

## CHAPTER 50 OPERATING PROCEDURES

### 50 – GUIDELINES ON STUDENT-TEACHER RATIO.

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 level of experience of the students, the ability to maintain rapport with the students, and the physical limitations of the classroom.

Training programs are designed to,

- Teach new skills and provide knowledge.
- Promote consistent, professional, and standardized training in support of wildland fire management objectives.
- Define course management and delivery procedures for Lead, Unit, and Adjunct instructors.
- Describe the course organization system.
- Provide directions that enable users to augment course content based on local needs.
- Provide directions on establishing specific course equivalency.
- Establish minimum requirements for course completion certification.
- Correct specific performance deficiencies.

Class size needs to be small enough to provide positive interactive learning situations for both Students and Instructors.

Based on the considerations above, the following class sizes have been adopted, effective immediately, as follows for all courses:

**The Class size recommendation Instructor to Student ratio of 24:1, with a MAXIMUM of 50 students, with an additional instructor and/or coach. If an additional instructor is used, they must be named when entering the class in the NWSA Database. A coach\* must be an ICT5 and/or FFT1 or higher to be utilized. Their name and qualification must be noted in the class notes.**

This class size recommendation pertains to all NWCG courses taught by NWSA Instructors except for S-212 Wildland Fire Chain Saws.

Class size recommendations for S-212 Wildland Fire Chain Saws will be the following.

**The classroom portion ratio will be 24:1 as stated above, and the field portion will be a 6:1 ratio due to the complexity and safety hazards involved in the operation of chainsaws. It is also recommended that additional Unit instructors and/or Coaches\* be utilized accordingly to ensure that safety is always maintained during field evolutions.**

\* Refer to Chapters 10-13 for the definition of a Coach.

These requirements were established by the NWSA Board of Directors and the NWSA Training Committee. Any questions, please contact the NWSA Training Administrator for clarification.

## **50.1 - SPECIAL CONSIDERATIONS**

Field exercises for courses such as, S 130 Field Day, Fire Shelter Deployment drills, RT 130 Wildland Fire Safety Training Annual Refresher, S 211 Portable Pumps and Water Use, and Classroom portions of RT 130 Wildland Fire Safety Training Annual Refresher will require additional Lead, Unit Instructors and/or Coaches necessary to ensure Safety and Quality of Hands-on Training with specialized equipment.

When NWCG courses are used, all stated objectives **must be met**. The Lead Instructor has the latitude to add objectives, some content, and hours to the course; however, hours should **never be reduced**. Students must meet the course objectives and pass the final examination to be certified. At times, this can be affected by class size, class pace, and how much time the instructor must provide to students having difficulty understanding and meeting class objectives.

As always, Course content needs to be maintained and stay within the parameters of NWCG requirements, PMS 901-1 NWCG Standards for Course Delivery.

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

## **51 - INSTRUCTOR EVALUATIONS.**

The objective is to improve instructor performance through evaluation. This can be accomplished through Student Course Evaluations and Final Examinations. Both are important processes to gauge and improve student comprehension and ensure the course and unit objectives have been met.

**RESPONSIBILITIES**

Each Course Coordinator and/or Lead Instructor **must** be familiar with the Course Instructor Guide, Course and Unit Objectives, and any other essential information required in the 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 Administrator upon request. These Student Course Evaluations should be summarized by the Lead Instructor and made a part of the instructor's permanent file.

The instructor's Guide should **always** 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.

Instructor Class size recommendations are in place to provide the student with the best training experience possible and to always maintain safety.

Not following the Class size recommendations stated at the beginning of this chapter will result in the following:

- 1<sup>st</sup> violation will result in a **Verbal Warning**
- 2<sup>nd</sup> Violation will result in a **Written Warning Letter**
- 3<sup>rd</sup> Violation will result in a **Final Written Warning Letter**
- 4<sup>th</sup> Violation **can and/or will result in the Instructor's Status as a NWSA Instructor being terminated.**

## 51-2            LEAD INSTRUCTOR EVALUATION

Lead Instructors should have an evaluation by an independent third party in the first year they are certified and then at least once every 5 years.

### **LEAD INSTRUCTORS ARE REQUIRED TO NOTIFY THE TRAINING COORDINATOR BY FAX OR E-MAIL ONCE A COURSE HAS BEEN SCHEDULED.**

The NWSA Training Coordinator has the discretion to select an independent third-party evaluator. Geographical Area MOUs also have a mandatory notification process.

The evaluator will complete the Instructor Evaluation Form during the training session. A complete 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 instructor's file.

A second copy will be reviewed 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 an 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 who meet the prerequisites. The responsibility and proof rest with the company that maintains the employees' records.

PMS 907 NWCG Course Coordinators Guide is an excellent reference for all Lead Instructors. Topics include the development of course timelines, basic preparation, pre- and post-course activities, with supporting Appendix.

**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 completing a training course should have the following information on the certificate:

- Course title and number.
- Course completion date.
- Hours of instruction (classroom and field).
- Printed name of Lead Instructor.
- Electronic signature of Lead Instructor.
- Course "Meets and/or Exceeds NWCG standards".

## 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 provide 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
---	---	---	---	---	---

COMMENTS

[Type here]

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 accept NWSA standards. 5 4 3 2 1

COMMENTS:

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

COMMENTS:

6. The instructor promoted participant discussion and interaction using 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. Were visuals legible from all parts of the room?      Yes      No
- c. Were visuals appropriate to the subject?      Yes      No
- d. Does the instructor acceptably use visual materials and equipment?      Yes      No

10. Did the instructor speak loudly 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 determined by NWCG. Qualifications can vary by geographical location.

NWCG has established faller qualifications.

- NWCG PMS 310-1 NWCG Standards for Wildland Fire Position Qualifications.
- NFES 2724 “Interagency Standards for Fire and Aviation Operations” (The Red Book), Chapter 13 “Firefighter Training and Qualifications - (Agency Dependent).

Both above standards guide chainsaw operators and fallers. NWSA has adopted these qualifications and standards.

### **54.1 – INSTRUCTOR PREREQUISITES**

Instructor prerequisites can be found in them.

- NFES 002660 - NWCG S-212 Instructor Guide.
- NWCG PMS 901-1 NWCG Standards for Course Delivery

The Lead Instructor must be certified at the Operator 2 level and a Single Resource Boss to teach S-212.

Unit Instructors must also 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 programs require operators to 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 completed 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 completed 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 (5) years**, with a classroom and field component. See the agreement for specifications.

All saw operator qualifications will be maintained through the NWSA Database System.

Certification of saw operators will be valid from the date of issuance if the individual firefighter maintains currency of the ICS position.

This can be accomplished by the Crew Boss completing an **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 PMS 311-91 Position Task Book,

Found at: [www.nwcg.gov/publications-taskbooks/ops](http://www.nwcg.gov/publications-taskbooks/ops) “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 Faller 3, Faller 2, and Faller 1 Position Task Books 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 tree and determine the extent of qualification required to safely perform a felling operation.

## 54.3 - CERTIFICATION

This section defines the qualifications for operating chainsaws.

**Class 3.** Apprentice chainsaw operators using chainsaws for felling are limited to material under eight (8) inches in diameter. Minimum requirements include the successful completion of the NWCG S-212 course and 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 successful completion of the S-212 course and completion of the NWCG Task Book for Faller Class 2.

**Class 1.** Advanced chainsaw operators are considered skilled in felling material over twenty-four (24) inches in diameter. They should be knowledgeable in recognizing dangerous 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 on demonstrated performance, hands-on operation of chainsaws, safety procedures (constant vigilance), and use of personal protective equipment. Knowledge of personal capabilities and limitations is essential in making tree-felling 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 course is valid for three years and is subject to review at any time before expiration. Minimum requirements for Sawyer refresher training and field proficiency reevaluations include:

### 54.4.1

- A knowledge refresher conducted in the classroom or the field and including discussion or demonstrations that cover current safety directives, emerging safety issues, emergency procedures, and cutting techniques.

- 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.
- 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 database.

**54.6 - RECERTIFICATION**

If the currency has expired, the person shall revert to the trainee level only in the position for which the 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 from the one outlined above.

## CHAINSAW OPERATOR FIELD EVALUATION 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)
OVERALL RATING				
<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: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

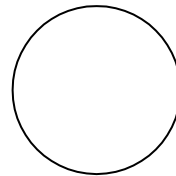
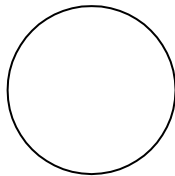
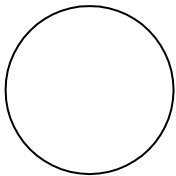
# CHAINSAW OPERATOR FIELD EVALUATION FORM

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 Hazards				*Escape Routes		
			*Widow Makers				Brief Swampier				Bind/Tension-Compression				Swamps Out Work Area		
			*Bark				*Control Cutting Area				Swamps Out Work Area				*Thumb Placement		
			*Wind				Swamps Out Work Area				*Escape Route				Use of Wedge Cut Procedure		
			*Hang-ups				*Body Positioning				*Thumb Placement				Cut Sequence		
			*Determine Soundness				*Use of Bar Tip				Avoids Over/Under Cutting				Release Cut Movement		
			*Lean				Avoids Kickback				*Power Head below Shoulder Ht.				Multiple Bind Situations		
			*Snag/Green Tree				Spring Poles-Tension/Compression				Limb Removal Sequence				Drop Cutting		
			*Root Wads/Loose Logs				Avoids Kickback				Spring Poles-Tension/Compression				Spring Poles-Tension/Compression		
			*Spring Poles								Avoids Kickback				Avoids Kickback		
			*Disease/Fungus												Wedging Procedure		
			Other(list)														

## 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				Swamp out the work area and escape routes	
			*Establishes positive communication				Undercutting – Gunning or Horizontal Cut				Use of Gunning Sites	
RATING			STUMP ANALYSIS									Sloping Cut
			Felled to Desired/Other Lay				*Warning Shout				Back Cut	
			Gunning Cut Position				Back Cut				*Cuts in Appropriate Position / Looks Up	
			Slopping Cut Position				Procedure Alteration (if necessary)				*Wedging Procedure	
			Undercut/Face Cut Angle and Depth				*Use of Escape Route / Safety Zone				Time	
			Back Cut									
			*Dutchman – one/both corners									
			*Holding/Hinge Wood									
			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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