place safety and ensuring compliance to the regulations by private and government employers under the provisions of the Occupational Safety and Health Act (29 CFR). As a federal agency, Bureau compliance with OSHA regulations is mandatory. OSHA provides very specific guidance for the development of a chainsaw training and certification program (29 CFR 1910. 266 Logging Operations). These same statutes are the basis of chainsaw training and certification programs developed and currently used by private industry and the U.S. Forest Service.

OSHA requires maintenance of written records documenting the training and certification of employees in required job procedures and safety requirements. "The employer shall verify that each affected employee has received and understood the required training through written certification that contains the name of each employee trained, the date(s) of training, and that identifies the subject of the certification."

In addition, OSHA requires that a Job Hazard Analysis be developed and made available to employees. As directed in OSHA "The employer shall assess the workplace to determine if hazards are present, or are likely to be present, which necessitate the use of personal protective equipment (PPE). (2) The employer shall verify that the required workplace hazard assessment has been performed through a written certification that identifies the workplace evaluated; the person certifying that the evaluation has been performed; the date of the hazard assessment; and, which identifies the document as a certification of a hazard assessment."

Many have assumed that the chainsaw training provided to firefighters in the S-212 *Wildfire Powersaws* course to be the national standard for chainsaw certification. However, the Branch of Wildland Fire Management still has many employees using chainsaws who are not firefighters and may not have taken, or

have access to the course. It should be recognized that the National Wildfire Coordination Group (NWCG) which developed the S-212 course, is not a regulatory agency responsible for job safety, underwritten by federal law. NWCG provides a means for agencies to agree upon standards of training, equipment, qualifications and operational functions. NWCG currently does not have a national interagency standard certification program for chainsaw operation within the "Red Card" qualification system or a "Task Book" specific to chainsaw operation.

The S-212 course makes specific references to OSHA and development of a Job Hazard Analysis. It is mandatory that all instructors be fully certified chain saw operators. The success of this course depends on the instructors' own chain saw operation skills, as well as their ability to articulate those skills to a diverse audience. Specifically for the S-212 course, the lead instructor must be certified at the Faller B level and Single Resource Boss Crew or above. Unit instructors must be certified at the Faller B level or above. Each instructor needs to be well versed in the procedural approach and cutting techniques described in the course.

In addition, the S-212 Trainee Evaluation Form states that *certification is the responsibility of each agency* and that local unit managers must develop and approve a Job Hazard Analysis for each project. The S-212 course package fully recognizes that OSHA is the basis for chainsaw operation training and safety standards and that it is the responsibility of each individual agency to develop their own certification program as required by OSHA regulations.

The Branch of Wildland Fire Management has developed a chainsaw training and certification program that meets OSHA requirements and the needs of our agency. Specifically, it is the intent of our agency to insure a high degree of safety and professionalism in the operation of chainsaw use on the fireline and the home unit. This program has been in existence since 2001.

II. Program Objectives

The objectives of this program were to:

1. Maintain a chainsaw operation training and certification program that meets OSHA requirements for all employees that operate chainsaws as part of their job duties.
2. Ensure that all employees who operate chainsaws are properly trained in the chainsaw operation, safety and use of personal protective equipment.

3. Ensure that all supervisors understand OSHA regulations regarding their responsibilities to provide employees with personal protective equipment, training and certification in chainsaw operation.
4. Develop a formal process to establish written documentation of OSHA compliance by maintaining training records and providing employees with required Job Hazard Analyses.
5. Prevent accidents and injuries to employees by providing ongoing training, safety refreshers and periodic re-certification of qualifications by proficiency testing. This will include periodic first aid and CPR training.

III. Federal Laws, Policies and Regulations relating to the development of the Chainsaw Training and Certification Program

1. The Occupational Safety and Health Act of 1970
Section 19 - Federal Agency Safety Programs and Responsibilities.
2. Executive Order 12196. Occupational safety and health programs for Federal employees.
3. 29 CFR Part 1960 – Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters
4. The Occupational Safety and Health Act of 1970
29 CFR Section 1910.266, Logging Operations
5. Intro to 29 CFR Parts 1910 and 1928, Logging Operations
Section V: Summary and Explanation of the Final Standard
6. Part 485: Safety and Occupational Health Program.
Chapter 7: Incident/Accident Reporting/Serious Accident Investigation

IV. Program Responsibilities and Implementation

Regional Director: The Regional Director is responsible for the safety and health of all the employees and will ensure that agency line officers implement the chainsaw training and certification program as required by OSHA and Branch of Wildland Fire Management policy.

Regional Safety Officer: The Regional Safety Officer in coordination with Regional Fire Staff, will be responsible for the implementation of the Chainsaw Training and Certification program at the field level. Regional Staff will provide direction, training materials and qualified chainsaw instructors to Agency

Administrators. The Regional Safety Officer and Regional Fire Staff are responsible for field proficiency testing and approval of chainsaw operator ratings, consistent with the training policy described below. The Regional Safety Officer is responsible for compliance with OSHA requirements, including maintenance of safety training certification records for all employees involved in the use of chainsaws in performance of work duties.

Agency Administrator / Line Officer: The Agency Administrator or Line Officer is responsible for ensuring that all employees receive training in chainsaw operation and safety that meets agency policy, before assigning the employee to job tasks involving the use of chainsaw. The Agency Administrator will be responsible for maintaining written records for each employee receiving training and certification in chainsaw operation as part of their official personnel file.

Supervisor: The supervisor will ensure that all Branch of Wildland Fire Management employees are certified and qualified for assigned chainsaw operation tasks. The supervisor will perform a Job Hazard Analysis for each assignment involving chainsaw operation and provide a written copy to each employee. The supervisor is also responsible for conducting periodic safety sessions with all employees and evaluation of chainsaw operation and safety for ongoing performance reviews with each employee.

Chainsaw Training Instructors and Certifiers: Instructors are responsible for complete and thorough instruction in chainsaw operation and safety and the supervision of trainees during the course. A certifier is anyone who is qualified to evaluate and certify operators at the appropriate proficiency level. For example, a FALB is authorized to perform an operator proficiency evaluation in the field and certify FALA operators. (Refer to Chainsaw Operator Evaluation Form and Job Hazard Analysis for required training course elements of instruction). Typically, the Instructor and the Certifier are the same person.

V. OSHA Regulations and Branch of Wildland Fire Management Responsibilities

The following chainsaw training and certification program requirements are quoted directly from OSHA regulations (29 CFR 1910.266) and refer to the program administration responsibilities of the employer.

- *"The employer shall provide training for each employee, including supervisors, at no cost to the employee."*
- *"The employer shall assure that each employee, including supervisors, receives or has received first-aid and CPR training. The employer shall*

assure that each employee's first-aid and CPR training and/or certificate of training remain current."

- *"The employer shall assure that all training required by this section is presented in a manner that the employee is able to understand. The employer shall assure that all training materials used are appropriate in content and vocabulary to the educational level, literacy, and language skills of the employees being trained."*
- *"The employer shall verify compliance with paragraph (i) of this section by preparing a written certification record. The written certification record shall contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer. If the employer relies on training conducted prior to the employee's hiring or completed prior to the effective date of this section, the certification record shall indicate the date the employer determined the prior training was adequate."*
- *"The most recent training certification shall be maintained."*

(NOTE: The IQCS incident qualification and certification system is the official database for chainsaw qualifications. As required by OSHA, written certification must also be maintained. The IQCS incident qualification and certification system allows for entry of the S-212 Wildfire Powersaws course. It also provides for the certification of chain saw operators at four levels of proficiency: Apprentice Sawyer (FALA), Intermediate Faller (FALB), and Advanced Faller (FALC), and "C" Faller Certifier (CCRT). These qualifications can then be printed on the employee's "Red Card" and certified by the agency certifier.

- *"The employer shall hold safety and health meetings as necessary and at least each month for each employee. Safety and health meetings may be conducted individually, in crew meetings, in larger groups, or as part of other staff meetings."*
- *"The employer will provide the employee with personal protection equipment including OSHA approved Hard Hat, Goggles or Face Shield, Ear Protection, Gloves and cut resistant Saw Chaps which extend at least 2 inches below the top of the boots. Employee is required to wear cut resistant heavy duty leather boots."*
- *"The employer will provide first-aid kits for each work site which reflect the degree of isolation, number of employees and hazards anticipated at the work site."*

VI. Chainsaw Training Program Elements

The basic elements of the Branch of Wildland Fire Management Chainsaw Training and Certification program are:

1. Classroom instruction in chainsaw safety, maintenance, operation and cutting procedures.
2. Field demonstrations of chainsaw operation and cutting procedures by qualified instructors.
3. Hands on instruction for employees in chainsaw operation and cutting procedures.
4. Field evaluation by a qualified trainer, based on qualification level, including chainsaw safety, operation, situational awareness, size-up procedures, felling, limbing, and bucking techniques.
5. Providing employees with a Job Hazard Analysis prepared by the supervisor and approved by the line officer, or designee.,

OSHA provides specific direction for the content of a chainsaw training course. Refer to the "Chainsaw Operation Job Hazard Analysis" and "Chainsaw Operator Evaluation Form" for specific information to be included in the course content. Agencies are strongly encouraged to utilize the S-212 Wildfire Powersaws course for basic instructional purposes. The course covers all of the required OSHA training elements for chainsaw operation and safety.

29 CFR 1910.266 (excerpts from OSHA regulations):

"At a minimum, training shall consist of the following elements:

- Safe use, operation and maintenance of tools, machines and vehicles the employee uses or operates, including emphasis on understanding and following the manufacturer's operating and maintenance instructions, warnings and precautions;
- Recognition of safety and health hazards associated with the employee's specific work tasks, including the use of measures and work practices to prevent or control those hazards;
- Recognition, prevention and control of other safety and health hazards in the logging industry;

- Procedures, practices and requirements of the employer's work site;
- The employer is responsible for ensuring that each current and new employee can properly and safely perform the work tasks and operate the tools, equipment, machines, and vehicles used in their job.
- Each new employee and each employee who is required to be trained as specified in paragraph (i)(2) of this section, shall work under the close supervision of a designated person until the employee demonstrates to the employer the ability to safely perform their new duties independently.

VII. Evaluation and Certification

In order to meet the requirement of having employees demonstrate "the ability to safely perform their new duties independently", the Chainsaw Training and Certification process includes a final evaluation by a qualified Bureau Certifier (do not confuse the term "Certifier" with C-Faller Certifier. A Certifier could be a Supervisor, FALB, FALC, or CCRT. The only restriction is that the Certifier can only certify operators at lower levels.) The evaluation process is conducted in the field with the employee demonstrating knowledge and proficiency in the use of safety equipment, saw maintenance, saw operation, situational awareness, size-up, felling, limbing and bucking procedures.

The evaluation process includes demonstration of physical skills, employee discussion of safety information, hazard identification, environmental factors and a numerical rating by the Certifier of each of eight critical chainsaw operational procedures (Refer to the Chainsaw Operator Evaluation Form). Ratings are totaled and averaged for a final qualification rating based upon user experience and the complexity of the procedures undertaken by the employee.

The Certifier has the responsibility of approving a qualification rating level based upon the employees overall evaluation score and judgment of overall capabilities. The various levels of chainsaw qualifications are described in the next section. The instructor and evaluator are responsible for signing the evaluation form. The agency administrator, line officer or fire management officer is responsible for certifying the qualifications in the Incident Qualification and Certification System (IQCS). The evaluation form will be used as formal written documentation as required by OSHA and copies shall be maintained at the unit level and provided to the employee/operator.

VIII. Proficiency Complexity Rating

Chainsaw safety experts recognize that the diameter of a tree does not necessarily represent the hazards encountered in felling, limbing and bucking a tree. Many chainsaw operator injuries occur from small diameter trees in seemingly low complexity situations. The following are felling proficiency levels for chainsaw operators recognized by the Branch of Wildland Fire Management.

“A” Apprentice Sawyer (FALA): Chainsaw operators at this level of proficiency will be able to explain and field demonstrate necessary personal protective equipment, chainsaw maintenance, start procedures, as well as basic felling, limbing and bucking techniques with assistance from the field instructor. This individual may be involved with road maintenance, timber stand improvement, facility maintenance, as well as low complexity tree felling and simple fire line construction. Individuals at this level of proficiency will be supervised in the field by someone who has a higher saw certification level. Work activities should be limited to felling, bucking and limbing trees typically under 12 inches diameter at breast height (DBH). Under no circumstances should hazard trees, trees adjacent to buildings or power lines, large complex trees, or trees in dense canopies be felled by chain saw operators with this classification level.

“B” Intermediate Faller (FALB): Chainsaw operators at this level of proficiency will be able to explain and field demonstrate necessary personal protective equipment, chainsaw maintenance and starting, as well as multiple felling, bucking and limbing techniques with limited assistance from the field instructor. These individuals may be involved with road maintenance, timber stand improvement, facility maintenance, and moderately complex tree felling and fire line construction. An individual at this level of proficiency will be able to work independently, with periodic assistance and direction from a field supervisor with equivalent or higher chainsaw operations training. Work activities should be limited to felling, bucking and limbing trees typically under 24 inches DBH. Trees adjacent to buildings, powerlines and other hazards should be attempted only by FALC. FALB, Intermediate Fallers are authorized to certify FALA, Apprentice Sawyers. When a FALC is present and providing oversight and instruction a FALB can fall larger diameter, more complex trees.

“C” Advanced Faller (FALC): Chainsaw operators at this level of proficiency will be able to explain and field demonstrate necessary personal protective equipment, chainsaw maintenance and starting, as well as complex felling, bucking and limbing techniques with no assistance from the field instructor. These individuals may be involved with road maintenance, timber stand improvement, facility maintenance, and be able to effectively and efficiently plan complex tree felling and fire line construction operations. An individual at this level of proficiency will be able to work independently with limited direction from a field supervisor with equivalent or higher chainsaw operations training. FALCs are qualified to fell the largest most complex trees with diameters that may exceed 36 inches DBH. They are qualified to instruct and certify FALA and FALB

level operators. They are not allowed to certify other FALC Advanced Fallers but may assist in the certification process when accompanied by a CCRT.

“C” Faller Certifier (CCRT): Chainsaw operators at this level of proficiency will be able to effectively instruct and evaluate individuals about necessary personal protective equipment, chainsaw maintenance and starting, and felling, bucking and limbing techniques. These individuals will be able to apply the appropriate level of instruction and evaluation for each level of proficiency. They will have formal advanced chainsaw operations training in proper maintenance and usage of personal protective equipment and chainsaws, as well as formal advanced training in tree felling, bucking, and limbing techniques. The CCRT is the highest qualified faller recognized by the agency and is relied on to provide expert advice and leadership pertaining to national chainsaw operations policy.

IX. Chainsaw Operator Evaluation Form

The Chainsaw Operator Evaluation Form is used by the Branch of Wildland Fire Management to document the proficiency of an operator and serves to certify their qualification level. The evaluation form will include the employee name, agency or tribal affiliation, date of the evaluation, and the trainer and/or evaluator's full name. This information should be printed or typed. The form is taken to the field to be filled out by the instructor during the evaluation process. The employee will demonstrate chainsaw skills and proficiency based upon assigned tasks from the evaluator at an appropriate level of complexity based upon previous experience and qualifications. As the employee completes assigned tasks in felling, limbing and bucking trees, the evaluator will assign an adjective rating (good, fair, or poor) based upon the employee's knowledge and proficiency of tasks within the eight categories of chainsaw operation on the evaluation form.

Explanation of Rating Procedures for the Eight Chainsaw Operation Categories

1. *Safety Equipment*

In this category, the individual must be able to explain the need for and properly utilize necessary personal protective equipment and tools prior to operating the chainsaw.

2. *Hazard Analysis*

The operator will be asked to make an assessment of the hazards associated with the tree assigned to them, and then articulate those hazards to the trainer and others observing the felling operation. This

assessment should include hazards associated with the tree as well as other aerial and ground hazards.

3. *Felling Area Safety Plan*

The operator will be asked by the trainer to communicate to all observers what the felling plan will be. The operator should visualize and then communicate the cutting method and desired outcome of their felling plan. They are to explain the necessary steps that will use when they are actually cutting. They must communicate to all observers the expected outcome and make sure everyone understands what they have said, especially as it pertains to escape routes and placement of observers during cutting operations. Once the trainer is satisfied with this briefing, the operator will then be asked to commence with the felling operation. The trainer will observe and note any deviations from the plan that the operator described during the briefing. If at any time the trainer feels that safety is being grossly compromised, he will intervene, stop cutting operations, and provide advice and instruction to the operator.

4. *Saw Condition, Start-up, and Use (handling)*

The operator's equipment and accessories will be evaluated to determine condition and suitability to the job. The chain saw will be started using approved technique. At no time will a saw be drop started. The saw can be started on the ground, between the legs, or using the opposing forces method. The operator will be evaluated based on how they handle the saw.

5. *Felling Procedure*

The operator will be evaluated on how they clean up their felling area, provide for escape routes, approach the tree, size the tree up, gun the tree, and generally manage the area of operation. The operator is considered to be in charge of the area of operation and the trainer will observe how the operator commands the situation and communicates felling intent to all observers. Prior to commencement of cutting operations the operator will be expected to summarize his plan for implementing the gunning cut, sloping cut, and back cut to the instructor.

6. *Felling and Stump Evaluation*

This is the evaluation of the felling size up and the cut plan after the tree is felled. Refer to what was said in the previous evaluation categories to assess if the verbal plan was followed or not. If during the felling procedure the individual stops and verbally modifies the initial plan, the

evaluation should be based on the modified plan. The trainer will evaluate the lay of the felled tree to the original or modified plan. The stump will be evaluated to determine accuracy of cuts, suitability of holding wood and stump shot, and the proportion of face cut to back cut relative to the specific tree.

7. *Limbing procedures*

The operator will be evaluated on various procedures related to how they limb their felled tree. This will include their recognition and mitigation of overhead dangers, how they position their body relative to limbing operations, mitigation of spring poles and their understanding of tension and compression wood. In addition the operator will be evaluated in terms of their ability to size up conditions when cutting limbs could result in movement of the tree when it is on the ground. Finally they will be evaluated on the sequence of limb removal, the use of their bar tip and recognition of kick back.

8. *Bucking procedures*

Many of the considerations addressed during limbing operations apply to bucking particularly regarding tension and compression wood. The evaluator will assess how the operator addresses a felled tree with respect to slope as they commence bucking operations. The operator will be evaluated in terms of the bucking sequence they employ to include items such as bore cutting, drop cutting, angle cutting and pie cutting (all methods of release cutting).

4. Sawyer/Faller Qualifications

Bureau and tribal employees, both in fire positions and non-fire positions, perform a variety of job duties requiring the use of a chainsaw. The Branch of Fire Management has a training and certification process for these employees which can be obtained upon request.

a. Supervisor Responsibilities

It is the supervisor's responsibility to understand Occupational Safety and Health Administration (OSHA) regulations and provide their employees with personal protective equipment, training and certification in chainsaw operation.

b. Qualifications

There are four chain saw operator qualification levels recognized by the Bureau:

1. "A" Apprentice Sawyer (IQCS Position Code: FALA)
2. "B" Intermediate Faller (IQCS Position Code: FALB)
3. "C" Advanced Faller (IQCS Position Code: FALC)
4. "C" Faller Certifier (IQCS Position Code: CCRT)

c. Currency and Required Training

The following table identifies currency training, fitness, CPR, and first aid requirements for chainsaw operators. IQCS will be the system of record for chainsaw operator qualifications and reflect these requirements.

FALA and FALB operators only need to complete chainsaw operator training once and maintain currency thereafter by simply performing that position at least once every five years.

FALC and CCRT operators are required to attend recertification training every three years. This training should be recorded as BICFLR (C Faller Course) in the IQCS. Initial certification of BIA and tribal FALCs and CCRTs can only be obtained by attending a BIA sanctioned C Faller Course. Subsequent recertifications may be administered by other regional C-certifiers, provided the CCRT administering the evaluation is recognized by the Bureau.

Fitness for all positions is considered arduous except for CCRT which will be light.

CPR and first aid training will be completed as specified below. CPR and first aid training will not be included as disqualification criteria in IQCS. It is not an absolute necessity that every individual assigned to projects using chainsaws possess currency in CPR and first aid training. However, there should be an adequate number of certified individuals to provide first aid services commensurate with the need based on an assessment by the supervisor.

| Position | Performance Currency | Training Currency | Fitness Level | CPR | First Aid |
|----------|----------------------|-------------------|---------------|---------|-----------|
| FALA | 5 Years | n/a | Arduous | 2 years | 3 years |
| FALB | 5 Years | n/a | Arduous | 2 years | 3 years |
| FALC | 5 Years | 3 Years | Arduous | 2 years | 3 years |
| CCRT | 5 Years | 3 Years | Light | None | None |

Chainsaw operator training can be in the form of S-212, a comparable industry course, or a course developed at the local Agency. In order to obtain the qualification of FALC or CCRT employees will be required to attend a BIA sanctioned C-Faller training course. For information related to the delivery of this course please contact the National Chainsaw Program Manager or CCRT within your region.

d. Emergency Firefighter (AD) Chainsaw Operators

Chainsaw training is authorized for AD employees who are required to operate chainsaws for fire suppression or hazardous fuels reduction project work. Supervisors of Type 2 and Type 2 IA crews who have employees who operate chainsaws must have emergency medical response capabilities. The possession of emergency response capabilities can be fulfilled through one of the following two options:

1. Crews will minimally possess one or more individuals who are currently certified to administer CPR and provide first aid. 2. If the crew does not possess this capability other provisions must be made by the supervisor to provide these services while engaged in chainsaw operations.

| | | | |
|------------|--|---------------------|--|
| Trainee: | | Agency / Tribe: | |
| Evaluator: | | Date of Evaluation: | |

| Evaluation Category | Rating |
|----------------------------|--------|
| 1. Safety Equipment | |
| Hardhat | |
| Gloves | |
| Long Sleeve Shirt | |
| Ear Protection | |
| Eye Protection | |
| Chaps | |
| Boots | |
| Wedges (3 minimum) | |
| Falling Axe (3-5 lbs.) | |
| Category Rating | |

| | |
|---|--|
| 2. Hazard Analysis | |
| Tree top, dead limbs, "widow makers" | |
| Tree and bark soundness (rot) | |
| Leans | |
| Hang-ups | |
| Ground hazards (roots, root wads, loose logs) | |
| Snags/Green Trees in Fall Zone | |
| Canopy / weight distribution | |
| Other | |
| Category Rating | |

| | |
|--------------------------------------|--|
| 3. Felling Area Safety Plan | |
| Crew Safety – Safety Zone Identified | |
| Secure Working Area | |
| Escape Route identified | |
| Communication of Intent | |
| Category Rating | |

| | |
|---|--|
| 4. Saw Condition, Start-Up and Use | |
| Chain Tension / sharpened | |
| Gas, Bar Oil, Nuts and Bolts | |
| Chain Brake | |
| Throttle Lock Use | |
| Chain Break Use | |
| Starting Procedure | |
| Thumb Grip/Placement | |
| Safe, Comfortable Body Position | |
| Bar Tip Use and Boring | |
| Category Rating | |

| | |
|------------------------------|--|
| 5. Felling Procedure | |
| Escape Route and Safety Zone | |
| Swampout work area | |
| Lean determination | |
| Category Rating | |

| Evaluation Category | Rating |
|---|--------|
| 5. Felling Procedure, continued. | |
| Gunning Cut | |
| Use of Gunning Sights | |
| Sloping Cut | |
| Warning Shouts | |
| Back Cut | |
| Use of Wedges | |
| Use of Escape Route / Safety Zone | |
| Use of felling dogs | |
| No-Go Determination (Leave-It) | |
| Category Rating | |

| | |
|---------------------------------|--|
| 6. Fall / Stump Analysis | |
| Felled to Desired Lay | |
| Felled to Other Lay | |
| Undercut Positioning | |
| Gunning Cut | |
| Sloping Cut | |
| Holding Wood | |
| Stump Shot (height) | |
| Category Rating | |

| | |
|------------------------------|--|
| 7. Limbing Procedures | |
| Overhead Dangers | |
| Body Positioning | |
| Spring Poles | |
| Tension, Compression Wood | |
| Limb Removal Sequence | |
| Use of Bar Tip | |
| Category Rating | |

| | |
|------------------------------------|--|
| 8. Bucking Procedures | |
| Overhead Hazards | |
| Ground Hazards | |
| Identify Binds/Tension/Compression | |
| Use of Wedge/Pie Cut | |
| Cut Sequence | |
| Kerf Observation | |
| Release Cut Movement | |
| Angle Cut | |
| Drop Cut | |
| Category Rating | |

Evaluator will score each rating area with: G (Good); F (Fair); P (Poor).

Evaluator Comments (Consider attitude, technical knowledge, physical ability, verbal skills, recommendations and other elements):

| | | | | | |
|------------------------------|-----|----|-------|-------|------|
| Previously Certified? | Yes | No | Level | Where | Year |
|------------------------------|-----|----|-------|-------|------|

| Faller Skill / Qualification Level – Evaluator’s Recommendation | | | |
|--|-------------------------------|---------------------------|--------------------------------|
| <i>(Note: Evaluator Must Sign Appropriate Box)</i> | | | |
| Apprentice Sawyer (FALA) | Intermediate Faller (FALB) | Advanced Faller (FALC) | "C" Faller Certifier (CCRT) |
| | | | |

**** Qualification will be recorded in the IQCS (Incident Qualification and Certification System)**

| | | |
|---|--------|--------|
| Classroom Instruction Given at: | | Date: |
| Instructor Signature: | Title: | Level: |
| Field Examination Given at: | | Date: |
| Evaluator’s Signature: | Title: | Level: |
| Home Unit Certifying Official’s Signature: | Title: | Date: |

Copies of this Evaluation should be provided to the Employee, the Employee Supervisor, the Certifying Official and Regional Safety Officer (if any) and maintained in employee’s official training files.

**BRANCH OF WILDLAND FIRE MANAGEMENT JOB HAZARD ANALYSIS:
CHAINSAW OPERATION**

| | |
|---|--|
| <p align="center">JOB OR PROJECT TO BE ANALYZED CHAINSAW OPERATION (29 CFR 1910.266)</p> | <p align="center">LOCATION</p> |
| <p align="center">NAME OF ANALYST</p> | <p align="center">TITLE OF ANALYST DATE</p> |
| <p align="center">HAZARDS / JOB STEPS</p> | <p align="center">ACTIONS TO ELIMINATE HAZARDS</p> |
| <p align="center">USER SKILL LEVEL</p> | <p>Agency will provide formal training in chainsaw safety, personal protective equipment, saw operation, maintenance and first aid. Written certification records of individual training will be maintained by the agency. OSHA 1910. 266 (i) (2)-(10)</p> <p>Certification Requirements: Successful completion of Wildfire Powersaws (S-212) or other training that meets OSHA requirements.</p> <p>Demonstrated proficiency in saw operations for targeted and progressive levels of certification with training and experience. Field demonstration of qualifications in saw safety, falling, bucking, limbing and maintenance. Certification level based on the size class of the tree and complexity of interdependent factors (i.e., snags, steep terrain).</p> <p>Currency of qualifications is minimally maintained by performance in the position once every five years.</p> <p>Certification will require employee to complete approved Basic First Aid training every three years and CPR training every two years. Refer to BIA Blue Book for information pertaining to this requirement. OSHA 1910. 266 (i) 7</p> |
| <p align="center">PERSONAL PROTECTION EQUIPMENT and FIRST AID KITS</p> | <p>Agency will provide the employee with personal protection equipment including OSHA approved Hard Hat, Goggles or Face Shield, Ear Protection, Gloves, and cut resistant Saw Chaps which extend at least 2 inches below the top of the boots. Employee is required to wear cut resistant heavy duty leather boots. OSHA 1910. 266 (d) (1) (i) - (vii)</p> <p>Agencies will provide first-aid kits for each work site which reflect the degree of isolation, number of employees and hazards anticipated at the work site. OSHA 1910. 266 (d) (2) (i)-(iv)</p> |

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| <p>CHAINSAW SAFETY REQUIREMENTS</p> | <p>Chainsaws must be equipped with a chain brake and anti-kickback device. Chain saw will have a continuous pressure throttle control system which will stop the chain when released. OSHA 1910. 266 (e) (2) (I)-(ii)</p> |
| <p>FUELING AND STARTING</p> | <p>Turn off saw before refueling. No smoking in fueling areas. Fuel saw at least 10 ft. from open flame. Start saw at least 10 ft. from fueling area. Start saw on the ground. Drop starting a saw is prohibited. Saw can be started with the chain brake engaged. OSHA 1910. 266 (e) (2) (ii)-(vii).</p> <p>KEEP FUEL OFF CLOTHING AND PPE!</p> |
| <p>CUTTING WITH THE SAW</p> | <p>Conduct a saw inspection prior to operation. Ensure all handles and guards are tight. Check controls for proper function. Check chain for proper adjustment. 1910. 266 (e) (1) (II) (A)-(E)</p> <p>Use both hands to grip the saw at all times with thumbs of both hands encircling the handles. Establish firm, stable footing before beginning cut. Caution should be observed when cutting above your head or shoulders. 1910. 266 (e) (2) (viii) (Ix)</p> |
| <p>BAR KICKBACK</p> | <p>MAINTAIN FIRM GRIP ON THE SAW AT ALL TIMES!</p> <p>Avoid sawing with the bar tip. Prevent the bar tip from contacting limbs or boles beyond the cutting zone. Ensure that each saw is equipped with functional anti-kickback devices and chain brakes. 1910. 266 (e) (2) (I).</p> |
| <p>LIMBING AND BUCKING</p> | <p>Maintain solid footing and grip the saw with thumbs encircling the bar and handle at all times. 1910. 266 (e) (2) (ix). The chain saw shall not be used to cut directly overhead. 1910. 266 (e) (2) (xi). Always position your body on the uphill side of the log you are limbing and bucking. 1910. 266 (h) (3) (I) Watch for limbs that may spring up when released by cuts. Plan all cuts and position your body and saw to reduce the potential for injury.</p> |
| <p>SWAMPERS</p> | <p>Swampers must maintain a safe distance from the sawyer when cutting. Wait for the sawyer to stop cutting to remove debris. Never approach the saw operator before establishing visual contact.</p> |

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| <p style="text-align: center;">CARRYING THE SAW</p> | <p>Carry the saw on the downhill side when traversing slopes. Make sure the chain and dogs are covered when carrying the saw over long distances. The chain saw will be shut down or chain brake engaged whenever the saw is carried more than 50 ft. where conditions such as thick brush, steep or slippery slopes create additional hazards. 1910. 266 (e) (2) (xiv).</p> |
| <p style="text-align: center;">SAFE WORKING DISTANCES</p> | <p>Maintain a safe working distance between fallers, swampers and crews at all times. Distances between fallers will be based on the height of the trees being felled. Greater distances should be considered on slopes where rolling or sliding of trees is possible. 1910. 266 (d) (6) (ii). Avoid working crews downslope of falling operations. Swampers should only work in the fall zone when needed as a lookout or to assist the faller. 1910. 266 (h) (1) (iv).</p> |
| <p style="text-align: center;">FALLING A TREE</p> | <p>Size up the tree for hazards such as rot, disease, widowmakers, loose bark, snow and ice accumulations, dead limbs and the location of adjacent trees. Determine how lean and branch distribution will affect direction of fall. 1910. 266 (h)(2)(ii). Clear brush and remove obstacles from intended retreat path before beginning cut. 1910. 266 (h) (2) (i).</p> <p>Utilize facecuts and backcuts in all trees 5" diameter and above. Leave sufficient hinge wood on the backcut so as not to compromise the intended direction of fall. Ensure backcut is above the level of the horizontal facecut. Use wedges when necessary. 1910. 266 (h) (2) (v - vii).</p> <p>Fall with the lean of the tree if possible. Know your skill level and capabilities. Don't be afraid to leave a tree without cutting it if you feel it is too hazardous.</p> <p>Check for snags in the direction of the fall. Prior to beginning your backcut shut the saw off and provide a loud warning signal to others. Utilize intended escape route. Once you are in the safety zone, watch out for flying debris as a result of the fallen tree. Once the tree is on the ground and you are returning to the stump location check for widowmakers or other aerial hazards.</p> |

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| <p style="text-align: center;">CUTTING SNAGS</p> | <p>Check for rot, which will limit effectiveness of holding wood. Watch for weak tops, branches or bark that may fall during cutting operations. Wedging of snags is not advised. When practicable, snags should be felled in the direction of lean to eliminate the need to wedge. Only experienced fallers should cut snags. Don't be afraid to say no. Flag snags too hazardous to cut with "KILLER TREE" flagging.</p> |
| <p style="text-align: center;">BURNING OR BURNED TIMBER</p> | <p>Proper size-up is critical. Burning or burned tops can fall at any time. Watch for embers and burning material that can fall on you. Only experienced fallers should attempt this work and only when absolutely necessary.</p> |
| <p style="text-align: center;">ENVIRONMENTAL CONDITIONS</p> | <p>Avoid falling trees in high winds. Take extra precautions during wet conditions or while operating on steep slopes. Always use your best judgment with safety considerations during adverse environmental conditions.</p> |
| <p style="text-align: center;">OTHER PEOPLE OR VEHICLES ENTERING THE FALLING ZONE</p> | <p>Post Lookouts or roadblocks as necessary. Provide audible warning before starting backcut. Watch for others entering the fall zone.</p> |
| <p style="text-align: center;">SAW MAINTENANCE</p> | <p>Use gloves while handling the bar and chain. Wear long sleeve shirts and eye protection when using air compressors to clean saw. Limit exposure to cleaning solvents. No smoking in saw cleaning area, around fuel or solvents.</p> |
| <p style="text-align: center;">FATIGUE</p> | <p>Fatigue can affect safety by reducing physical skills and mental decision capabilities. Supervisors will monitor saw operator fatigue levels and provide for breaks as necessary. Saw operators must be cognizant of their own physical limitations. Extreme heat and cold can create rapid fatigue, be aware.</p> |
| <p style="text-align: center;">ACCIDENTAL FIRES</p> | <p>Check for chainsaw spark arrestor and inspect screen condition. Be aware of fire danger levels and requirements. Have a fire extinguisher and shovel available at the work site. 1910. 266 (d) (4) Flammable and combustible liquids can not be transported in any passenger occupied area of a vehicle. 1910. 266 (d) (9) (ii)</p> |

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| UNSAFE PRACTICES | Hold safety meetings daily during crew or staff meetings. Counsel employees individually for unsafe practices and follow up to ensure compliance with safe practices. 1910. 266 (l) (11) | |
| Approved By | Title | Date |

In accordance with current policy, two C-Faller Certifiers must be present in order to evaluate and certify C-Fallers. This is the current list of qualified C-Faller Certifiers that the Bureau has authorized to conduct this training:

| CURRENT BIA C-FALLER TRAINER/CERTIFIERS | |
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| Leo LaPaz , Contractor | Dave Koch , National Training Officer BIA, NIFC 3833 So. Development Ave. Boise, ID 83705 208-387-5577 |
| John Pollman , Industry Professional P.O. Box 3 Morton, WA 98356 360-496-6262 | William Wilson , Fuels Management Specialist Warm Springs Agency, BIA P.O. Box 1239 Warm Springs, OR 97761 541-553-1146 |
| Brian Billie , Navajo IHC, Squad Leader BIA, Navajo Region Branch of Forestry P.O. Box 1060, MC: 410 Gallup, NM 87305 928-729-7391/7382 (work) 928-310-1442 (cell) | Shaun Willeto , Navajo IHC, Lead Sawyer BIA, Navajo Region Branch of Forestry P.O. Box 1060, MC: 410 Gallup, NM 87305 928-729-7391/7382 (work) 505-860-2534 (cell) |
| Walt Lara Sr. , Forestry and Wildland Fire Field Coordinator, Cultural Tribal Representative Yurok Tribe Weitchpec, CA 95546 530-625-4130 ext 1607 (work) 707-498-2477 (cell) 707-496-0074 (cell) | Mike Lee , Forestry Technician Hoopa Valley Tribe, Tribal Forestry P.O. Box 368 Hoopa, CA 95546 530-625-4284 (work) 530-524-4966 (cell) |