

## **CHAPTER 50 OPERATING PROCEDURES**

**50 – GUIDELINES ON STUDENT-TEACHER RATIO.** In an effort to create an enhanced learning experience in the classroom there is a need to limit the number of students. This decision needs to be based on the type of course being taught, the experience level of the students, the ability to maintain rapport with the students, and the physical limitations of the classroom.

Since training programs are designed to teach new skills, provide knowledge and correct specific performance deficiencies, class size needs to be small enough to provide interactive learning situations rather than informational presentations. Informational presentations should be limited to less than 20 percent of the course time when practical.

Based on the above considerations 20 to 30 students are an ideal number of students for one instructor. Some courses could have up to 50 students provided there are adequate Unit Instructors to assist the Lead Instructor.

### **50.1 SPECIAL CONSIDERATIONS**

Some of the Instructor Guides recommend student to instructor ratio. For example the 2020 “Introduction to Wildland Fire Behavior” (S-190) recommends class size of 24 students. Instructors should maintain a 6:1 ratio of students to instructors/coaches to facilitate exercise and discussion and to enable strong mentorship to the students.

Field exercises for courses such as "Firefighting Training" (S-130), Fire Shelter Deployment, “Portable Pumps and Water Use" (S-211), "Wildland Fire Chain Saws” (S-212), would require additional Unit Instructors or coaches to assure safety and hands on training of fire suppression equipment.

Course objectives, exercises and testing; these measure student progress or deficiencies. When NWCG courses are used, all stated objectives must be met. The Lead Instructor has the latitude to add objectives, content, and hours to the course however hours should not be reduced. Having students meet the course objectives and pass the final examination is often related to class size and how much time the instructor can provide to assist students having difficulty.

When using a translator to teach a course, plan for additional time in order to compensate for the translation from one language to another.

**51 – INSTRUCTOR EVALUATIONS.** The objective is to improve instructor performance by evaluating performance. This can be accomplished through the Student Course Evaluations and Final Examinations. Both are importation processes to improve the transfer of knowledge to the students and achieve the course and unit objectives.

### **51.1 RESPONSIBILITIES**

Each Course Coordinator and Lead Instructor must be intimately familiar with the Instructors Guide, Course Objectives, Unit Objectives, and information essential for the coordination and presentation of the course.

Most of the Course Coordination Guides have an Evaluation Section that should be implemented and the results made available to the NWSA training coordinator upon request. These Student Course Evaluations should be summarized by the Course Coordinator or Lead Instructor and made a part of the Instructor's permanent file. Instructors Guide should have a Student Evaluation Form available.

Lead Instructors have the responsibility for evaluating Unit Instructors. When Unit Instructors have 5 years of teaching experience and request certification to become a Lead Instructor, documentation should be made available to support this 5 year requirement.

### **51.2 LEAD INSTRUCTOR EVALUATION**

Lead Instructors should have an evaluation by an independent third party the first year they are certified and then at least once every 5 years. **LEAD INSTRUCTORS ARE REQUIRED TO NOTIFY THE TRAINING COORDINATOR and NWSA STAFF EITHER BY FAX OR E-MAIL ONCE A COURSE HAS BEEN SCHEDULED.** The Training Coordinator has the discretion to select an independent third party evaluator. Geographical Area MOU's also have a mandatory notification process.

The evaluator will complete the Instructor Evaluation Form during the training session. A completed evaluation will be sent to the Training Coordinator within five working days of the evaluation. This copy will be reviewed by the Training Coordinator to determine if any follow up action is required and then placed in the Instructors file. A second copy will be reviewed with and given to the Instructor by the evaluator. If requested a third copy will be given to the company owner who is sponsoring the course.

The “EVALUATION OF AN NWSA INSTRUCTOR” form is appropriate for both Lead and Unit Instructors and should be completed by the designated evaluator. If the entire course is evaluated the “Student Course Evaluation” form should be summarized on the last page of this form. The form for the “Evaluation Of An NWSA Instructor” can be found on the following three pages.

**52 – COURSE COORDINATOR.** The Course Coordinator is responsible for the planning, implementation, and administrative support of a NWCG training course. In most instances NWSA courses do not have a designated Course Coordinator and therefore the Lead Instructor has this responsibility. A question that has been raised by Lead Instructors: Who is responsible for certifying that the trainee meets the course prerequisites? Answer: The Lead Instructor would provide the company owner with a list of the course prerequisites. The company owner would certify in writing the trainees that meet the prerequisites. The responsibility and proof rests with the company that maintains the employee’s records. The Course Coordinators Guide, PMS 907 is an excellent reference for all Lead Instructors. Topics include the development of course timelines, basic preparation, pre and post course activities, with a supporting Appendix’s.

**53 – TRAINING CERTIFICATES.** NWSA instructors shall use NWSA training certificates. Company logos can be added to the certificate. The private sector or non-NWCG entities do not have authorization to use the NWCG logo or certificates in some geographical areas.

NWSA certificates issued to individuals successfully completing a training course should have the following information on the certificate:

- A. Course title and number
- B. Course completion date
- C. Hours of instruction (classroom and field)
- D. Printed name of Lead Instructor
- E. Legal signature of Lead Instructor above the printed name

**EVALUATION OF AN NWSA INSTRUCTOR**

Course Name:

Course No.

Lesson Title:

Date:

Instructor:

Evaluator:

Please rate each of the following items by circling the appropriate numbers; and Appropriate comments designed to assist the instructor in improving the unit or its presentation.

**CONTENT**

	<u>Yes</u>		<u>To Some Extent</u>		<u>No</u>
1. The lesson provided information, ideas, and techniques that can be used by the students.	5	4	3	2	1

COMMENTS:

2. The contents provided practical skills for application on the job.	5	4	3	2	1
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COMMENTS:

**INSTRUCTOR**

1. The objectives were clearly defined by the Instructor.	5	4	3	2	1
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COMMENTS

2. The objectives were achieved. 5 4 3 2 1

COMMENTS:

3. The instructor was knowledgeable in the subject. 5 4 3 2 1

COMMENTS:

4. The instructor was organized and delivered the material to accepted NWSA standards. 5 4 3 2 1

COMMENTS:

5. The instructor established and maintained rapport with the class. 5 4 3 2 1

COMMENTS:

6. The instructor promoted participant discussion and interaction through the use of questions. 5 4 3 2 1

COMMENTS:

7. The instructor handled questions in an adequate manner. 5 4 3 2 1

COMMENTS:

8. The instructor used the most current NWCG training material            Yes            No

COMMENTS:

9. The instructor used a variety of audio-visual aid to enhance the presentation.            5            4            3            2            1

COMMENTS:

- a. Used a/v as cues, guides, discussion points, or to illustrate, not as fillers or time killers?            Yes            No
- b. Visuals were legible from all parts of the room?            Yes            No
- c. Visuals were appropriate to the subject?            Yes            No
- d. Instructor used visual materials and equipment in an acceptable manner?            Yes            No

10. Did the instructor speak loud enough and clearly enough to be heard throughout the classroom?            Yes            No

11. Did the instructor's handouts contribute to the accomplishment of the objectives?            5            4            3            2            1

COMMENTS

12. Are there any handout materials the instructor should update, and, or delete from the presentation?            Yes            No  
If yes, please list below:

COMMENTS:

13. Did the classroom assignments of practical exercises, if used, contribute to meeting the lesson objective? 5 4 3 2 1

COMMENTS:

14. As an evaluator, what do you suggest the instructor do to improve the unit material or its delivery? Please be constructive. If there isn't anything you can think of, just leave this section blank.

## **54 – CERTIFICATION of CHAINSAW OPERATORS**

Instructor qualifications are agency determined. Qualifications vary by agencies. NWCG established faller qualifications in the NWCG PMS 310-1. The red book, “Interagency Standards for Fire and Aviation Operations” NFES 2724, Chapter 13 provides guidance for chainsaw operators and fallers. NWSA has adapted the following qualifications and standards.

### **54.1 INSTRUCTOR PREREQUISITES**

Instructor prerequisites will be based on the NWCG S-212 Instructor Guide, (NFES 002660) and NWCG PMS 901-1. The Lead Instructor must be certified at the Operator 2 level and a Single Resource Boss or above to teach S-212. Unit Instructors must be certified at the Operator 2 level or above. Each instructor needs to be well versed in the procedural approach and cutting techniques described in the course.

### **54.2 CHAIN SAW OPERATORS**

All fire program saw operators must complete the NWCG S-212 Wildland Fire Chain Saws course, including the field exercise. This may qualify the individual at the “3” level.

The individual tasks required for completion of the final certification for the “3” level saw operator must be certified by a qualified “2” or “1” level operator.

The individual tasks required for completion of the final certification for the “2” level saw operator must be certified by a qualified “2” or “1” level operator.

The individual tasks required for completion of the final certification for the “1” level saw operator must be certified by a qualified “1” level operator.

All fire related saw operator qualifications have a currency of three (3) years. The one exception is the Pacific Northwest Coordinating Group’s “Interagency Firefighting Crew Agreement” administered by the Oregon Department of Forestry. The crew agreement requires all faller certifications to be recertified every five years; with a classroom and field component. See the agreement for specifics. All saw operator qualifications will be maintained through the NWSA Data Base System.

Certification of saw operators will be valid from the date of issuance if the individual fire fighter maintains currency of the ICS position. This can be accomplished by the Crew Boss completing a **Incident Personnel Performance Rating** (ICS 225) or an **Individual Performance Rating** (ICS 226) for chainsaw operators on his crew. Another option for evaluation would be the Evaluation **Record and Faller Stump Analysis** in the **Task Book for Faller Class 3, 2, & 1** when working on projects or prescribed fires.

NWSA members shall use the Position Task Book, PMS 311-91. Found at: [www.nwcg.gov/publications-taskbooks/ops](http://www.nwcg.gov/publications-taskbooks/ops) (This site is the “NWCG PTB Catalog”) Under the heading, “Task Books by Functional Areas”, click on Operations Scroll down to Faller 3, 2, 1 and click on PMS 311-91 Then click on “Task Book PDF” and a copy of the PTB should come online

Size classes used in the Faller 3, Faller 2, and Faller 1 Position Task Book are guidelines and are not the determining factor in the complexity of a tree falling operation. The size classes are to be used as an evaluation tool during trainee evaluation. Chain saw operators are expected to conduct a size up of each individual tree and determine the extent of qualification required to safely perform a felling operation.

### **54.3 CERTIFICATION**

This section defines the qualifications for operating chain saws.

**Class 3.** Apprentice chain saw operators using chain saws for felling are limited to material under eight (8) inches in diameter. Minimum requirements include the successful completion of the NWCG S-212 course, Wildland Fire Chain Saws course. This is a 24-to-36-hour course.

**Class 2.** Intermediate chain saw operators using chain saws for felling are limited to material under twenty-four (24) inches in diameter. Minimum requirements include the success completion of the S-212 course and completion of the NWCG Task Book for Faller Class 2.

**Class 1.** Advanced chain saw operators are considered skilled in felling material over twenty-four (24) inches in diameter. They should be knowledgeable in recognizing danger trees and how to eliminate the danger. Minimum requirements include the successful completion of the S-212 course and completion of the NWCG Task Book for Faller Class 1.

The Wildland Power Saw Course S-212 is required for all certification levels. Focus should be: demonstrated performance, hands-on operation of chain saws, safety procedures (constant vigilance), and use of personnel protective equipment. Knowledge of personal capabilities and limitations is essential in making tree falling decisions or making the decision to walk away.

#### **54.4 S-212 CHAINSAW REFRESHER**

**Sawyer, Classroom and Field Proficiency Reevaluation, Sawyer Instructor and Sawyer Evaluator Training.**

The initial S-212 training is valid for three years and is subject to review any time prior to expiration. Minimum requirements for sawyer refresher training and field proficiency reevaluations include:

1. A knowledge refresher conducted in the classroom or the field and including discussion or demonstrations that cover current saw directives, emerging safety issues, emergency procedures, and cutting techniques.
2. A skill refresher, including a field proficiency evaluation, equivalent to the initial evaluation for the sawyer's certification level that involves sawing tasks relevant to the sawyer's certification level. There is a Field Evaluation Form attached that can be used for documentation of the evaluation.
3. Sawyer instructors/evaluators should conduct one refresher and one sawyer field proficiency evaluation or reevaluation every three years.

#### **54.5 NWSA SAWYER INSTRUCTOR CURRENCY**

**Sawyer Instructors are required to be recertified by instructing at least one S-212 course every three years.**

NWSA will keep a log of certified instructors based on the S-212 entries in the NWSA data base.

#### **54.6 RECERTIFICATION**

If currency has expired, the person shall revert to the trainee level only in the position for which currency expired. A new Position Task Book will be issued for the position and all field tasks must be completed. Class 3 saw operators are required to retake S-212 or complete the FAL3 PTB. Any new requirements added to the position will have to be completed.

Agency contract requirements vary and may require a process different than the one outlined above.

## CHAINSAW OPERATOR FIELD EVALUTION FORM

<b>(Recertify Every 3 Years)</b>	
Name:	Agency Address:
Date:	
Training Location:	
Phone:	Email:
Previous Certification? Yes _____ No _____ Level _____ Agency/Unit _____ Year _____ Certified by: _____ <b>Note to Evaluator:</b> All rating blocks will be filled in with one of the following: A = Acceptable, U = Unacceptable, N/A = Not Applicable. Any item marked with an asterisk (*) and an unacceptable rating must be noted in comments.	

YES	NO	SAFETY EQUIPMENT	RATING	CHAINSAW USE
		Hard Hat		Chain Saw & Axe Condition
		Eye Protection		Starting Procedure
		Hearing Protection		Throttle Lock/Chock Use
		Long Sleeved Shirt		Correct Body Position
		Gloves		Thumb Placement
		Boots		Bar Tip Use - General
		Chaps		Boring - Specific
		Axe (3-5 lb.)		Chain Brake Use
		Wedges		Foot Travel w/Chain Saw
		Approved fuel/oil container		Chain Saw Tool Kit
		Bar/Chain Protection		Field Chain Sharpening
<b>NOTE: Any safety equipment violations will result in automatic failure.</b>				Other (list)
<b>OVERALL RATING</b>				
<b>Felling Procedure</b>				
<b>Bucking</b>				
<b>Limbing &amp; Brushing</b>				

**Recommended Skill Level (circle one):    Basic (FAL3)    Intermediate (FAL2)    Advanced (FAL1)**

RESTRICTIONS (if any): \_\_\_\_\_

Student's Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Evaluator's Signature: \_\_\_\_\_ Title: \_\_\_\_\_ Date: \_\_\_\_\_

Remarks: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

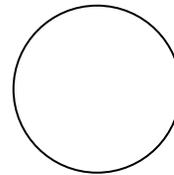
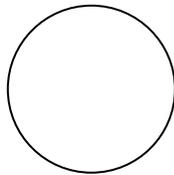
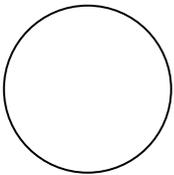
## CHAINSAW OPERATOR FIELD EVALUATION FORM

RATING			HAZARD ANALYSIS			RATING			LIMBING & BRUSHING			RATING			BUCKING		
1	2	3	← Tree/Scenario #	1	2	3	← Scenario #	1	2	3	← Scenario #	1	2	3	← Scenario #		
			*Top				*Overhead/Ground Hazard				*Overhead/Ground Hazard s				*Escape Routes		
			*Widow Makers				Brief Swamper				Bind/Tension-Compression				Swamps Out Work Area		
			*Bark				*Control Cutting Area				*Thumb Placement				Use of Wedge Cut Procedure		
			*Wind				Swamps Out Work Area				*Body Positioning				Cut Sequence		
			*Hang-ups				*Escape Route				*Thumb Placement				Kerf Observation		
			*Determine Soundness				*Body Positioning				*Use of Bar Tip				Release Cut Movement		
			*Lean				*Thumb Placement				Avoids Over/Under Cutting				Multiple Bind Situations		
			*Snag/Green Tree				*Use of Bar Tip				*Power Head below Shoulder Ht.				Drop Cutting		
			*Root Wads/Loose Logs				Avoids Over/Under Cutting				Limb Removal Sequence				Spring Poles-Tension/Compression		
			*Spring Poles				*Power Head below Shoulder Ht.				Spring Poles-Tension/Compression				Avoids Kickback		
			*Disease/Fungus				Limb Removal Sequence				Avoids Kickback				Wedging Procedure		
			Other(list)				Spring Poles-Tension/Compression				Swamps Out Work Area						
							Avoids Kickback										

### FELLING

RATING			FELLING AREA			RATING			FELLING PROCEDURE		
1	2	3	← Tree #	1	2	3	← Tree #	1	2	3	← Tree #
			*Saw Team Safety				*Go/No Go Decision / Walk Away				Plumb Lean – Determines Lay
			*Maintains cutting area control				*Escape Routes, Alternatives, Safety				Swamps out work area and escape routes
			*Establishes positive communication				Undercutting – Gunning or Horizontal Cut				Use of Gunning Sites
RATING			STUMP ANALYSIS								
			Felled to Desired/Other Lay				Sloping Cut				*Warning Shout
			Gunning Cut Position				Undercut/Face Cut Angle and Depth				Back Cut
			Slopping Cut Position				Back Cut				*Cuts in Appropriate Position / Looks Up
			Undercut/Face Cut Angle and Depth				*Dutchman – one/both corners				Procedure Alteration (if necessary)
			Back Cut				*Holding/Hinge Wood				*Wedging Procedure
			*Dutchman – one/both corners				Undercut as a Whole				*Use of Escape Route / Safety Zone
			*Holding/Hinge Wood								Time
			Undercut as a Whole								

### EVALUATOR'S STUMP ANALYSIS SKETCHES



Tree 1	Tree 2	Tree 3
Height _____ DBH _____	Height _____ DBH _____	Height _____ DBH _____
% Slope _____ Species _____	% Slope _____ Species _____	% Slope _____ Species _____
Condition _____	Condition _____	Condition _____
Feet from Center of Lay _____	Feet from Center of Lay _____	Feet from Center of Lay _____

**COMMENTS: Attitude, Technical Skills, Verbal Skills, Weak / Strong, etc (be specific, address all marked unacceptable.)**

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