

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 experience level 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 direction that enables users to augment course content based on local needs.
- Provide direction 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 above considerations a recommended class size is 24 students. Instructors should maintain a 6:1 ratio of students to instructors and/or coaches to facilitate exercises and discussion and to enable strong mentorship to the students.

Some courses may have larger and/or smaller recommended class size and student to instructor ratios due to course type and complexity requirements.

Some courses could have up to 40+ students provided there are adequate Unit Instructors and/or Coaches to assist the Lead Instructor. Example being RT 130 Wildland Fire Safety Training Annual Refresher.

In 2022 the NWSA Training Committee determined a **Student to Instructor ratio of 10:1** would be **acceptable for RT-130 only**.

Questions regarding class sizes and student to instructor ratios refer to NWCG PMS 901-1 NWCG Standards for Course Delivery in the “Training Catalog” section under the course being taught or contact the NWSA Training Coordinator 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, S 212 Wildland Fire Chain Saws, 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.

51.1 - 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 Coordinator upon request. These Student Course Evaluations should be summarized by the Lead Instructor and made a part of the instructor's permanent file.

Instructors 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.

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 instructor's 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.

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 determined by NWCG. Qualifications can vary by geographical location.

NWCG has established faller qualifications in;

- 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 provide guidance for chainsaw operators and fallers.

NWSA has adapted these qualifications and standards.

54.1 - INSTRUCTOR PREREQUISITES

Instructor prerequisites can be found in;

- 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 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 (5) 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 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 “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 successful 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 on 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:

54.4.1

- 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.

- 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 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

(Recertify Every 3 Years)	
Name:	Agency Address:
Date:	
Training Location:	
Phone:	Email:
Previous Certification? Yes _____ No _____ Level _____ Agency/Unit _____ Year _____ Certified by: _____	
Note to Evaluator: 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
NOTE: Any safety equipment violations will result in automatic failure.				Other (list)
OVERALL RATING				
Felling Procedure				
Bucking				
Limbing & Brushing				

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: _____

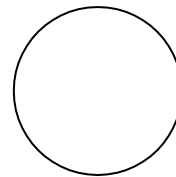
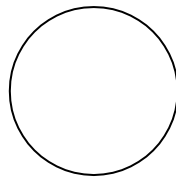
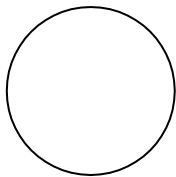
CHAINSAW OPERATOR FIELD EVALUATION FORM

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

FELLING

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

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.)
