

**Forest Service Handbook
National Headquarters - Washington Office
Washington, DC**

**Forest Service Handbook 2409.11a – National Forest Cubic Scaling Handbook
Zero Code**

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Approved by: Gloria Manning, Associate Deputy Chief, NFS

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Responsible Staff:

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Digest: Following is an explanation of the changes throughout the directive by section.

Zero Code: Revises the name of the former Washington Office, Forest and Rangelands Staff to the current staff name, Forest and Rangeland Management Staff, throughout the chapter.

06: Incorporates, without substantive change, into the parent text the direction formerly in interim directive (ID) 2409.11a-2002-1. Corrects errors in the notations and abbreviations table in exhibit 01.

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This Handbook provides procedural direction for cubic scaling of National Forest System timber. The intended audience is log scalers and sale administrators. Use this Handbook in concert with FSM 2440, FSM 2450, and FSH 2409.15, Timber Sale Administration Handbook. The procedures are to be applied by certified scalers (FSH 2409.15, sec. 23.11).

01 - Authority

For further direction on related authorities, see FSM 2450.1.

02 - Objective

To standardize the use of cubic measurement in scaling National Forest System timber.

03 - Policy

Use the procedures in this Handbook when scaling timber that is disposed of by means of sale, free use, exchange, or trespass.

04 - Responsibility

Organizations for carrying out timber sale administration and scaling vary from Region to Region in the Forest Service. These differences accommodate differing timber workloads, programs, and operating needs. The general responsibilities of line officers and principal staff are contained in FSM 2443.04, FSM 2450.4, and FSH 2409.15. Specific responsibilities for key positions for timber sale scaling are set out in the following sections 04.1 through 04.6.

04.1 - Washington Office, Director of Forest and Rangeland Management

The Director of Forest and Rangeland Management, Washington Office, is responsible for coordinating the need for periodic revisions of this Handbook with representatives of the timber industry, scaling bureaus, other agencies, and interested groups (FSM 2400).

04.2 - Regional Forester

The Regional Forester is responsible for:

1. Developing Regional guidelines for species identification.
2. Developing a Regional scaler information form (sec. 11.4), where needed.
3. Recommending to the Washington Office, Director of Forest and Rangeland Management, changes in this Handbook to meet new or special Regional requirements.

4. Developing and implementing butt log taper tables (sec. 21.4).
5. Considering and deciding on requests for the approval of team scaling.

04.3 - Forest Supervisor

The Forest Supervisor is responsible for:

1. Establishing any special safety standards designed for each individual scaling location within the Forest, consistent with State and purchaser site regulations.
2. Approving scaling locations, including approval of weight scales when they are used in scaling.
3. Training and certification testing of production scalers (FSH 2409.15, sec. 23.11).

04.4 - Contracting Officer

In addition to responsibilities for timber sale administration outlined in FSM 2450.4 and FSH 2409.15, the Contracting Officer has the responsibility to:

1. Provide the scalers with completed scaler information forms (sec. 11.4) for each contract that requires scaling.
2. Provide the scalers with names of members of the sale administration team (FSH 2409.15), their responsibilities, and where they can be reached.
3. Provide the scalers with new scaler information forms in the event of contract modifications or other changes affecting utilization standards, log accountability, or scaling procedures.
4. Provide the scalers with a list of assigned sale brands.

04.5 - Forest Service Representative

In addition to the responsibilities outlined in FSH 2409.15, the Forest Service Representative is responsible for:

1. Providing scalers and Contracting Officers with sampling frequencies used for scaling timber sales they administer.
2. Providing log accountability methods, forms, and equipment as needed by scalers.

04.6 - Scaler

The Forest Service scaler is responsible for:

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1. Maintaining log and load accountability records and sample load selection systems.
2. Applying the procedures contained in this Handbook to determine the cubic volume of National Forest System products.
3. Promptly submitting recorded measurements in the specified manner.
4. Knowing the name and working position of the Forest Service Representative responsible for each timber sale contract.
5. Keeping current the file of scaler's information forms received from the Timber Sale Contracting Officers and the Forest Service Representatives.
6. Acting promptly and positively to report all irregular or suspicious activities pertaining to timber theft, such as missing or unstapled log load receipts, sample scaling manipulation, attempts to influence scalers, or unusual amounts of after hours hauling.
7. Reporting unsafe or poorly maintained scaling locations to the Forest Service Representative.
8. Maintaining scaling tools.

05 - Definitions

The following specialized terms are used in timber sale scaling:

Contract Scaling Organization. A bureau, cooperative, or firm that provides log scaling services under contract with the Forest Service. A Contract Scaling Organization (CSO) must meet certain criteria to scale National Forest System timber. Individual log scaling services contracts may vary by Region.

Contracting Officer. The position with the delegated authority to enter into and administer timber sale contracts on behalf of the Government. The term also includes authorized representatives acting within the limits of their authority as delegated in writing by the Contracting Officer.

Forest Product. In this Handbook, the term referring to any product of wood fiber manufactured from the bole or limbs of a tree.

Forest Service Representative. The authorized Government representative acting within the limits of the representative's authority, as delegated in writing by the Contracting Officer.

Grading. The determination of the value class of logs or trees based on log characteristics.

Log. A section of a tree, usually cut to a specific length.

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Scaling. The determination of gross and net quantity of timber products such as logs, stacked roundwood, and poles. Scaling may include a variety of sampling and measurement methods.

Segment. A log or a portion of a log not exceeding 20 feet in recorded length.

Third Party Scaling Organization. A bureau, cooperative, or firm that provides log scaling services and is independent from the buyer or seller. A Third Party Scaling Organization (TPSO) must meet certain criteria to scale National Forest System timber (FSH 2409.15, sec. 25.2).

06 - Notations and Abbreviations

The notations and abbreviations in exhibit 01 are used throughout this Handbook.

06 - Exhibit 01

Notations and Abbreviations Used in Scaling

d	= Small end log diameter
D	= Large end log diameter
ft ³	= Cubic feet
ft ²	= Square feet
H	= Defect height
ML	= Measured length
L	= Defect length
W	= Defect width
RL	= Recorded length
SL	= Segment length
'	= Feet
"	= Inches