



**FOREST SERVICE HANDBOOK
NATIONAL HEADQUARTERS (WO)
WASHINGTON, DC**

FSH 6709.11 – HEALTH AND SAFETY CODE HANDBOOK

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22.49 - Tree Climbing

22.49a - Standards

The standards for tree climbing safety equipment are in 29 CFR 1910.268, 1926.104, and 1926.107, and the American National Standards Institute (ANSI) A10.14 and Z133.1 Standards.

22.49b - Qualifications

The Regions, Stations, Area, and Institute shall develop a training and certification program for employees who climb trees in support of project work and activities (sec. 22.06, para. 7).

1. Tree climbing performed in support of smokejumper wildland fire suppression operations and activities must be in accordance with FSH 5709.14, Smokejumper and Paracargo Handbook and the Interagency Smokejumper Training Guide.
2. Smokejumpers who engage in tree climbing in support of project work and activities shall comply with the requirements in sections 22.49 - 22.49e.

3. The program must include the following annual components:
 - a. Review the manufacturer's specifications on the use, care, and storage of climbing equipment and systems, including serviceability and retirement of worn or defective equipment and components.
 - b. Perform practice sessions on the use of basic climbing equipment and techniques.
 - c. Conduct training sessions on care, use, and storage of climbing equipment and systems with emphasis on climbing techniques, practices, and procedures.
 - d. Conduct training sessions on rescue operations and activities. Training should include a practicum on proper rescue techniques.

22.49c - Personal Protective Equipment

Climbing equipment must comply with the requirements of 29 CFR 1926.104 and 1926.107 and the ANSI A10.14. The following PPE is required for tree climbing:

1. Climbing helmet with a 3-point (minimum) chin strap (UIAA approved).
2. Harness with a breaking strength of at least 5,400 pounds (24 kN).
3. Lanyard with a breaking strength of at least 5,400 pounds (24 kN).
4. Long-sleeved shirt and sturdy pants or coveralls.
5. Eye protection meeting the requirements of the ANSI Z87.1.
6. Gloves during rappelling.
7. Appropriate footwear as identified by the JHA. Examples are soft-soled hiking boots, high-top tennis shoes, and crepe-soled work boots. When working with climbing spurs, wear boots with suitable heels to keep the spurs in place.
8. Other PPE as identified by the JHA.
9. An appropriate 10-person (minimum) first aid kit must be available to each climbing team (refer to the Glossary).

22.49d - Procedures

Prepare a JHA and discuss it with the climbing team before the climbing assignment (sec. 22.08). Discuss how to accomplish the project on a day-to-day

basis. Hold periodic tailgate safety and health sessions. Tree climbing operations and activities must be conducted by climbing teams only.

1. Preparing for Climb.

- a. Determine from where radio contact can be made. When direct radio contact cannot be maintained from the job site, establish procedures to obtain help without leaving the injured climbers alone.
- b. Team inexperienced climbers with an experienced climber to monitor the new climbers' technique and equipment use and provide advice.
- c. Have rescue equipment ready for use at the tree.
- d. Inspect equipment for excessive wear or breakage.
- e. Determine which safety systems will be utilized for a specific climb.
- f. Be aware of changes in the weather throughout the day.

2. During Climb.

- a. Once the climber is in the tree, they shall observe the different characteristics of the tree that were not evident from the ground. Adjust procedures and techniques as necessary to maintain safety. If safety cannot be maintained, the climber shall immediately descend.
- b. Use a haul line for securing, supporting, and transporting equipment and tools that could hinder climbing activities. Keep protective coverings over sharp edges and pointed tips while not in use. Keep hands free of materials and tools while climbing.
- c. When climbing, secure equipment and tools to the climber or to the tree. Always secure large tools to the tree. When using cutting tools, secure climber to the tree with a steel cored lanyard or other cut-resistant lines.
- d. Ensure that the ground person is certified for the level of work being performed. The ground person shall remain on the ground except when it is necessary to assist the climber.

22.49e - Safety Practices

Refer to the National Tree Climbing Field Guide (sec. 22.06, para. 7) for guidelines on safe tree climbing practices.