

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

**Forest Service Handbook 2409.11a – National Forest Cubic Scaling Handbook  
Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

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**Approved by:** Gloria Manning, Associate Deputy Chief, NFS

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**Responsible Staff:**

**Last Change:** 2409.11a-2002-3 to 2409.11a\_40

**Superseded Document(s):** 2409.11a,60, Amendment 2409.11a-91-1, May 22, 1991

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

**60:** Changes the caption of the chapter to Appendixes (formerly, Appendix) and reorganizes the tables and exhibits into separately numbered Appendixes 1 through 14. Makes formatting and editorial changes throughout the chapter.

**Appendix 1:** Incorporates the table for recorded length and segment lengths for given measured length (formerly numbered Table I).

**Appendix 2:** Incorporates the table for cubic foot log volumes (formerly numbered Table II).

**Appendix 3:** Incorporates the table for cubic foot half cylinder volumes (formerly numbered Table III).

**Appendix 4:** Revises and incorporates data in the length cut table (formerly numbered Table IV).

**Appendix 5:** Incorporates the length factor table (formerly numbered Table V).

**Appendix 6:** Revises and incorporates data in the interior defect factor table (formerly numbered Table VI).

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**Appendix 1 -- Recorded Length and Segment Lengths for Given Measured Length****(20 Foot Maximum with .5-Foot Trim)**

| Measured Length<br>(Ft) | Recorded Length<br>(Ft) | Segment Length(s)<br>(Ft) |    |  |
|-------------------------|-------------------------|---------------------------|----|--|
|                         |                         | TOP                       |    |  |
| 8.0 - 8.5               | 8                       | 8                         |    |  |
| 8.6 - 9.5               | 9                       | 9                         |    |  |
| 9.6 - 10.5              | 10                      | 10                        |    |  |
| 10.6 - 11.5             | 11                      | 11                        |    |  |
| 11.6 - 12.5             | 12                      | 12                        |    |  |
| 12.6 - 13.5             | 13                      | 13                        |    |  |
| 13.6 - 14.5             | 14                      | 14                        |    |  |
| 14.6 - 15.5             | 15                      | 15                        |    |  |
| 15.6 - 16.5             | 16                      | 16                        |    |  |
| 16.6 - 17.5             | 17                      | 17                        |    |  |
| 17.6 - 18.5             | 18                      | 18                        |    |  |
| 18.6 - 19.5             | 19                      | 19                        |    |  |
| 19.6 - 20.5             | 20                      | 20                        |    |  |
| 20.6 - 22.0             | 21                      | 10                        | 11 |  |
| 22.1 - 23.0             | 22                      | 10                        | 12 |  |
| 23.1 - 24.0             | 23                      | 11                        | 12 |  |
| 24.1 - 25.0             | 24                      | 12                        | 12 |  |
| 25.1 - 26.0             | 25                      | 12                        | 12 |  |
| 26.1 - 27.0             | 26                      | 12                        | 14 |  |
| 27.1 - 28.0             | 27                      | 13                        | 14 |  |
| 28.1 - 29.0             | 28                      | 14                        | 14 |  |
| 29.1 - 30.0             | 29                      | 14                        | 15 |  |
| 30.1 - 31.0             | 30                      | 14                        | 16 |  |
| 31.1 - 32.0             | 31                      | 15                        | 16 |  |
| 32.1 - 33.0             | 32                      | 16                        | 16 |  |
| 33.1 - 34.0             | 33                      | 16                        | 17 |  |
| 34.1 - 35.0             | 34                      | 16                        | 18 |  |
| 35.1 - 36.0             | 35                      | 17                        | 18 |  |
| 36.1 - 37.0             | 36                      | 18                        | 18 |  |
| 37.1 - 38.0             | 37                      | 18                        | 19 |  |

**Recorded Length and Segment Lengths for Given Measured Length**  
**(20 Foot Maximum with .5-Foot Trim)**

| Measured Length<br>(Ft) | Recorded Length<br>(Ft) | Segment Length(s)<br>(Ft) |    |    |    |
|-------------------------|-------------------------|---------------------------|----|----|----|
|                         |                         | TOP                       |    |    |    |
| 38.1 - 39.0             | 38                      | 18                        | 20 |    |    |
| 39.1 - 40.0             | 39                      | 19                        | 20 |    |    |
| 40.1 - 41.0             | 40                      | 20                        | 20 |    |    |
| 41.1 - 42.5             | 41                      | 13                        | 14 | 14 |    |
| 42.6 - 43.5             | 42                      | 14                        | 14 | 14 |    |
| 43.6 - 44.5             | 43                      | 14                        | 14 | 15 |    |
| 44.6 - 45.5             | 44                      | 14                        | 14 | 16 |    |
| 45.6 - 46.5             | 45                      | 14                        | 15 | 16 |    |
| 46.6 - 47.5             | 46                      | 14                        | 16 | 16 |    |
| 47.6 - 48.5             | 47                      | 15                        | 16 | 16 |    |
| 48.6 - 49.5             | 48                      | 16                        | 16 | 16 |    |
| 49.6 - 50.5             | 49                      | 16                        | 16 | 17 |    |
| 50.6 - 51.5             | 50                      | 16                        | 16 | 18 |    |
| 51.6 - 52.5             | 51                      | 16                        | 17 | 18 |    |
| 52.6 - 53.5             | 52                      | 16                        | 18 | 18 |    |
| 53.6 - 54.5             | 53                      | 17                        | 18 | 18 |    |
| 54.6 - 55.5             | 54                      | 18                        | 18 | 18 |    |
| 55.6 - 56.5             | 55                      | 18                        | 18 | 19 |    |
| 56.6 - 57.5             | 56                      | 18                        | 18 | 20 |    |
| 57.6 - 58.5             | 57                      | 18                        | 19 | 20 |    |
| 58.6 - 59.5             | 58                      | 18                        | 20 | 20 |    |
| 59.6 - 60.5             | 59                      | 19                        | 20 | 20 |    |
| 60.6 - 61.5             | 60                      | 20                        | 20 | 20 |    |
| 61.6 - 63.0             | 61                      | 14                        | 15 | 16 | 16 |
| 63.1 - 64.0             | 62                      | 14                        | 16 | 16 | 16 |
| 64.1 - 65.0             | 63                      | 15                        | 16 | 16 | 16 |
| 65.1 - 66.0             | 64                      | 16                        | 16 | 16 | 16 |
| 66.1 - 67.0             | 65                      | 16                        | 16 | 16 | 17 |
| 67.1 - 68.0             | 66                      | 16                        | 16 | 16 | 18 |
| 68.1 - 69.0             | 67                      | 16                        | 16 | 17 |    |

**Recorded Length and Segment Lengths for Given Measured Length**  
**(20 Foot Maximum with .5-Foot Trim)**

| Measured Length (Ft) | Recorded Length (Ft) | Segment Length(s) (Ft) |    |    |    |
|----------------------|----------------------|------------------------|----|----|----|
|                      |                      | TOP                    |    |    |    |
| 69.1 - 70.0          | 68                   | 16                     | 16 | 18 | 18 |
| 70.1 - 71.0          | 69                   | 16                     | 17 | 18 | 18 |
| 71.1 - 72.0          | 70                   | 16                     | 18 | 18 | 18 |
| 72.1 - 73.0          | 71                   | 17                     | 18 | 18 | 18 |
| 73.1 - 74.0          | 72                   | 18                     | 18 | 18 | 18 |
| 74.1 - 75.0          | 73                   | 18                     | 18 | 18 | 19 |
| 75.1 - 76.0          | 74                   | 18                     | 18 | 18 | 20 |
| 76.1 - 77.0          | 75                   | 18                     | 18 | 19 | 20 |
| 77.1 - 78.0          | 76                   | 18                     | 18 | 20 | 20 |
| 78.1 - 79.0          | 77                   | 18                     | 19 | 20 | 20 |
| 79.1 - 80.0          | 78                   | 18                     | 20 | 20 | 20 |
| 80.1 - 81.0          | 79                   | 19                     | 20 | 20 | 20 |
| 81.6 - 82.0          | 80                   | 20                     | 20 | 20 | 20 |

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**Appendix 2 -- Cubic Foot Log Volumes**

\*\*\* *Segment Length = 1 Ft.* \*\*\*

To determine cubic foot volume, use the following equation:

$$\text{Volume (ft}^3\text{)} = .002727 (D^2 + d^2) \text{ SL}$$

| Small<br>End<br>Dia. | Inches of Taper |     |     |     |     |     |     |     |     |     |     |
|----------------------|-----------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|                      | 0               | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   | 10  |
| 2                    | .0              | .0  | .1  | .1  | .1  | .1  | .2  | .2  | .3  | .3  | .4  |
| 3                    | .0              | .1  | .1  | .1  | .2  | .2  | .2  | .3  | .4  | .4  | .5  |
| 4                    | .1              | .1  | .1  | .2  | .2  | .3  | .3  | .4  | .4  | .5  | .6  |
| 5                    | .1              | .2  | .2  | .2  | .3  | .3  | .4  | .5  | .5  | .6  | .7  |
| 6                    | .2              | .2  | .3  | .3  | .4  | .4  | .5  | .6  | .6  | .7  | .8  |
| 7                    | .3              | .3  | .4  | .4  | .5  | .5  | .6  | .7  | .7  | .8  | .9  |
| 8                    | .3              | .4  | .4  | .5  | .6  | .6  | .7  | .8  | .9  | 1.0 | 1.1 |
| 9                    | .4              | .5  | .6  | .6  | .7  | .8  | .8  | .9  | 1.0 | 1.1 | 1.2 |
| 10                   | .5              | .6  | .7  | .7  | .8  | .9  | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 |
| 11                   | .7              | .7  | .8  | .9  | .9  | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 |
| 12                   | .8              | .9  | .9  | 1.0 | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 |
| 13                   | .9              | 1.0 | 1.1 | 1.2 | 1.2 | 1.3 | 1.4 | 1.6 | 1.7 | 1.8 | 1.9 |
| 14                   | 1.1             | 1.1 | 1.2 | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.9 | 2.0 | 2.1 |
| 15                   | 1.2             | 1.3 | 1.4 | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.1 | 2.2 | 2.3 |
| 16                   | 1.4             | 1.5 | 1.6 | 1.7 | 1.8 | 1.9 | 2.0 | 2.1 | 2.3 | 2.4 | 2.5 |
| 17                   | 1.6             | 1.7 | 1.8 | 1.9 | 2.0 | 2.1 | 2.2 | 2.4 | 2.5 | 2.6 | 2.8 |
| 18                   | 1.8             | 1.9 | 2.0 | 2.1 | 2.2 | 2.3 | 2.5 | 2.6 | 2.7 | 2.9 | 3.0 |
| 19                   | 2.0             | 2.1 | 2.2 | 2.3 | 2.4 | 2.6 | 2.7 | 2.8 | 3.0 | 3.1 | 3.3 |
| 20                   | 2.2             | 2.3 | 2.4 | 2.5 | 2.7 | 2.8 | 2.9 | 3.1 | 3.2 | 3.4 | 3.5 |
| 21                   | 2.4             | 2.5 | 2.6 | 2.8 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.7 | 3.8 |
| 22                   | 2.6             | 2.8 | 2.9 | 3.0 | 3.2 | 3.3 | 3.5 | 3.6 | 3.8 | 3.9 | 4.1 |
| 23                   | 2.9             | 3.0 | 3.1 | 3.3 | 3.4 | 3.6 | 3.7 | 3.9 | 4.1 | 4.2 | 4.4 |
| 24                   | 3.1             | 3.3 | 3.4 | 3.6 | 3.7 | 3.9 | 4.0 | 4.2 | 4.4 | 4.5 | 4.7 |
| 25                   | 3.4             | 3.5 | 3.7 | 3.8 | 4.0 | 4.2 | 4.3 | 4.5 | 4.7 | 4.9 | 5.0 |
| 26                   | 3.7             | 3.8 | 4.0 | 4.1 | 4.3 | 4.5 | 4.6 | 4.8 | 5.0 | 5.2 | 5.4 |
| 27                   | 4.0             | 4.1 | 4.3 | 4.4 | 4.6 | 4.8 | 5.0 | 5.1 | 5.3 | 5.5 | 5.7 |
| 28                   | 4.3             | 4.4 | 4.6 | 4.8 | 4.9 | 5.1 | 5.3 | 5.5 | 5.7 | 5.9 | 6.1 |
| 29                   | 4.6             | 4.7 | 4.9 | 5.1 | 5.3 | 5.4 | 5.6 | 5.8 | 6.0 | 6.2 | 6.4 |
| 30                   | 4.9             | 5.1 | 5.2 | 5.4 | 5.6 | 5.8 | 6.0 | 6.2 | 6.4 | 6.6 | 6.8 |

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**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 31                   | 5.2             | 5.4  | 5.6  | 5.8  | 6.0  | 6.2  | 6.4  | 6.6  | 6.8  | 7.0  | 7.2  |
| 32                   | 5.6             | 5.8  | 5.9  | 6.1  | 6.3  | 6.5  | 6.7  | 6.9  | 7.2  | 7.4  | 7.6  |
| 33                   | 5.9             | 6.1  | 6.3  | 6.5  | 6.7  | 6.9  | 7.1  | 7.3  | 7.6  | 7.8  | 8.0  |
| 34                   | 6.3             | 6.5  | 6.7  | 6.9  | 7.1  | 7.3  | 7.5  | 7.7  | 8.0  | 8.2  | 8.4  |
| 35                   | 6.7             | 6.9  | 7.1  | 7.3  | 7.5  | 7.7  | 7.9  | 8.2  | 8.4  | 8.6  | 8.9  |
| 36                   | 7.1             | 7.3  | 7.5  | 7.7  | 7.9  | 8.1  | 8.3  | 8.6  | 8.8  | 9.1  | 9.3  |
| 37                   | 7.5             | 7.7  | 7.9  | 8.1  | 8.3  | 8.5  | 8.8  | 9.0  | 9.3  | 9.5  | 9.8  |
| 38                   | 7.9             | 8.1  | 8.3  | 8.5  | 8.7  | 9.0  | 9.2  | 9.5  | 9.7  | 10.0 | 10.2 |
| 39                   | 8.3             | 8.5  | 8.7  | 9.0  | 9.2  | 9.4  | 9.7  | 9.9  | 10.2 | 10.4 | 10.7 |
| 40                   | 8.7             | 8.9  | 9.2  | 9.4  | 9.6  | 9.9  | 10.1 | 10.4 | 10.6 | 10.9 | 11.2 |
| 41                   | 9.2             | 9.4  | 9.6  | 9.9  | 10.1 | 10.4 | 10.6 | 10.9 | 11.1 | 11.4 | 11.7 |
| 42                   | 9.6             | 9.9  | 10.1 | 10.3 | 10.6 | 10.8 | 11.1 | 11.4 | 11.6 | 11.9 | 12.2 |
| 43                   | 10.1            | 10.3 | 10.6 | 10.8 | 11.1 | 11.3 | 11.6 | 11.9 | 12.1 | 12.4 | 12.7 |
| 44                   | 10.6            | 10.8 | 11.0 | 11.3 | 11.6 | 11.8 | 12.1 | 12.4 | 12.7 | 12.9 | 13.2 |
| 45                   | 11.0            | 11.3 | 11.5 | 11.8 | 12.1 | 12.3 | 12.6 | 12.9 | 13.2 | 13.5 | 13.8 |
| 46                   | 11.5            | 11.8 | 12.1 | 12.3 | 12.6 | 12.9 | 13.1 | 13.4 | 13.7 | 14.0 | 14.3 |
| 47                   | 12.0            | 12.3 | 12.6 | 12.8 | 13.1 | 13.4 | 13.7 | 14.0 | 14.3 | 14.6 | 14.9 |
| 48                   | 12.6            | 12.8 | 13.1 | 13.4 | 13.7 | 13.9 | 14.2 | 14.5 | 14.8 | 15.1 | 15.5 |
| 49                   | 13.1            | 13.4 | 13.6 | 13.9 | 14.2 | 14.5 | 14.8 | 15.1 | 15.4 | 15.7 | 16.0 |
| 50                   | 13.6            | 13.9 | 14.2 | 14.5 | 14.8 | 15.1 | 15.4 | 15.7 | 16.0 | 16.3 | 16.6 |

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**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 2 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .0              | .1   | .1   | .2   | .2   | .3   | .4   | .5   | .6   | .7   | .8   |
| 3                    | .1              | .1   | .2   | .2   | .3   | .4   | .5   | .6   | .7   | .8   | 1.0  |
| 4                    | .2              | .2   | .3   | .4   | .4   | .5   | .6   | .7   | .9   | 1.0  | 1.2  |
| 5                    | .3              | .3   | .4   | .5   | .6   | .7   | .8   | .9   | 1.1  | 1.2  | 1.4  |
| 6                    | .4              | .5   | .5   | .6   | .7   | .9   | 1.0  | 1.1  | 1.3  | 1.4  | 1.6  |
| 7                    | .5              | .6   | .7   | .8   | .9   | 1.1  | 1.2  | 1.3  | 1.5  | 1.7  | 1.8  |
| 8                    | .7              | .8   | .9   | 1.0  | 1.1  | 1.3  | 1.4  | 1.6  | 1.7  | 1.9  | 2.1  |
| 9                    | .9              | 1.0  | 1.1  | 1.2  | 1.4  | 1.5  | 1.7  | 1.8  | 2.0  | 2.2  | 2.4  |
| 10                   | 1.1             | 1.2  | 1.3  | 1.5  | 1.6  | 1.8  | 1.9  | 2.1  | 2.3  | 2.5  | 2.7  |
| 11                   | 1.3             | 1.4  | 1.6  | 1.7  | 1.9  | 2.1  | 2.2  | 2.4  | 2.6  | 2.8  | 3.1  |
| 12                   | 1.6             | 1.7  | 1.9  | 2.0  | 2.2  | 2.4  | 2.6  | 2.8  | 3.0  | 3.2  | 3.4  |
| 13                   | 1.8             | 2.0  | 2.1  | 2.3  | 2.5  | 2.7  | 2.9  | 3.1  | 3.3  | 3.6  | 3.8  |
| 14                   | 2.1             | 2.3  | 2.5  | 2.6  | 2.8  | 3.0  | 3.3  | 3.5  | 3.7  | 4.0  | 4.2  |
| 15                   | 2.5             | 2.6  | 2.8  | 3.0  | 3.2  | 3.4  | 3.6  | 3.9  | 4.1  | 4.4  | 4.6  |
| 16                   | 2.8             | 3.0  | 3.2  | 3.4  | 3.6  | 3.8  | 4.0  | 4.3  | 4.5  | 4.8  | 5.1  |
| 17                   | 3.2             | 3.3  | 3.5  | 3.8  | 4.0  | 4.2  | 4.5  | 4.7  | 5.0  | 5.3  | 5.6  |
| 18                   | 3.5             | 3.7  | 3.9  | 4.2  | 4.4  | 4.7  | 4.9  | 5.2  | 5.5  | 5.7  | 6.0  |
| 19                   | 3.9             | 4.2  | 4.4  | 4.6  | 4.9  | 5.1  | 5.4  | 5.7  | 5.9  | 6.2  | 6.6  |
| 20                   | 4.4             | 4.6  | 4.8  | 5.1  | 5.3  | 5.6  | 5.9  | 6.2  | 6.5  | 6.8  | 7.1  |
| 21                   | 4.8             | 5.0  | 5.3  | 5.5  | 5.8  | 6.1  | 6.4  | 6.7  | 7.0  | 7.3  | 7.6  |
| 22                   | 5.3             | 5.5  | 5.8  | 6.0  | 6.3  | 6.6  | 6.9  | 7.2  | 7.5  | 7.9  | 8.2  |
| 23                   | 5.8             | 6.0  | 6.3  | 6.6  | 6.9  | 7.2  | 7.5  | 7.8  | 8.1  | 8.5  | 8.8  |
| 24                   | 6.3             | 6.6  | 6.8  | 7.1  | 7.4  | 7.7  | 8.1  | 8.4  | 8.7  | 9.1  | 9.4  |
| 25                   | 6.8             | 7.1  | 7.4  | 7.7  | 8.0  | 8.3  | 8.7  | 9.0  | 9.3  | 9.7  | 10.1 |
| 26                   | 7.4             | 7.7  | 8.0  | 8.3  | 8.6  | 8.9  | 9.3  | 9.6  | 10.0 | 10.4 | 10.8 |
| 27                   | 8.0             | 8.3  | 8.6  | 8.9  | 9.2  | 9.6  | 9.9  | 10.3 | 10.7 | 11.0 | 11.4 |
| 28                   | 8.6             | 8.9  | 9.2  | 9.5  | 9.9  | 10.2 | 10.6 | 11.0 | 11.3 | 11.7 | 12.2 |
| 29                   | 9.2             | 9.5  | 9.8  | 10.2 | 10.5 | 10.9 | 11.3 | 11.7 | 12.1 | 12.5 | 12.9 |
| 30                   | 9.8             | 10.1 | 10.5 | 10.8 | 11.2 | 11.6 | 12.0 | 12.4 | 12.8 | 13.2 | 13.6 |
| 31                   | 10.5            | 10.8 | 11.2 | 11.5 | 11.9 | 12.3 | 12.7 | 13.1 | 13.5 | 14.0 | 14.4 |
| 32                   | 11.2            | 11.5 | 11.9 | 12.3 | 12.7 | 13.1 | 13.5 | 13.9 | 14.3 | 14.8 | 15.2 |
| 33                   | 11.9            | 12.2 | 12.6 | 13.0 | 13.4 | 13.8 | 14.2 | 14.7 | 15.1 | 15.6 | 16.0 |

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**Chapter 60 - Appendixes**

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**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 34                   | 12.6            | 13.0 | 13.4 | 13.8 | 14.2 | 14.6 | 15.0 | 15.5 | 15.9 | 16.4 | 16.9 |
| 35                   | 13.4            | 13.7 | 14.1 | 14.6 | 15.0 | 15.4 | 15.8 | 16.3 | 16.8 | 17.2 | 17.7 |
| 36                   | 14.1            | 14.5 | 14.9 | 15.4 | 15.8 | 16.2 | 16.7 | 17.2 | 17.6 | 18.1 | 18.6 |
| 37                   | 14.9            | 15.3 | 15.8 | 16.2 | 16.6 | 17.1 | 17.6 | 18.0 | 18.5 | 19.0 | 19.5 |
| 38                   | 15.8            | 16.2 | 16.6 | 17.0 | 17.5 | 18.0 | 18.4 | 18.9 | 19.4 | 19.9 | 20.4 |
| 39                   | 16.6            | 17.0 | 17.5 | 17.9 | 18.4 | 18.9 | 19.3 | 19.8 | 20.3 | 20.9 | 21.4 |
| 40                   | 17.5            | 17.9 | 18.3 | 18.8 | 19.3 | 19.8 | 20.3 | 20.8 | 21.3 | 21.8 | 22.4 |
| 41                   | 18.3            | 18.8 | 19.3 | 19.7 | 20.2 | 20.7 | 21.2 | 21.7 | 22.3 | 22.8 | 23.4 |
| 42                   | 19.2            | 19.7 | 20.2 | 20.7 | 21.2 | 21.7 | 22.2 | 22.7 | 23.3 | 23.8 | 24.4 |
| 43                   | 20.2            | 20.6 | 21.1 | 21.6 | 22.1 | 22.7 | 23.2 | 23.7 | 24.3 | 24.8 | 25.4 |
| 44                   | 21.1            | 21.6 | 22.1 | 22.6 | 23.1 | 23.7 | 24.2 | 24.7 | 25.3 | 25.9 | 26.5 |
| 45                   | 22.1            | 22.6 | 23.1 | 23.6 | 24.1 | 24.7 | 25.2 | 25.8 | 26.4 | 26.9 | 27.5 |
| 46                   | 23.1            | 23.6 | 24.1 | 24.6 | 25.2 | 25.7 | 26.3 | 26.9 | 27.4 | 28.0 | 28.6 |
| 47                   | 24.1            | 24.6 | 25.1 | 25.7 | 26.2 | 26.8 | 27.4 | 28.0 | 28.5 | 29.2 | 29.8 |
| 48                   | 25.1            | 25.7 | 26.2 | 26.8 | 27.3 | 27.9 | 28.5 | 29.1 | 29.7 | 30.3 | 30.9 |
| 49                   | 26.2            | 26.7 | 27.3 | 27.8 | 28.4 | 29.0 | 29.6 | 30.2 | 30.8 | 31.4 | 32.1 |
| 50                   | 27.3            | 27.8 | 28.4 | 29.0 | 29.5 | 30.1 | 30.7 | 31.4 | 32.0 | 32.6 | 33.3 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 3 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .1              | .1   | .2   | .2   | .3   | .4   | .6   | .7   | .9   | 1.0  | 1.2  |
| 3                    | .1              | .2   | .3   | .4   | .5   | .6   | .7   | .9   | 1.1  | 1.3  | 1.5  |
| 4                    | .3              | .3   | .4   | .5   | .7   | .8   | .9   | 1.1  | 1.3  | 1.5  | 1.7  |
| 5                    | .4              | .5   | .6   | .7   | .9   | 1.0  | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  |
| 6                    | .6              | .7   | .8   | 1.0  | 1.1  | 1.3  | 1.5  | 1.7  | 1.9  | 2.1  | 2.4  |
| 7                    | .8              | .9   | 1.1  | 1.2  | 1.4  | 1.6  | 1.8  | 2.0  | 2.2  | 2.5  | 2.8  |
| 8                    | 1.0             | 1.2  | 1.3  | 1.5  | 1.7  | 1.9  | 2.1  | 2.4  | 2.6  | 2.9  | 3.2  |
| 9                    | 1.3             | 1.5  | 1.7  | 1.8  | 2.0  | 2.3  | 2.5  | 2.8  | 3.0  | 3.3  | 3.6  |
| 10                   | 1.6             | 1.8  | 2.0  | 2.2  | 2.4  | 2.7  | 2.9  | 3.2  | 3.5  | 3.8  | 4.1  |
| 11                   | 2.0             | 2.2  | 2.4  | 2.6  | 2.8  | 3.1  | 3.4  | 3.6  | 3.9  | 4.3  | 4.6  |
| 12                   | 2.4             | 2.6  | 2.8  | 3.0  | 3.3  | 3.5  | 3.8  | 4.1  | 4.5  | 4.8  | 5.1  |
| 13                   | 2.8             | 3.0  | 3.2  | 3.5  | 3.7  | 4.0  | 4.3  | 4.7  | 5.0  | 5.3  | 5.7  |
| 14                   | 3.2             | 3.4  | 3.7  | 4.0  | 4.3  | 4.6  | 4.9  | 5.2  | 5.6  | 5.9  | 6.3  |
| 15                   | 3.7             | 3.9  | 4.2  | 4.5  | 4.8  | 5.1  | 5.4  | 5.8  | 6.2  | 6.6  | 7.0  |
| 16                   | 4.2             | 4.5  | 4.7  | 5.0  | 5.4  | 5.7  | 6.1  | 6.4  | 6.8  | 7.2  | 7.6  |
| 17                   | 4.7             | 5.0  | 5.3  | 5.6  | 6.0  | 6.3  | 6.7  | 7.1  | 7.5  | 7.9  | 8.3  |
| 18                   | 5.3             | 5.6  | 5.9  | 6.3  | 6.6  | 7.0  | 7.4  | 7.8  | 8.2  | 8.6  | 9.1  |
| 19                   | 5.9             | 6.2  | 6.6  | 6.9  | 7.3  | 7.7  | 8.1  | 8.5  | 8.9  | 9.4  | 9.8  |
| 20                   | 6.5             | 6.9  | 7.2  | 7.6  | 8.0  | 8.4  | 8.8  | 9.2  | 9.7  | 10.2 | 10.6 |
| 21                   | 7.2             | 7.6  | 7.9  | 8.3  | 8.7  | 9.1  | 9.6  | 10.0 | 10.5 | 11.0 | 11.5 |
| 22                   | 7.9             | 8.3  | 8.7  | 9.1  | 9.5  | 9.9  | 10.4 | 10.8 | 11.3 | 11.8 | 12.3 |
| 23                   | 8.7             | 9.0  | 9.4  | 9.9  | 10.3 | 10.7 | 11.2 | 11.7 | 12.2 | 12.7 | 13.2 |
| 24                   | 9.4             | 9.8  | 10.2 | 10.7 | 11.1 | 11.6 | 12.1 | 12.6 | 13.1 | 13.6 | 14.2 |
| 25                   | 10.2            | 10.6 | 11.1 | 11.5 | 12.0 | 12.5 | 13.0 | 13.5 | 14.0 | 14.6 | 15.1 |
| 26                   | 11.1            | 11.5 | 11.9 | 12.4 | 12.9 | 13.4 | 13.9 | 14.4 | 15.0 | 15.6 | 16.1 |
| 27                   | 11.9            | 12.4 | 12.8 | 13.3 | 13.8 | 14.3 | 14.9 | 15.4 | 16.0 | 16.6 | 17.2 |
| 28                   | 12.8            | 13.3 | 13.8 | 14.3 | 14.8 | 15.3 | 15.9 | 16.4 | 17.0 | 17.6 | 18.2 |
| 29                   | 13.8            | 14.2 | 14.7 | 15.3 | 15.8 | 16.3 | 16.9 | 17.5 | 18.1 | 18.7 | 19.3 |
| 30                   | 14.7            | 15.2 | 15.7 | 16.3 | 16.8 | 17.4 | 18.0 | 18.6 | 19.2 | 19.8 | 20.5 |
| 31                   | 15.7            | 16.2 | 16.8 | 17.3 | 17.9 | 18.5 | 19.1 | 19.7 | 20.3 | 21.0 | 21.6 |
| 32                   | 16.8            | 17.3 | 17.8 | 18.4 | 19.0 | 19.6 | 20.2 | 20.8 | 21.5 | 22.1 | 22.8 |
| 33                   | 17.8            | 18.4 | 18.9 | 19.5 | 20.1 | 20.7 | 21.4 | 22.0 | 22.7 | 23.3 | 24.0 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 34                   | 18.9            | 19.5 | 20.1 | 20.7 | 21.3 | 21.9 | 22.5 | 23.2 | 23.9 | 24.6 | 25.3 |
| 35                   | 20.0            | 20.6 | 21.2 | 21.8 | 22.5 | 23.1 | 23.8 | 24.5 | 25.1 | 25.9 | 26.6 |
| 36                   | 21.2            | 21.8 | 22.4 | 23.0 | 23.7 | 24.4 | 25.0 | 25.7 | 26.4 | 27.2 | 27.9 |
| 37                   | 22.4            | 23.0 | 23.6 | 24.3 | 25.0 | 25.6 | 26.3 | 27.0 | 27.8 | 28.5 | 29.3 |
| 38                   | 23.6            | 24.3 | 24.9 | 25.6 | 26.2 | 26.9 | 27.7 | 28.4 | 29.1 | 29.9 | 30.7 |
| 39                   | 24.9            | 25.5 | 26.2 | 26.9 | 27.6 | 28.3 | 29.0 | 29.8 | 30.5 | 31.3 | 32.1 |
| 40                   | 26.2            | 26.8 | 27.5 | 28.2 | 28.9 | 29.7 | 30.4 | 31.2 | 31.9 | 32.7 | 33.5 |
| 41                   | 27.5            | 28.2 | 28.9 | 29.6 | 30.3 | 31.1 | 31.8 | 32.6 | 33.4 | 34.2 | 35.0 |
| 42                   | 28.9            | 29.6 | 30.3 | 31.0 | 31.7 | 32.5 | 33.3 | 34.1 | 34.9 | 35.7 | 36.6 |
| 43                   | 30.3            | 31.0 | 31.7 | 32.4 | 33.2 | 34.0 | 34.8 | 35.6 | 36.4 | 37.2 | 38.1 |
| 44                   | 31.7            | 32.4 | 33.1 | 33.9 | 34.7 | 35.5 | 36.3 | 37.1 | 38.0 | 38.8 | 39.7 |
| 45                   | 33.1            | 33.9 | 34.6 | 35.4 | 36.2 | 37.0 | 37.8 | 38.7 | 39.5 | 40.4 | 41.3 |
| 46                   | 34.6            | 35.4 | 36.2 | 37.0 | 37.8 | 38.6 | 39.4 | 40.3 | 41.2 | 42.1 | 43.0 |
| 47                   | 36.1            | 36.9 | 37.7 | 38.5 | 39.4 | 40.2 | 41.1 | 41.9 | 42.8 | 43.7 | 44.7 |
| 48                   | 37.7            | 38.5 | 39.3 | 40.1 | 41.0 | 41.8 | 42.7 | 43.6 | 44.5 | 45.4 | 46.4 |
| 49                   | 39.3            | 40.1 | 40.9 | 41.8 | 42.6 | 43.5 | 44.4 | 45.3 | 46.2 | 47.2 | 48.1 |
| 50                   | 40.9            | 41.7 | 42.6 | 43.4 | 44.3 | 45.2 | 46.1 | 47.0 | 48.0 | 48.9 | 49.9 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 4 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .1              | .1   | .2   | .3   | .4   | .6   | .7   | .9   | 1.1  | 1.4  | 1.6  |
| 3                    | .2              | .3   | .4   | .5   | .6   | .8   | 1.0  | 1.2  | 1.4  | 1.7  | 1.9  |
| 4                    | .3              | .4   | .6   | .7   | .9   | 1.1  | 1.3  | 1.5  | 1.7  | 2.0  | 2.3  |
| 5                    | .5              | .7   | .8   | 1.0  | 1.2  | 1.4  | 1.6  | 1.8  | 2.1  | 2.4  | 2.7  |
| 6                    | .8              | .9   | 1.1  | 1.3  | 1.5  | 1.7  | 2.0  | 2.2  | 2.5  | 2.8  | 3.2  |
| 7                    | 1.1             | 1.2  | 1.4  | 1.6  | 1.9  | 2.1  | 2.4  | 2.7  | 3.0  | 3.3  | 3.7  |
| 8                    | 1.4             | 1.6  | 1.8  | 2.0  | 2.3  | 2.5  | 2.8  | 3.2  | 3.5  | 3.9  | 4.2  |
| 9                    | 1.8             | 2.0  | 2.2  | 2.5  | 2.7  | 3.0  | 3.3  | 3.7  | 4.0  | 4.4  | 4.8  |
| 10                   | 2.2             | 2.4  | 2.7  | 2.9  | 3.2  | 3.5  | 3.9  | 4.2  | 4.6  | 5.0  | 5.5  |
| 11                   | 2.6             | 2.9  | 3.2  | 3.5  | 3.8  | 4.1  | 4.5  | 4.9  | 5.3  | 5.7  | 6.1  |
| 12                   | 3.1             | 3.4  | 3.7  | 4.0  | 4.4  | 4.7  | 5.1  | 5.5  | 5.9  | 6.4  | 6.9  |
| 13                   | 3.7             | 4.0  | 4.3  | 4.6  | 5.0  | 5.4  | 5.8  | 6.2  | 6.7  | 7.1  | 7.6  |
| 14                   | 4.3             | 4.6  | 4.9  | 5.3  | 5.7  | 6.1  | 6.5  | 6.9  | 7.4  | 7.9  | 8.4  |
| 15                   | 4.9             | 5.2  | 5.6  | 6.0  | 6.4  | 6.8  | 7.3  | 7.7  | 8.2  | 8.7  | 9.3  |
| 16                   | 5.6             | 5.9  | 6.3  | 6.7  | 7.2  | 7.6  | 8.1  | 8.6  | 9.1  | 9.6  | 10.2 |
| 17                   | 6.3             | 6.7  | 7.1  | 7.5  | 8.0  | 8.4  | 8.9  | 9.4  | 10.0 | 10.5 | 11.1 |
| 18                   | 7.1             | 7.5  | 7.9  | 8.3  | 8.8  | 9.3  | 9.8  | 10.4 | 10.9 | 11.5 | 12.1 |
| 19                   | 7.9             | 8.3  | 8.7  | 9.2  | 9.7  | 10.2 | 10.8 | 11.3 | 11.9 | 12.5 | 13.1 |
| 20                   | 8.7             | 9.2  | 9.6  | 10.1 | 10.6 | 11.2 | 11.7 | 12.3 | 12.9 | 13.5 | 14.2 |
| 21                   | 9.6             | 10.1 | 10.6 | 11.1 | 11.6 | 12.2 | 12.8 | 13.4 | 14.0 | 14.6 | 15.3 |
| 22                   | 10.6            | 11.0 | 11.6 | 12.1 | 12.7 | 13.2 | 13.8 | 14.5 | 15.1 | 15.8 | 16.4 |
| 23                   | 11.5            | 12.1 | 12.6 | 13.1 | 13.7 | 14.3 | 14.9 | 15.6 | 16.3 | 16.9 | 17.6 |
| 24                   | 12.6            | 13.1 | 13.7 | 14.2 | 14.8 | 15.5 | 16.1 | 16.8 | 17.5 | 18.2 | 18.9 |
| 25                   | 13.6            | 14.2 | 14.8 | 15.4 | 16.0 | 16.6 | 17.3 | 18.0 | 18.7 | 19.4 | 20.2 |
| 26                   | 14.7            | 15.3 | 15.9 | 16.5 | 17.2 | 17.9 | 18.5 | 19.3 | 20.0 | 20.7 | 21.5 |
| 27                   | 15.9            | 16.5 | 17.1 | 17.8 | 18.4 | 19.1 | 19.8 | 20.6 | 21.3 | 22.1 | 22.9 |
| 28                   | 17.1            | 17.7 | 18.4 | 19.0 | 19.7 | 20.4 | 21.2 | 21.9 | 22.7 | 23.5 | 24.3 |
| 29                   | 18.3            | 19.0 | 19.7 | 20.3 | 21.1 | 21.8 | 22.5 | 23.3 | 24.1 | 24.9 | 25.8 |
| 30                   | 19.6            | 20.3 | 21.0 | 21.7 | 22.4 | 23.2 | 24.0 | 24.8 | 25.6 | 26.4 | 27.3 |
| 31                   | 21.0            | 21.7 | 22.4 | 23.1 | 23.8 | 24.6 | 25.4 | 26.2 | 27.1 | 27.9 | 28.8 |
| 32                   | 22.3            | 23.0 | 23.8 | 24.5 | 25.3 | 26.1 | 26.9 | 27.8 | 28.6 | 29.5 | 30.4 |
| 33                   | 23.8            | 24.5 | 25.2 | 26.0 | 26.8 | 27.6 | 28.5 | 29.3 | 30.2 | 31.1 | 32.0 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 34                   | 25.2            | 26.0 | 26.7 | 27.5 | 28.4 | 29.2 | 30.1 | 30.9 | 31.9 | 32.8 | 33.7 |
| 35                   | 26.7            | 27.5 | 28.3 | 29.1 | 30.0 | 30.8 | 31.7 | 32.6 | 33.5 | 34.5 | 35.5 |
| 36                   | 28.3            | 29.1 | 29.9 | 30.7 | 31.6 | 32.5 | 33.4 | 34.3 | 35.3 | 36.2 | 37.2 |
| 37                   | 29.9            | 30.7 | 31.5 | 32.4 | 33.3 | 34.2 | 35.1 | 36.1 | 37.0 | 38.0 | 39.0 |
| 38                   | 31.5            | 32.3 | 33.2 | 34.1 | 35.0 | 35.9 | 36.9 | 37.8 | 38.8 | 39.8 | 40.9 |
| 39                   | 33.2            | 34.0 | 34.9 | 35.8 | 36.8 | 37.7 | 38.7 | 39.7 | 40.7 | 41.7 | 42.8 |
| 40                   | 34.9            | 35.8 | 36.7 | 37.6 | 38.6 | 39.5 | 40.5 | 41.5 | 42.6 | 43.6 | 44.7 |
| 41                   | 36.7            | 37.6 | 38.5 | 39.5 | 40.4 | 41.4 | 42.4 | 43.5 | 44.5 | 45.6 | 46.7 |
| 42                   | 38.5            | 39.4 | 40.4 | 41.3 | 42.3 | 43.3 | 44.4 | 45.4 | 46.5 | 47.6 | 48.7 |
| 43                   | 40.3            | 41.3 | 42.3 | 43.3 | 44.3 | 45.3 | 46.4 | 47.4 | 48.5 | 49.7 | 50.8 |
| 44                   | 42.2            | 43.2 | 44.2 | 45.2 | 46.2 | 47.3 | 48.4 | 49.5 | 50.6 | 51.8 | 52.9 |
| 45                   | 44.2            | 45.2 | 46.2 | 47.2 | 48.3 | 49.4 | 50.5 | 51.6 | 52.7 | 53.9 | 55.1 |
| 46                   | 46.2            | 47.2 | 48.2 | 49.3 | 50.4 | 51.5 | 52.6 | 53.7 | 54.9 | 56.1 | 57.3 |
| 47                   | 48.2            | 49.2 | 50.3 | 51.4 | 52.5 | 53.6 | 54.7 | 55.9 | 57.1 | 58.3 | 59.5 |
| 48                   | 50.3            | 51.3 | 52.4 | 53.5 | 54.6 | 55.8 | 56.9 | 58.1 | 59.3 | 60.6 | 61.8 |
| 49                   | 52.4            | 53.5 | 54.6 | 55.7 | 56.8 | 58.0 | 59.2 | 60.4 | 61.6 | 62.9 | 64.2 |
| 50                   | 54.5            | 55.6 | 56.8 | 57.9 | 59.1 | 60.3 | 61.5 | 62.7 | 64.0 | 65.2 | 66.5 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 5 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .1              | .2   | .3   | .4   | .5   | .7   | .9   | 1.2  | 1.4  | 1.7  | 2.0  |
| 3                    | .2              | .3   | .5   | .6   | .8   | 1.0  | 1.2  | 1.5  | 1.8  | 2.1  | 2.4  |
| 4                    | .4              | .6   | .7   | .9   | 1.1  | 1.3  | 1.6  | 1.9  | 2.2  | 2.5  | 2.9  |
| 5                    | .7              | .8   | 1.0  | 1.2  | 1.4  | 1.7  | 2.0  | 2.3  | 2.6  | 3.0  | 3.4  |
| 6                    | 1.0             | 1.2  | 1.4  | 1.6  | 1.9  | 2.1  | 2.5  | 2.8  | 3.2  | 3.6  | 4.0  |
| 7                    | 1.3             | 1.5  | 1.8  | 2.0  | 2.3  | 2.6  | 3.0  | 3.3  | 3.7  | 4.2  | 4.6  |
| 8                    | 1.7             | 2.0  | 2.2  | 2.5  | 2.8  | 3.2  | 3.5  | 3.9  | 4.4  | 4.8  | 5.3  |
| 9                    | 2.2             | 2.5  | 2.8  | 3.1  | 3.4  | 3.8  | 4.2  | 4.6  | 5.0  | 5.5  | 6.0  |
| 10                   | 2.7             | 3.0  | 3.3  | 3.7  | 4.0  | 4.4  | 4.9  | 5.3  | 5.8  | 6.3  | 6.8  |
| 11                   | 3.3             | 3.6  | 4.0  | 4.3  | 4.7  | 5.1  | 5.6  | 6.1  | 6.6  | 7.1  | 7.7  |
| 12                   | 3.9             | 4.3  | 4.6  | 5.0  | 5.5  | 5.9  | 6.4  | 6.9  | 7.4  | 8.0  | 8.6  |
| 13                   | 4.6             | 5.0  | 5.4  | 5.8  | 6.2  | 6.7  | 7.2  | 7.8  | 8.3  | 8.9  | 9.5  |
| 14                   | 5.3             | 5.7  | 6.2  | 6.6  | 7.1  | 7.6  | 8.1  | 8.7  | 9.3  | 9.9  | 10.5 |
| 15                   | 6.1             | 6.6  | 7.0  | 7.5  | 8.0  | 8.5  | 9.1  | 9.7  | 10.3 | 10.9 | 11.6 |
| 16                   | 7.0             | 7.4  | 7.9  | 8.4  | 8.9  | 9.5  | 10.1 | 10.7 | 11.3 | 12.0 | 12.7 |
| 17                   | 7.9             | 8.4  | 8.9  | 9.4  | 10.0 | 10.5 | 11.2 | 11.8 | 12.5 | 13.2 | 13.9 |
| 18                   | 8.8             | 9.3  | 9.9  | 10.4 | 11.0 | 11.6 | 12.3 | 12.9 | 13.6 | 14.4 | 15.1 |
| 19                   | 9.8             | 10.4 | 10.9 | 11.5 | 12.1 | 12.8 | 13.4 | 14.1 | 14.9 | 15.6 | 16.4 |
| 20                   | 10.9            | 11.5 | 12.1 | 12.7 | 13.3 | 14.0 | 14.7 | 15.4 | 16.1 | 16.9 | 17.7 |
| 21                   | 12.0            | 12.6 | 13.2 | 13.9 | 14.5 | 15.2 | 16.0 | 16.7 | 17.5 | 18.3 | 19.1 |
| 22                   | 13.2            | 13.8 | 14.5 | 15.1 | 15.8 | 16.5 | 17.3 | 18.1 | 18.9 | 19.7 | 20.6 |
| 23                   | 14.4            | 15.1 | 15.7 | 16.4 | 17.2 | 17.9 | 18.7 | 19.5 | 20.3 | 21.2 | 22.1 |
| 24                   | 15.7            | 16.4 | 17.1 | 17.8 | 18.5 | 19.3 | 20.1 | 21.0 | 21.8 | 22.7 | 23.6 |
| 25                   | 17.0            | 17.7 | 18.5 | 19.2 | 20.0 | 20.8 | 21.6 | 22.5 | 23.4 | 24.3 | 25.2 |
| 26                   | 18.4            | 19.2 | 19.9 | 20.7 | 21.5 | 22.3 | 23.2 | 24.1 | 25.0 | 25.9 | 26.9 |
| 27                   | 19.9            | 20.6 | 21.4 | 22.2 | 23.0 | 23.9 | 24.8 | 25.7 | 26.6 | 27.6 | 28.6 |
| 28                   | 21.4            | 22.2 | 23.0 | 23.8 | 24.7 | 25.5 | 26.5 | 27.4 | 28.4 | 29.4 | 30.4 |
| 29                   | 22.9            | 23.7 | 24.6 | 25.4 | 26.3 | 27.2 | 28.2 | 29.1 | 30.1 | 31.2 | 32.2 |
| 30                   | 24.5            | 25.4 | 26.2 | 27.1 | 28.0 | 29.0 | 29.9 | 30.9 | 32.0 | 33.0 | 34.1 |
| 31                   | 26.2            | 27.1 | 28.0 | 28.9 | 29.8 | 30.8 | 31.8 | 32.8 | 33.8 | 34.9 | 36.0 |
| 32                   | 27.9            | 28.8 | 29.7 | 30.7 | 31.6 | 32.6 | 33.7 | 34.7 | 35.8 | 36.9 | 38.0 |
| 33                   | 29.7            | 30.6 | 31.6 | 32.5 | 33.5 | 34.5 | 35.6 | 36.7 | 37.8 | 38.9 | 40.1 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 34                   | 31.5            | 32.5 | 33.4 | 34.4 | 35.5 | 36.5 | 37.6 | 38.7 | 39.8 | 41.0 | 42.2 |
| 35                   | 33.4            | 34.4 | 35.4 | 36.4 | 37.4 | 38.5 | 39.6 | 40.8 | 41.9 | 43.1 | 44.3 |
| 36                   | 35.3            | 36.3 | 37.4 | 38.4 | 39.5 | 40.6 | 41.7 | 42.9 | 44.1 | 45.3 | 46.5 |
| 37                   | 37.3            | 38.4 | 39.4 | 40.5 | 41.6 | 42.7 | 43.9 | 45.1 | 46.3 | 47.5 | 48.8 |
| 38                   | 39.4            | 40.4 | 41.5 | 42.6 | 43.7 | 44.9 | 46.1 | 47.3 | 48.5 | 49.8 | 51.1 |
| 39                   | 41.5            | 42.6 | 43.7 | 44.8 | 45.9 | 47.1 | 48.3 | 49.6 | 50.9 | 52.2 | 53.5 |
| 40                   | 43.6            | 44.7 | 45.9 | 47.0 | 48.2 | 49.4 | 50.7 | 51.9 | 53.2 | 54.6 | 55.9 |
| 41                   | 45.8            | 47.0 | 48.1 | 49.3 | 50.5 | 51.8 | 53.0 | 54.3 | 55.7 | 57.0 | 58.4 |
| 42                   | 48.1            | 49.3 | 50.4 | 51.7 | 52.9 | 54.2 | 55.5 | 56.8 | 58.1 | 59.5 | 60.9 |
| 43                   | 50.4            | 51.6 | 52.8 | 54.1 | 55.3 | 56.6 | 57.9 | 59.3 | 60.7 | 62.1 | 63.5 |
| 44                   | 52.8            | 54.0 | 55.2 | 56.5 | 57.8 | 59.1 | 60.5 | 61.9 | 63.3 | 64.7 | 66.2 |
| 45                   | 55.2            | 56.5 | 57.7 | 59.0 | 60.3 | 61.7 | 63.1 | 64.5 | 65.9 | 67.4 | 68.9 |
| 46                   | 57.7            | 59.0 | 60.3 | 61.6 | 62.9 | 64.3 | 65.7 | 67.2 | 68.6 | 70.1 | 71.6 |
| 47                   | 60.2            | 61.5 | 62.9 | 64.2 | 65.6 | 67.0 | 68.4 | 69.9 | 71.4 | 72.9 | 74.4 |
| 48                   | 62.8            | 64.2 | 65.5 | 66.9 | 68.3 | 69.7 | 71.2 | 72.7 | 74.2 | 75.7 | 77.3 |
| 49                   | 65.5            | 66.8 | 68.2 | 69.6 | 71.0 | 72.5 | 74.0 | 75.5 | 77.0 | 78.6 | 80.2 |
| 50                   | 68.2            | 69.6 | 71.0 | 72.4 | 73.8 | 75.3 | 76.8 | 78.4 | 80.0 | 81.6 | 83.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 6 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .1              | .2   | .3   | .5   | .7   | .9   | 1.1  | 1.4  | 1.7  | 2.0  | 2.4  |
| 3                    | .3              | .4   | .6   | .7   | .9   | 1.2  | 1.5  | 1.8  | 2.1  | 2.5  | 2.9  |
| 4                    | .5              | .7   | .9   | 1.1  | 1.3  | 1.6  | 1.9  | 2.2  | 2.6  | 3.0  | 3.5  |
| 5                    | .8              | 1.0  | 1.2  | 1.5  | 1.7  | 2.0  | 2.4  | 2.8  | 3.2  | 3.6  | 4.1  |
| 6                    | 1.2             | 1.4  | 1.6  | 1.9  | 2.2  | 2.6  | 2.9  | 3.4  | 3.8  | 4.3  | 4.8  |
| 7                    | 1.6             | 1.8  | 2.1  | 2.4  | 2.8  | 3.2  | 3.6  | 4.0  | 4.5  | 5.0  | 5.5  |
| 8                    | 2.1             | 2.4  | 2.7  | 3.0  | 3.4  | 3.8  | 4.3  | 4.7  | 5.2  | 5.8  | 6.3  |
| 9                    | 2.7             | 3.0  | 3.3  | 3.7  | 4.1  | 4.5  | 5.0  | 5.5  | 6.1  | 6.6  | 7.2  |
| 10                   | 3.3             | 3.6  | 4.0  | 4.4  | 4.8  | 5.3  | 5.8  | 6.4  | 6.9  | 7.5  | 8.2  |
| 11                   | 4.0             | 4.3  | 4.7  | 5.2  | 5.7  | 6.2  | 6.7  | 7.3  | 7.9  | 8.5  | 9.2  |
| 12                   | 4.7             | 5.1  | 5.6  | 6.0  | 6.5  | 7.1  | 7.7  | 8.3  | 8.9  | 9.6  | 10.3 |
| 13                   | 5.5             | 6.0  | 6.4  | 7.0  | 7.5  | 8.1  | 8.7  | 9.3  | 10.0 | 10.7 | 11.4 |
| 14                   | 6.4             | 6.9  | 7.4  | 7.9  | 8.5  | 9.1  | 9.8  | 10.4 | 11.1 | 11.9 | 12.6 |
| 15                   | 7.4             | 7.9  | 8.4  | 9.0  | 9.6  | 10.2 | 10.9 | 11.6 | 12.3 | 13.1 | 13.9 |
| 16                   | 8.4             | 8.9  | 9.5  | 10.1 | 10.7 | 11.4 | 12.1 | 12.8 | 13.6 | 14.4 | 15.2 |
| 17                   | 9.5             | 10.0 | 10.6 | 11.3 | 11.9 | 12.6 | 13.4 | 14.2 | 15.0 | 15.8 | 16.7 |
| 18                   | 10.6            | 11.2 | 11.8 | 12.5 | 13.2 | 14.0 | 14.7 | 15.5 | 16.4 | 17.2 | 18.1 |
| 19                   | 11.8            | 12.5 | 13.1 | 13.8 | 14.6 | 15.3 | 16.1 | 17.0 | 17.8 | 18.7 | 19.7 |
| 20                   | 13.1            | 13.8 | 14.5 | 15.2 | 16.0 | 16.8 | 17.6 | 18.5 | 19.4 | 20.3 | 21.3 |
| 21                   | 14.4            | 15.1 | 15.9 | 16.6 | 17.4 | 18.3 | 19.1 | 20.0 | 21.0 | 21.9 | 22.9 |
| 22                   | 15.8            | 16.6 | 17.3 | 18.1 | 19.0 | 19.8 | 20.7 | 21.7 | 22.6 | 23.6 | 24.7 |
| 23                   | 17.3            | 18.1 | 18.9 | 19.7 | 20.6 | 21.5 | 22.4 | 23.4 | 24.4 | 25.4 | 26.5 |
| 24                   | 18.8            | 19.7 | 20.5 | 21.4 | 22.3 | 23.2 | 24.2 | 25.1 | 26.2 | 27.2 | 28.3 |
| 25                   | 20.5            | 21.3 | 22.2 | 23.1 | 24.0 | 25.0 | 26.0 | 27.0 | 28.0 | 29.1 | 30.3 |
| 26                   | 22.1            | 23.0 | 23.9 | 24.8 | 25.8 | 26.8 | 27.8 | 28.9 | 30.0 | 31.1 | 32.3 |
| 27                   | 23.9            | 24.8 | 25.7 | 26.7 | 27.7 | 28.7 | 29.7 | 30.8 | 32.0 | 33.1 | 34.3 |
| 28                   | 25.7            | 26.6 | 27.6 | 28.6 | 29.6 | 30.6 | 31.7 | 32.9 | 34.0 | 35.2 | 36.5 |
| 29                   | 27.5            | 28.5 | 29.5 | 30.5 | 31.6 | 32.7 | 33.8 | 35.0 | 36.2 | 37.4 | 38.6 |
| 30                   | 29.5            | 30.4 | 31.5 | 32.5 | 33.6 | 34.8 | 35.9 | 37.1 | 38.4 | 39.6 | 40.9 |
| 31                   | 31.4            | 32.5 | 33.5 | 34.6 | 35.8 | 36.9 | 38.1 | 39.4 | 40.6 | 41.9 | 43.2 |
| 32                   | 33.5            | 34.6 | 35.7 | 36.8 | 38.0 | 39.2 | 40.4 | 41.6 | 42.9 | 44.3 | 45.6 |
| 33                   | 35.6            | 36.7 | 37.9 | 39.0 | 40.2 | 41.4 | 42.7 | 44.0 | 45.3 | 46.7 | 48.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 34                   | 37.8            | 39.0 | 40.1 | 41.3 | 42.5 | 43.8 | 45.1 | 46.4 | 47.8 | 49.2 | 50.6 |
| 35                   | 40.1            | 41.2 | 42.4 | 43.7 | 44.9 | 46.2 | 47.5 | 48.9 | 50.3 | 51.7 | 53.2 |
| 36                   | 42.4            | 43.6 | 44.8 | 46.1 | 47.4 | 48.7 | 50.1 | 51.5 | 52.9 | 54.3 | 55.8 |
| 37                   | 44.8            | 46.0 | 47.3 | 48.6 | 49.9 | 51.3 | 52.7 | 54.1 | 55.5 | 57.0 | 58.5 |
| 38                   | 47.3            | 48.5 | 49.8 | 51.1 | 52.5 | 53.9 | 55.3 | 56.8 | 58.2 | 59.8 | 61.3 |
| 39                   | 49.8            | 51.1 | 52.4 | 53.7 | 55.1 | 56.6 | 58.0 | 59.5 | 61.0 | 62.6 | 64.2 |
| 40                   | 52.4            | 53.7 | 55.0 | 56.4 | 57.9 | 59.3 | 60.8 | 62.3 | 63.9 | 65.5 | 67.1 |
| 41                   | 55.0            | 56.4 | 57.8 | 59.2 | 60.6 | 62.1 | 63.6 | 65.2 | 66.8 | 68.4 | 70.1 |
| 42                   | 57.7            | 59.1 | 60.5 | 62.0 | 63.5 | 65.0 | 66.6 | 68.1 | 69.8 | 71.4 | 73.1 |
| 43                   | 60.5            | 61.9 | 63.4 | 64.9 | 66.4 | 68.0 | 69.5 | 71.2 | 72.8 | 74.5 | 76.2 |
| 44                   | 63.4            | 64.8 | 66.3 | 67.8 | 69.4 | 71.0 | 72.6 | 74.2 | 75.9 | 77.6 | 79.4 |
| 45                   | 66.3            | 67.8 | 69.3 | 70.8 | 72.4 | 74.0 | 75.7 | 77.4 | 79.1 | 80.8 | 82.6 |
| 46                   | 69.2            | 70.8 | 72.3 | 73.9 | 75.5 | 77.2 | 78.9 | 80.6 | 82.3 | 84.1 | 85.9 |
| 47                   | 72.3            | 73.8 | 75.4 | 77.0 | 78.7 | 80.4 | 82.1 | 83.9 | 85.6 | 87.5 | 89.3 |
| 48                   | 75.4            | 77.0 | 78.6 | 80.3 | 81.9 | 83.7 | 85.4 | 87.2 | 89.0 | 90.9 | 92.7 |
| 49                   | 78.6            | 80.2 | 81.8 | 83.5 | 85.2 | 87.0 | 88.8 | 90.6 | 92.4 | 94.3 | 96.2 |
| 50                   | 81.8            | 83.5 | 85.1 | 86.9 | 88.6 | 90.4 | 92.2 | 94.1 | 95.9 | 97.9 | 99.8 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 7 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .2              | .2   | .4   | .6   | .8   | 1.0  | 1.3  | 1.6  | 2.0  | 2.4  | 2.8  |
| 3                    | .3              | .5   | .6   | .9   | 1.1  | 1.4  | 1.7  | 2.1  | 2.5  | 2.9  | 3.4  |
| 4                    | .6              | .8   | 1.0  | 1.2  | 1.5  | 1.9  | 2.2  | 2.6  | 3.1  | 3.5  | 4.0  |
| 5                    | 1.0             | 1.2  | 1.4  | 1.7  | 2.0  | 2.4  | 2.8  | 3.2  | 3.7  | 4.2  | 4.8  |
| 6                    | 1.4             | 1.6  | 1.9  | 2.2  | 2.6  | 3.0  | 3.4  | 3.9  | 4.4  | 5.0  | 5.6  |
| 7                    | 1.9             | 2.2  | 2.5  | 2.8  | 3.2  | 3.7  | 4.2  | 4.7  | 5.2  | 5.8  | 6.5  |
| 8                    | 2.4             | 2.8  | 3.1  | 3.5  | 4.0  | 4.4  | 5.0  | 5.5  | 6.1  | 6.7  | 7.4  |
| 9                    | 3.1             | 3.5  | 3.9  | 4.3  | 4.8  | 5.3  | 5.8  | 6.4  | 7.1  | 7.7  | 8.4  |
| 10                   | 3.8             | 4.2  | 4.7  | 5.1  | 5.7  | 6.2  | 6.8  | 7.4  | 8.1  | 8.8  | 9.5  |
| 11                   | 4.6             | 5.1  | 5.5  | 6.1  | 6.6  | 7.2  | 7.8  | 8.5  | 9.2  | 9.9  | 10.7 |
| 12                   | 5.5             | 6.0  | 6.5  | 7.0  | 7.6  | 8.3  | 8.9  | 9.6  | 10.4 | 11.2 | 12.0 |
| 13                   | 6.5             | 7.0  | 7.5  | 8.1  | 8.7  | 9.4  | 10.1 | 10.9 | 11.6 | 12.5 | 13.3 |
| 14                   | 7.5             | 8.0  | 8.6  | 9.3  | 9.9  | 10.6 | 11.4 | 12.2 | 13.0 | 13.8 | 14.7 |
| 15                   | 8.6             | 9.2  | 9.8  | 10.5 | 11.2 | 11.9 | 12.7 | 13.5 | 14.4 | 15.3 | 16.2 |
| 16                   | 9.8             | 10.4 | 11.1 | 11.8 | 12.5 | 13.3 | 14.1 | 15.0 | 15.9 | 16.8 | 17.8 |
| 17                   | 11.0            | 11.7 | 12.4 | 13.2 | 13.9 | 14.8 | 15.6 | 16.5 | 17.4 | 18.4 | 19.4 |
| 18                   | 12.4            | 13.1 | 13.8 | 14.6 | 15.4 | 16.3 | 17.2 | 18.1 | 19.1 | 20.1 | 21.2 |
| 19                   | 13.8            | 14.5 | 15.3 | 16.1 | 17.0 | 17.9 | 18.8 | 19.8 | 20.8 | 21.9 | 22.9 |
| 20                   | 15.3            | 16.1 | 16.9 | 17.7 | 18.6 | 19.6 | 20.5 | 21.6 | 22.6 | 23.7 | 24.8 |
| 21                   | 16.8            | 17.7 | 18.5 | 19.4 | 20.3 | 21.3 | 22.3 | 23.4 | 24.5 | 25.6 | 26.8 |
| 22                   | 18.5            | 19.3 | 20.2 | 21.2 | 22.1 | 23.2 | 24.2 | 25.3 | 26.4 | 27.6 | 28.8 |
| 23                   | 20.2            | 21.1 | 22.0 | 23.0 | 24.0 | 25.1 | 26.2 | 27.3 | 28.4 | 29.6 | 30.9 |
| 24                   | 22.0            | 22.9 | 23.9 | 24.9 | 26.0 | 27.0 | 28.2 | 29.3 | 30.5 | 31.8 | 33.1 |
| 25                   | 23.9            | 24.8 | 25.8 | 26.9 | 28.0 | 29.1 | 30.3 | 31.5 | 32.7 | 34.0 | 35.3 |
| 26                   | 25.8            | 26.8 | 27.9 | 29.0 | 30.1 | 31.2 | 32.5 | 33.7 | 35.0 | 36.3 | 37.6 |
| 27                   | 27.8            | 28.9 | 30.0 | 31.1 | 32.3 | 33.5 | 34.7 | 36.0 | 37.3 | 38.7 | 40.0 |
| 28                   | 29.9            | 31.0 | 32.1 | 33.3 | 34.5 | 35.8 | 37.0 | 38.3 | 39.7 | 41.1 | 42.5 |
| 29                   | 32.1            | 33.2 | 34.4 | 35.6 | 36.8 | 38.1 | 39.4 | 40.8 | 42.2 | 43.6 | 45.1 |
| 30                   | 34.4            | 35.5 | 36.7 | 38.0 | 39.2 | 40.6 | 41.9 | 43.3 | 44.7 | 46.2 | 47.7 |
| 31                   | 36.7            | 37.9 | 39.1 | 40.4 | 41.7 | 43.1 | 44.5 | 45.9 | 47.4 | 48.9 | 50.4 |
| 32                   | 39.1            | 40.3 | 41.6 | 42.9 | 44.3 | 45.7 | 47.1 | 48.6 | 50.1 | 51.6 | 53.2 |
| 33                   | 41.6            | 42.9 | 44.2 | 45.5 | 46.9 | 48.4 | 49.8 | 51.3 | 52.9 | 54.5 | 56.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |      |      |       |       |       |       |       |       |       |       |
|----------------------|-----------------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1    | 2    | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 44.1            | 45.5 | 46.8 | 48.2  | 49.6  | 51.1  | 52.6  | 54.2  | 55.7  | 57.4  | 59.0  |
| 35                   | 46.8            | 48.1 | 49.5 | 50.9  | 52.4  | 53.9  | 55.5  | 57.1  | 58.7  | 60.3  | 62.0  |
| 36                   | 49.5            | 50.9 | 52.3 | 53.8  | 55.3  | 56.8  | 58.4  | 60.0  | 61.7  | 63.4  | 65.1  |
| 37                   | 52.3            | 53.7 | 55.2 | 56.7  | 58.2  | 59.8  | 61.4  | 63.1  | 64.8  | 66.5  | 68.3  |
| 38                   | 55.1            | 56.6 | 58.1 | 59.7  | 61.2  | 62.9  | 64.5  | 66.2  | 68.0  | 69.7  | 71.5  |
| 39                   | 58.1            | 59.6 | 61.1 | 62.7  | 64.3  | 66.0  | 67.7  | 69.4  | 71.2  | 73.0  | 74.9  |
| 40                   | 61.1            | 62.6 | 64.2 | 65.8  | 67.5  | 69.2  | 70.9  | 72.7  | 74.5  | 76.4  | 78.3  |
| 41                   | 64.2            | 65.8 | 67.4 | 69.0  | 70.7  | 72.5  | 74.3  | 76.1  | 77.9  | 79.8  | 81.7  |
| 42                   | 67.3            | 69.0 | 70.6 | 72.3  | 74.1  | 75.8  | 77.7  | 79.5  | 81.4  | 83.3  | 85.3  |
| 43                   | 70.6            | 72.3 | 74.0 | 75.7  | 77.5  | 79.3  | 81.1  | 83.0  | 84.9  | 86.9  | 88.9  |
| 44                   | 73.9            | 75.6 | 77.3 | 79.1  | 80.9  | 82.8  | 84.7  | 86.6  | 88.6  | 90.6  | 92.6  |
| 45                   | 77.3            | 79.0 | 80.8 | 82.6  | 84.5  | 86.4  | 88.3  | 90.3  | 92.3  | 94.3  | 96.4  |
| 46                   | 80.8            | 82.6 | 84.4 | 86.2  | 88.1  | 90.0  | 92.0  | 94.0  | 96.1  | 98.1  | 100.3 |
| 47                   | 84.3            | 86.1 | 88.0 | 89.9  | 91.8  | 93.8  | 95.8  | 97.8  | 99.9  | 102.0 | 104.2 |
| 48                   | 88.0            | 89.8 | 91.7 | 93.6  | 95.6  | 97.6  | 99.6  | 101.7 | 103.8 | 106.0 | 108.2 |
| 49                   | 91.7            | 93.6 | 95.5 | 97.4  | 99.5  | 101.5 | 103.6 | 105.7 | 107.9 | 110.0 | 112.3 |
| 50                   | 95.4            | 97.4 | 99.3 | 101.3 | 103.4 | 105.5 | 107.6 | 109.7 | 111.9 | 114.2 | 116.4 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 8 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .2              | .3   | .4   | .6   | .9   | 1.2  | 1.5  | 1.9  | 2.3  | 2.7  | 3.2  |
| 3                    | .4              | .5   | .7   | 1.0  | 1.3  | 1.6  | 2.0  | 2.4  | 2.8  | 3.3  | 3.9  |
| 4                    | .7              | .9   | 1.1  | 1.4  | 1.7  | 2.1  | 2.5  | 3.0  | 3.5  | 4.0  | 4.6  |
| 5                    | 1.1             | 1.3  | 1.6  | 1.9  | 2.3  | 2.7  | 3.2  | 3.7  | 4.2  | 4.8  | 5.5  |
| 6                    | 1.6             | 1.9  | 2.2  | 2.6  | 3.0  | 3.4  | 3.9  | 4.5  | 5.1  | 5.7  | 6.4  |
| 7                    | 2.1             | 2.5  | 2.8  | 3.3  | 3.7  | 4.2  | 4.8  | 5.3  | 6.0  | 6.7  | 7.4  |
| 8                    | 2.8             | 3.2  | 3.6  | 4.0  | 4.5  | 5.1  | 5.7  | 6.3  | 7.0  | 7.7  | 8.5  |
| 9                    | 3.5             | 3.9  | 4.4  | 4.9  | 5.5  | 6.0  | 6.7  | 7.4  | 8.1  | 8.8  | 9.6  |
| 10                   | 4.4             | 4.8  | 5.3  | 5.9  | 6.5  | 7.1  | 7.8  | 8.5  | 9.2  | 10.1 | 10.9 |
| 11                   | 5.3             | 5.8  | 6.3  | 6.9  | 7.5  | 8.2  | 8.9  | 9.7  | 10.5 | 11.4 | 12.3 |
| 12                   | 6.3             | 6.8  | 7.4  | 8.1  | 8.7  | 9.4  | 10.2 | 11.0 | 11.9 | 12.8 | 13.7 |
| 13                   | 7.4             | 8.0  | 8.6  | 9.3  | 10.0 | 10.8 | 11.6 | 12.4 | 13.3 | 14.2 | 15.2 |
| 14                   | 8.6             | 9.2  | 9.9  | 10.6 | 11.3 | 12.2 | 13.0 | 13.9 | 14.8 | 15.8 | 16.8 |
| 15                   | 9.8             | 10.5 | 11.2 | 12.0 | 12.8 | 13.6 | 14.5 | 15.5 | 16.4 | 17.5 | 18.5 |
| 16                   | 11.2            | 11.9 | 12.7 | 13.5 | 14.3 | 15.2 | 16.1 | 17.1 | 18.2 | 19.2 | 20.3 |
| 17                   | 12.6            | 13.4 | 14.2 | 15.0 | 15.9 | 16.9 | 17.8 | 18.9 | 19.9 | 21.1 | 22.2 |
| 18                   | 14.1            | 14.9 | 15.8 | 16.7 | 17.6 | 18.6 | 19.6 | 20.7 | 21.8 | 23.0 | 24.2 |
| 19                   | 15.8            | 16.6 | 17.5 | 18.4 | 19.4 | 20.4 | 21.5 | 22.6 | 23.8 | 25.0 | 26.2 |
| 20                   | 17.5            | 18.3 | 19.3 | 20.3 | 21.3 | 22.4 | 23.5 | 24.6 | 25.8 | 27.1 | 28.4 |
| 21                   | 19.2            | 20.2 | 21.2 | 22.2 | 23.3 | 24.4 | 25.5 | 26.7 | 28.0 | 29.3 | 30.6 |
| 22                   | 21.1            | 22.1 | 23.1 | 24.2 | 25.3 | 26.5 | 27.7 | 28.9 | 30.2 | 31.5 | 32.9 |
| 23                   | 23.1            | 24.1 | 25.2 | 26.3 | 27.4 | 28.6 | 29.9 | 31.2 | 32.5 | 33.9 | 35.3 |
| 24                   | 25.1            | 26.2 | 27.3 | 28.5 | 29.7 | 30.9 | 32.2 | 33.5 | 34.9 | 36.3 | 37.8 |
| 25                   | 27.3            | 28.4 | 29.5 | 30.7 | 32.0 | 33.3 | 34.6 | 36.0 | 37.4 | 38.9 | 40.4 |
| 26                   | 29.5            | 30.7 | 31.9 | 33.1 | 34.4 | 35.7 | 37.1 | 38.5 | 40.0 | 41.5 | 43.0 |
| 27                   | 31.8            | 33.0 | 34.3 | 35.5 | 36.9 | 38.2 | 39.7 | 41.1 | 42.6 | 44.2 | 45.8 |
| 28                   | 34.2            | 35.5 | 36.7 | 38.1 | 39.4 | 40.9 | 42.3 | 43.8 | 45.4 | 47.0 | 48.6 |
| 29                   | 36.7            | 38.0 | 39.3 | 40.7 | 42.1 | 43.6 | 45.1 | 46.6 | 48.2 | 49.8 | 51.5 |
| 30                   | 39.3            | 40.6 | 42.0 | 43.4 | 44.9 | 46.4 | 47.9 | 49.5 | 51.1 | 52.8 | 54.5 |
| 31                   | 41.9            | 43.3 | 44.7 | 46.2 | 47.7 | 49.2 | 50.8 | 52.5 | 54.1 | 55.9 | 57.6 |
| 32                   | 44.7            | 46.1 | 47.6 | 49.1 | 50.6 | 52.2 | 53.8 | 55.5 | 57.2 | 59.0 | 60.8 |
| 33                   | 47.5            | 49.0 | 50.5 | 52.0 | 53.6 | 55.3 | 56.9 | 58.7 | 60.4 | 62.2 | 64.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 50.4            | 51.9  | 53.5  | 55.1  | 56.7  | 58.4  | 60.1  | 61.9  | 63.7  | 65.6  | 67.5  |
| 35                   | 53.4            | 55.0  | 56.6  | 58.2  | 59.9  | 61.6  | 63.4  | 65.2  | 67.1  | 69.0  | 70.9  |
| 36                   | 56.5            | 58.1  | 59.8  | 61.5  | 63.2  | 64.9  | 66.8  | 68.6  | 70.5  | 72.5  | 74.4  |
| 37                   | 59.7            | 61.4  | 63.0  | 64.8  | 66.5  | 68.3  | 70.2  | 72.1  | 74.0  | 76.0  | 78.1  |
| 38                   | 63.0            | 64.7  | 66.4  | 68.2  | 70.0  | 71.8  | 73.7  | 75.7  | 77.7  | 79.7  | 81.8  |
| 39                   | 66.4            | 68.1  | 69.9  | 71.7  | 73.5  | 75.4  | 77.4  | 79.3  | 81.4  | 83.4  | 85.6  |
| 40                   | 69.8            | 71.6  | 73.4  | 75.2  | 77.1  | 79.1  | 81.1  | 83.1  | 85.2  | 87.3  | 89.4  |
| 41                   | 73.3            | 75.2  | 77.0  | 78.9  | 80.9  | 82.8  | 84.9  | 86.9  | 89.1  | 91.2  | 93.4  |
| 42                   | 77.0            | 78.8  | 80.7  | 82.7  | 84.6  | 86.7  | 88.7  | 90.9  | 93.0  | 95.2  | 97.5  |
| 43                   | 80.7            | 82.6  | 84.5  | 86.5  | 88.5  | 90.6  | 92.7  | 94.9  | 97.1  | 99.3  | 101.6 |
| 44                   | 84.5            | 86.4  | 88.4  | 90.4  | 92.5  | 94.6  | 96.8  | 99.0  | 101.2 | 103.5 | 105.9 |
| 45                   | 88.4            | 90.3  | 92.4  | 94.4  | 96.6  | 98.7  | 100.9 | 103.2 | 105.5 | 107.8 | 110.2 |
| 46                   | 92.3            | 94.4  | 96.4  | 98.5  | 100.7 | 102.9 | 105.2 | 107.4 | 109.8 | 112.2 | 114.6 |
| 47                   | 96.4            | 98.5  | 100.6 | 102.7 | 104.9 | 107.2 | 109.5 | 111.8 | 114.2 | 116.6 | 119.1 |
| 48                   | 100.5           | 102.6 | 104.8 | 107.0 | 109.3 | 111.5 | 113.9 | 116.3 | 118.7 | 121.1 | 123.7 |
| 49                   | 104.8           | 106.9 | 109.1 | 111.4 | 113.7 | 116.0 | 118.4 | 120.8 | 123.3 | 125.8 | 128.3 |
| 50                   | 109.1           | 111.3 | 113.5 | 115.8 | 118.2 | 120.5 | 123.0 | 125.4 | 127.9 | 130.5 | 133.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* *Segment Length = 9 Ft.* \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .2              | .3   | .5   | .7   | 1.0  | 1.3  | 1.7  | 2.1  | 2.6  | 3.1  | 3.6  |
| 3                    | .4              | .6   | .8   | 1.1  | 1.4  | 1.8  | 2.2  | 2.7  | 3.2  | 3.8  | 4.4  |
| 4                    | .8              | 1.0  | 1.3  | 1.6  | 2.0  | 2.4  | 2.8  | 3.4  | 3.9  | 4.5  | 5.2  |
| 5                    | 1.2             | 1.5  | 1.8  | 2.2  | 2.6  | 3.1  | 3.6  | 4.1  | 4.8  | 5.4  | 6.1  |
| 6                    | 1.8             | 2.1  | 2.5  | 2.9  | 3.3  | 3.9  | 4.4  | 5.0  | 5.7  | 6.4  | 7.2  |
| 7                    | 2.4             | 2.8  | 3.2  | 3.7  | 4.2  | 4.7  | 5.4  | 6.0  | 6.7  | 7.5  | 8.3  |
| 8                    | 3.1             | 3.6  | 4.0  | 4.5  | 5.1  | 5.7  | 6.4  | 7.1  | 7.9  | 8.7  | 9.5  |
| 9                    | 4.0             | 4.4  | 5.0  | 5.5  | 6.1  | 6.8  | 7.5  | 8.3  | 9.1  | 9.9  | 10.8 |
| 10                   | 4.9             | 5.4  | 6.0  | 6.6  | 7.3  | 8.0  | 8.7  | 9.5  | 10.4 | 11.3 | 12.3 |
| 11                   | 5.9             | 6.5  | 7.1  | 7.8  | 8.5  | 9.3  | 10.1 | 10.9 | 11.8 | 12.8 | 13.8 |
| 12                   | 7.1             | 7.7  | 8.3  | 9.1  | 9.8  | 10.6 | 11.5 | 12.4 | 13.4 | 14.4 | 15.4 |
| 13                   | 8.3             | 9.0  | 9.7  | 10.4 | 11.2 | 12.1 | 13.0 | 14.0 | 15.0 | 16.0 | 17.1 |
| 14                   | 9.6             | 10.3 | 11.1 | 11.9 | 12.8 | 13.7 | 14.6 | 15.6 | 16.7 | 17.8 | 18.9 |
| 15                   | 11.0            | 11.8 | 12.6 | 13.5 | 14.4 | 15.3 | 16.3 | 17.4 | 18.5 | 19.7 | 20.9 |
| 16                   | 12.6            | 13.4 | 14.2 | 15.1 | 16.1 | 17.1 | 18.2 | 19.3 | 20.4 | 21.6 | 22.9 |
| 17                   | 14.2            | 15.0 | 16.0 | 16.9 | 17.9 | 19.0 | 20.1 | 21.2 | 22.4 | 23.7 | 25.0 |
| 18                   | 15.9            | 16.8 | 17.8 | 18.8 | 19.8 | 20.9 | 22.1 | 23.3 | 24.5 | 25.8 | 27.2 |
| 19                   | 17.7            | 18.7 | 19.7 | 20.7 | 21.8 | 23.0 | 24.2 | 25.5 | 26.8 | 28.1 | 29.5 |
| 20                   | 19.6            | 20.6 | 21.7 | 22.8 | 24.0 | 25.2 | 26.4 | 27.7 | 29.1 | 30.5 | 31.9 |
| 21                   | 21.6            | 22.7 | 23.8 | 25.0 | 26.2 | 27.4 | 28.7 | 30.1 | 31.5 | 32.9 | 34.4 |
| 22                   | 23.8            | 24.9 | 26.0 | 27.2 | 28.5 | 29.8 | 31.1 | 32.5 | 34.0 | 35.5 | 37.0 |
| 23                   | 26.0            | 27.1 | 28.3 | 29.6 | 30.9 | 32.2 | 33.6 | 35.1 | 36.6 | 38.1 | 39.7 |
| 24                   | 28.3            | 29.5 | 30.7 | 32.0 | 33.4 | 34.8 | 36.2 | 37.7 | 39.3 | 40.9 | 42.5 |
| 25                   | 30.7            | 31.9 | 33.2 | 34.6 | 36.0 | 37.4 | 38.9 | 40.5 | 42.1 | 43.7 | 45.4 |
| 26                   | 33.2            | 34.5 | 35.8 | 37.2 | 38.7 | 40.2 | 41.7 | 43.3 | 45.0 | 46.7 | 48.4 |
| 27                   | 35.8            | 37.1 | 38.5 | 40.0 | 41.5 | 43.0 | 44.6 | 46.3 | 48.0 | 49.7 | 51.5 |
| 28                   | 38.5            | 39.9 | 41.3 | 42.8 | 44.4 | 46.0 | 47.6 | 49.3 | 51.0 | 52.8 | 54.7 |
| 29                   | 41.3            | 42.7 | 44.2 | 45.8 | 47.4 | 49.0 | 50.7 | 52.4 | 54.2 | 56.1 | 58.0 |
| 30                   | 44.2            | 45.7 | 47.2 | 48.8 | 50.5 | 52.2 | 53.9 | 55.7 | 57.5 | 59.4 | 61.4 |
| 31                   | 47.2            | 48.7 | 50.3 | 52.0 | 53.7 | 55.4 | 57.2 | 59.0 | 60.9 | 62.9 | 64.8 |
| 32                   | 50.3            | 51.9 | 53.5 | 55.2 | 56.9 | 58.7 | 60.6 | 62.5 | 64.4 | 66.4 | 68.4 |
| 33                   | 53.5            | 55.1 | 56.8 | 58.5 | 60.3 | 62.2 | 64.1 | 66.0 | 68.0 | 70.0 | 72.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 56.7            | 58.4  | 60.2  | 62.0  | 63.8  | 65.7  | 67.6  | 69.6  | 71.7  | 73.8  | 75.9  |
| 35                   | 60.1            | 61.9  | 63.7  | 65.5  | 67.4  | 69.3  | 71.3  | 73.4  | 75.4  | 77.6  | 79.8  |
| 36                   | 63.6            | 65.4  | 67.2  | 69.1  | 71.1  | 73.1  | 75.1  | 77.2  | 79.3  | 81.5  | 83.7  |
| 37                   | 67.2            | 69.0  | 70.9  | 72.9  | 74.9  | 76.9  | 79.0  | 81.1  | 83.3  | 85.5  | 87.8  |
| 38                   | 70.9            | 72.8  | 74.7  | 76.7  | 78.7  | 80.8  | 83.0  | 85.1  | 87.4  | 89.7  | 92.0  |
| 39                   | 74.7            | 76.6  | 78.6  | 80.6  | 82.7  | 84.8  | 87.0  | 89.3  | 91.5  | 93.9  | 96.3  |
| 40                   | 78.5            | 80.5  | 82.6  | 84.6  | 86.8  | 89.0  | 91.2  | 93.5  | 95.8  | 98.2  | 100.6 |
| 41                   | 82.5            | 84.6  | 86.6  | 88.8  | 91.0  | 93.2  | 95.5  | 97.8  | 100.2 | 102.6 | 105.1 |
| 42                   | 86.6            | 88.7  | 90.8  | 93.0  | 95.2  | 97.5  | 99.8  | 102.2 | 104.7 | 107.1 | 109.7 |
| 43                   | 90.8            | 92.9  | 95.1  | 97.3  | 99.6  | 101.9 | 104.3 | 106.7 | 109.2 | 111.7 | 114.3 |
| 44                   | 95.0            | 97.2  | 99.4  | 101.7 | 104.1 | 106.4 | 108.9 | 111.4 | 113.9 | 116.5 | 119.1 |
| 45                   | 99.4            | 101.6 | 103.9 | 106.2 | 108.6 | 111.1 | 113.5 | 116.1 | 118.6 | 121.3 | 123.9 |
| 46                   | 103.9           | 106.1 | 108.5 | 110.9 | 113.3 | 115.8 | 118.3 | 120.9 | 123.5 | 126.2 | 128.9 |
| 47                   | 108.4           | 110.8 | 113.1 | 115.6 | 118.1 | 120.6 | 123.2 | 125.8 | 128.5 | 131.2 | 134.0 |
| 48                   | 113.1           | 115.5 | 117.9 | 120.4 | 122.9 | 125.5 | 128.1 | 130.8 | 133.5 | 136.3 | 139.1 |
| 49                   | 117.9           | 120.3 | 122.8 | 125.3 | 127.9 | 130.5 | 133.2 | 135.9 | 138.7 | 141.5 | 144.4 |
| 50                   | 122.7           | 125.2 | 127.7 | 130.3 | 132.9 | 135.6 | 138.3 | 141.1 | 143.9 | 146.8 | 149.7 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 10 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .2              | .4   | .5   | .8   | 1.1  | 1.4  | 1.9  | 2.3  | 2.8  | 3.4  | 4.0  |
| 3                    | .5              | .7   | .9   | 1.2  | 1.6  | 2.0  | 2.5  | 3.0  | 3.5  | 4.2  | 4.9  |
| 4                    | .9              | 1.1  | 1.4  | 1.8  | 2.2  | 2.6  | 3.2  | 3.7  | 4.4  | 5.0  | 5.8  |
| 5                    | 1.4             | 1.7  | 2.0  | 2.4  | 2.9  | 3.4  | 4.0  | 4.6  | 5.3  | 6.0  | 6.8  |
| 6                    | 2.0             | 2.3  | 2.7  | 3.2  | 3.7  | 4.3  | 4.9  | 5.6  | 6.3  | 7.1  | 8.0  |
| 7                    | 2.7             | 3.1  | 3.5  | 4.1  | 4.6  | 5.3  | 5.9  | 6.7  | 7.5  | 8.3  | 9.2  |
| 8                    | 3.5             | 4.0  | 4.5  | 5.0  | 5.7  | 6.4  | 7.1  | 7.9  | 8.7  | 9.6  | 10.6 |
| 9                    | 4.4             | 4.9  | 5.5  | 6.1  | 6.8  | 7.6  | 8.3  | 9.2  | 10.1 | 11.0 | 12.1 |
| 10                   | 5.5             | 6.0  | 6.7  | 7.3  | 8.1  | 8.9  | 9.7  | 10.6 | 11.6 | 12.6 | 13.6 |
| 11                   | 6.6             | 7.2  | 7.9  | 8.6  | 9.4  | 10.3 | 11.2 | 12.1 | 13.1 | 14.2 | 15.3 |
| 12                   | 7.9             | 8.5  | 9.3  | 10.1 | 10.9 | 11.8 | 12.8 | 13.8 | 14.8 | 16.0 | 17.1 |
| 13                   | 9.2             | 10.0 | 10.7 | 11.6 | 12.5 | 13.4 | 14.5 | 15.5 | 16.6 | 17.8 | 19.0 |
| 14                   | 10.7            | 11.5 | 12.3 | 13.2 | 14.2 | 15.2 | 16.3 | 17.4 | 18.5 | 19.8 | 21.1 |
| 15                   | 12.3            | 13.1 | 14.0 | 15.0 | 16.0 | 17.0 | 18.2 | 19.3 | 20.6 | 21.8 | 23.2 |
| 16                   | 14.0            | 14.9 | 15.8 | 16.8 | 17.9 | 19.0 | 20.2 | 21.4 | 22.7 | 24.0 | 25.4 |
| 17                   | 15.8            | 16.7 | 17.7 | 18.8 | 19.9 | 21.1 | 22.3 | 23.6 | 24.9 | 26.3 | 27.8 |
| 18                   | 17.7            | 18.7 | 19.7 | 20.9 | 22.0 | 23.3 | 24.5 | 25.9 | 27.3 | 28.7 | 30.2 |
| 19                   | 19.7            | 20.8 | 21.9 | 23.0 | 24.3 | 25.6 | 26.9 | 28.3 | 29.7 | 31.2 | 32.8 |
| 20                   | 21.8            | 22.9 | 24.1 | 25.3 | 26.6 | 28.0 | 29.3 | 30.8 | 32.3 | 33.8 | 35.5 |
| 21                   | 24.1            | 25.2 | 26.5 | 27.7 | 29.1 | 30.5 | 31.9 | 33.4 | 35.0 | 36.6 | 38.2 |
| 22                   | 26.4            | 27.6 | 28.9 | 30.2 | 31.6 | 33.1 | 34.6 | 36.1 | 37.7 | 39.4 | 41.1 |
| 23                   | 28.9            | 30.1 | 31.5 | 32.9 | 34.3 | 35.8 | 37.4 | 39.0 | 40.6 | 42.4 | 44.1 |
| 24                   | 31.4            | 32.8 | 34.1 | 35.6 | 37.1 | 38.6 | 40.3 | 41.9 | 43.6 | 45.4 | 47.2 |
| 25                   | 34.1            | 35.5 | 36.9 | 38.4 | 40.0 | 41.6 | 43.3 | 45.0 | 46.7 | 48.6 | 50.4 |
| 26                   | 36.9            | 38.3 | 39.8 | 41.4 | 43.0 | 44.6 | 46.4 | 48.1 | 50.0 | 51.8 | 53.8 |
| 27                   | 39.8            | 41.3 | 42.8 | 44.4 | 46.1 | 47.8 | 49.6 | 51.4 | 53.3 | 55.2 | 57.2 |
| 28                   | 42.8            | 44.3 | 45.9 | 47.6 | 49.3 | 51.1 | 52.9 | 54.8 | 56.7 | 58.7 | 60.8 |
| 29                   | 45.9            | 47.5 | 49.1 | 50.9 | 52.6 | 54.5 | 56.3 | 58.3 | 60.3 | 62.3 | 64.4 |
| 30                   | 49.1            | 50.7 | 52.5 | 54.2 | 56.1 | 57.9 | 59.9 | 61.9 | 63.9 | 66.0 | 68.2 |
| 31                   | 52.4            | 54.1 | 55.9 | 57.7 | 59.6 | 61.5 | 63.5 | 65.6 | 67.7 | 69.8 | 72.0 |
| 32                   | 55.8            | 57.6 | 59.4 | 61.3 | 63.3 | 65.3 | 67.3 | 69.4 | 71.6 | 73.8 | 76.0 |
| 33                   | 59.4            | 61.2 | 63.1 | 65.0 | 67.0 | 69.1 | 71.2 | 73.3 | 75.5 | 77.8 | 80.1 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 63.0            | 64.9  | 66.9  | 68.9  | 70.9  | 73.0  | 75.2  | 77.4  | 79.6  | 81.9  | 84.3  |
| 35                   | 66.8            | 68.7  | 70.7  | 72.8  | 74.9  | 77.0  | 79.2  | 81.5  | 83.8  | 86.2  | 88.6  |
| 36                   | 70.7            | 72.7  | 74.7  | 76.8  | 79.0  | 81.2  | 83.4  | 85.8  | 88.1  | 90.6  | 93.0  |
| 37                   | 74.7            | 76.7  | 78.8  | 81.0  | 83.2  | 85.4  | 87.8  | 90.1  | 92.6  | 95.0  | 97.6  |
| 38                   | 78.8            | 80.9  | 83.0  | 85.2  | 87.5  | 89.8  | 92.2  | 94.6  | 97.1  | 99.6  | 102.2 |
| 39                   | 83.0            | 85.1  | 87.3  | 89.6  | 91.9  | 94.3  | 96.7  | 99.2  | 101.7 | 104.3 | 107.0 |
| 40                   | 87.3            | 89.5  | 91.7  | 94.1  | 96.4  | 98.9  | 101.3 | 103.9 | 106.5 | 109.1 | 111.8 |
| 41                   | 91.7            | 93.9  | 96.3  | 98.6  | 101.1 | 103.5 | 106.1 | 108.7 | 111.3 | 114.0 | 116.8 |
| 42                   | 96.2            | 98.5  | 100.9 | 103.3 | 105.8 | 108.3 | 110.9 | 113.6 | 116.3 | 119.0 | 121.8 |
| 43                   | 100.8           | 103.2 | 105.6 | 108.1 | 110.7 | 113.3 | 115.9 | 118.6 | 121.4 | 124.2 | 127.0 |
| 44                   | 105.6           | 108.0 | 110.5 | 113.0 | 115.6 | 118.3 | 121.0 | 123.7 | 126.5 | 129.4 | 132.3 |
| 45                   | 110.4           | 112.9 | 115.5 | 118.1 | 120.7 | 123.4 | 126.2 | 129.0 | 131.8 | 134.7 | 137.7 |
| 46                   | 115.4           | 117.9 | 120.5 | 123.2 | 125.9 | 128.6 | 131.4 | 134.3 | 137.2 | 140.2 | 143.2 |
| 47                   | 120.5           | 123.1 | 125.7 | 128.4 | 131.2 | 134.0 | 136.8 | 139.8 | 142.7 | 145.8 | 148.8 |
| 48                   | 125.7           | 128.3 | 131.0 | 133.8 | 136.6 | 139.4 | 142.3 | 145.3 | 148.3 | 151.4 | 154.6 |
| 49                   | 131.0           | 133.7 | 136.4 | 139.2 | 142.1 | 145.0 | 148.0 | 151.0 | 154.1 | 157.2 | 160.4 |
| 50                   | 136.4           | 139.1 | 141.9 | 144.8 | 147.7 | 150.7 | 153.7 | 156.8 | 159.9 | 163.1 | 166.3 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 11 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .2              | .4   | .6   | .9   | 1.2  | 1.6  | 2.0  | 2.5  | 3.1  | 3.7  | 4.4  |
| 3                    | .5              | .7   | 1.0  | 1.3  | 1.7  | 2.2  | 2.7  | 3.3  | 3.9  | 4.6  | 5.3  |
| 4                    | 1.0             | 1.2  | 1.6  | 1.9  | 2.4  | 2.9  | 3.5  | 4.1  | 4.8  | 5.5  | 6.4  |
| 5                    | 1.5             | 1.8  | 2.2  | 2.7  | 3.2  | 3.7  | 4.4  | 5.1  | 5.8  | 6.6  | 7.5  |
| 6                    | 2.2             | 2.5  | 3.0  | 3.5  | 4.1  | 4.7  | 5.4  | 6.1  | 7.0  | 7.8  | 8.8  |
| 7                    | 2.9             | 3.4  | 3.9  | 4.5  | 5.1  | 5.8  | 6.5  | 7.3  | 8.2  | 9.1  | 10.1 |
| 8                    | 3.8             | 4.3  | 4.9  | 5.5  | 6.2  | 7.0  | 7.8  | 8.7  | 9.6  | 10.6 | 11.6 |
| 9                    | 4.9             | 5.4  | 6.1  | 6.7  | 7.5  | 8.3  | 9.2  | 10.1 | 11.1 | 12.1 | 13.3 |
| 10                   | 6.0             | 6.6  | 7.3  | 8.1  | 8.9  | 9.7  | 10.7 | 11.7 | 12.7 | 13.8 | 15.0 |
| 11                   | 7.3             | 7.9  | 8.7  | 9.5  | 10.4 | 11.3 | 12.3 | 13.3 | 14.5 | 15.6 | 16.9 |
| 12                   | 8.6             | 9.4  | 10.2 | 11.1 | 12.0 | 13.0 | 14.0 | 15.1 | 16.3 | 17.5 | 18.8 |
| 13                   | 10.1            | 10.9 | 11.8 | 12.7 | 13.7 | 14.8 | 15.9 | 17.1 | 18.3 | 19.6 | 20.9 |
| 14                   | 11.8            | 12.6 | 13.6 | 14.5 | 15.6 | 16.7 | 17.9 | 19.1 | 20.4 | 21.7 | 23.2 |
| 15                   | 13.5            | 14.4 | 15.4 | 16.5 | 17.6 | 18.7 | 20.0 | 21.3 | 22.6 | 24.0 | 25.5 |
| 16                   | 15.4            | 16.3 | 17.4 | 18.5 | 19.7 | 20.9 | 22.2 | 23.5 | 25.0 | 26.4 | 28.0 |
| 17                   | 17.3            | 18.4 | 19.5 | 20.7 | 21.9 | 23.2 | 24.5 | 25.9 | 27.4 | 28.9 | 30.5 |
| 18                   | 19.4            | 20.5 | 21.7 | 22.9 | 24.2 | 25.6 | 27.0 | 28.5 | 30.0 | 31.6 | 33.2 |
| 19                   | 21.7            | 22.8 | 24.1 | 25.3 | 26.7 | 28.1 | 29.6 | 31.1 | 32.7 | 34.3 | 36.1 |
| 20                   | 24.0            | 25.2 | 26.5 | 27.9 | 29.3 | 30.7 | 32.3 | 33.9 | 35.5 | 37.2 | 39.0 |
| 21                   | 26.5            | 27.7 | 29.1 | 30.5 | 32.0 | 33.5 | 35.1 | 36.7 | 38.5 | 40.2 | 42.1 |
| 22                   | 29.0            | 30.4 | 31.8 | 33.3 | 34.8 | 36.4 | 38.0 | 39.7 | 41.5 | 43.3 | 45.2 |
| 23                   | 31.7            | 33.1 | 34.6 | 36.1 | 37.7 | 39.4 | 41.1 | 42.9 | 44.7 | 46.6 | 48.5 |
| 24                   | 34.6            | 36.0 | 37.6 | 39.1 | 40.8 | 42.5 | 44.3 | 46.1 | 48.0 | 49.9 | 52.0 |
| 25                   | 37.5            | 39.0 | 40.6 | 42.3 | 44.0 | 45.7 | 47.6 | 49.5 | 51.4 | 53.4 | 55.5 |
| 26                   | 40.6            | 42.1 | 43.8 | 45.5 | 47.3 | 49.1 | 51.0 | 52.9 | 55.0 | 57.0 | 59.2 |
| 27                   | 43.7            | 45.4 | 47.1 | 48.9 | 50.7 | 52.6 | 54.5 | 56.5 | 58.6 | 60.7 | 62.9 |
| 28                   | 47.0            | 48.7 | 50.5 | 52.3 | 54.2 | 56.2 | 58.2 | 60.3 | 62.4 | 64.6 | 66.8 |
| 29                   | 50.5            | 52.2 | 54.1 | 55.9 | 57.9 | 59.9 | 62.0 | 64.1 | 66.3 | 68.5 | 70.9 |
| 30                   | 54.0            | 55.8 | 57.7 | 59.7 | 61.7 | 63.7 | 65.9 | 68.1 | 70.3 | 72.6 | 75.0 |
| 31                   | 57.7            | 59.5 | 61.5 | 63.5 | 65.6 | 67.7 | 69.9 | 72.1 | 74.5 | 76.8 | 79.3 |
| 32                   | 61.4            | 63.4 | 65.4 | 67.5 | 69.6 | 71.8 | 74.0 | 76.3 | 78.7 | 81.1 | 83.6 |
| 33                   | 65.3            | 67.3 | 69.4 | 71.5 | 73.7 | 76.0 | 78.3 | 80.7 | 83.1 | 85.6 | 88.1 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 69.4            | 71.4  | 73.6  | 75.7  | 78.0  | 80.3  | 82.7  | 85.1  | 87.6  | 90.1  | 92.8  |
| 35                   | 73.5            | 75.6  | 77.8  | 80.1  | 82.4  | 84.7  | 87.2  | 89.7  | 92.2  | 94.8  | 97.5  |
| 36                   | 77.8            | 79.9  | 82.2  | 84.5  | 86.9  | 89.3  | 91.8  | 94.3  | 97.0  | 99.6  | 102.3 |
| 37                   | 82.1            | 84.4  | 86.7  | 89.1  | 91.5  | 94.0  | 96.5  | 99.1  | 101.8 | 104.5 | 107.3 |
| 38                   | 86.6            | 88.9  | 91.3  | 93.7  | 96.2  | 98.8  | 101.4 | 104.1 | 106.8 | 109.6 | 112.4 |
| 39                   | 91.3            | 93.6  | 96.1  | 98.5  | 101.1 | 103.7 | 106.4 | 109.1 | 111.9 | 114.7 | 117.6 |
| 40                   | 96.0            | 98.4  | 100.9 | 103.5 | 106.1 | 108.7 | 111.5 | 114.3 | 117.1 | 120.0 | 123.0 |
| 41                   | 100.8           | 103.3 | 105.9 | 108.5 | 111.2 | 113.9 | 116.7 | 119.5 | 122.4 | 125.4 | 128.4 |
| 42                   | 105.8           | 108.4 | 111.0 | 113.7 | 116.4 | 119.2 | 122.0 | 124.9 | 127.9 | 130.9 | 134.0 |
| 43                   | 110.9           | 113.5 | 116.2 | 118.9 | 121.7 | 124.6 | 127.5 | 130.5 | 133.5 | 136.6 | 139.7 |
| 44                   | 116.1           | 118.8 | 121.5 | 124.3 | 127.2 | 130.1 | 133.1 | 136.1 | 139.2 | 142.3 | 145.5 |
| 45                   | 121.5           | 124.2 | 127.0 | 129.9 | 132.8 | 135.7 | 138.8 | 141.9 | 145.0 | 148.2 | 151.5 |
| 46                   | 126.9           | 129.7 | 132.6 | 135.5 | 138.5 | 141.5 | 144.6 | 147.7 | 150.9 | 154.2 | 157.5 |
| 47                   | 132.5           | 135.4 | 138.3 | 141.3 | 144.3 | 147.4 | 150.5 | 153.7 | 157.0 | 160.3 | 163.7 |
| 48                   | 138.2           | 141.1 | 144.1 | 147.1 | 150.2 | 153.4 | 156.6 | 159.9 | 163.2 | 166.6 | 170.0 |
| 49                   | 144.0           | 147.0 | 150.0 | 153.1 | 156.3 | 159.5 | 162.8 | 166.1 | 169.5 | 172.9 | 176.4 |
| 50                   | 150.0           | 153.0 | 156.1 | 159.3 | 162.5 | 165.7 | 169.1 | 172.5 | 175.9 | 179.4 | 183.0 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 12 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |      |      |
|----------------------|-----------------|------|------|------|------|------|------|------|------|------|------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9    | 10   |
| 2                    | .3              | .4   | .7   | .9   | 1.3  | 1.7  | 2.2  | 2.8  | 3.4  | 4.1  | 4.8  |
| 3                    | .6              | .8   | 1.1  | 1.5  | 1.9  | 2.4  | 2.9  | 3.6  | 4.3  | 5.0  | 5.8  |
| 4                    | 1.0             | 1.3  | 1.7  | 2.1  | 2.6  | 3.2  | 3.8  | 4.5  | 5.2  | 6.1  | 6.9  |
| 5                    | 1.6             | 2.0  | 2.4  | 2.9  | 3.5  | 4.1  | 4.8  | 5.5  | 6.3  | 7.2  | 8.2  |
| 6                    | 2.4             | 2.8  | 3.3  | 3.8  | 4.5  | 5.1  | 5.9  | 6.7  | 7.6  | 8.5  | 9.6  |
| 7                    | 3.2             | 3.7  | 4.3  | 4.9  | 5.6  | 6.3  | 7.1  | 8.0  | 9.0  | 10.0 | 11.1 |
| 8                    | 4.2             | 4.7  | 5.4  | 6.1  | 6.8  | 7.6  | 8.5  | 9.5  | 10.5 | 11.6 | 12.7 |
| 9                    | 5.3             | 5.9  | 6.6  | 7.4  | 8.2  | 9.1  | 10.0 | 11.0 | 12.1 | 13.3 | 14.5 |
| 10                   | 6.5             | 7.2  | 8.0  | 8.8  | 9.7  | 10.6 | 11.6 | 12.7 | 13.9 | 15.1 | 16.4 |
| 11                   | 7.9             | 8.7  | 9.5  | 10.4 | 11.3 | 12.3 | 13.4 | 14.6 | 15.8 | 17.0 | 18.4 |
| 12                   | 9.4             | 10.2 | 11.1 | 12.1 | 13.1 | 14.2 | 15.3 | 16.5 | 17.8 | 19.1 | 20.6 |
| 13                   | 11.1            | 11.9 | 12.9 | 13.9 | 15.0 | 16.1 | 17.3 | 18.6 | 20.0 | 21.4 | 22.8 |
| 14                   | 12.8            | 13.8 | 14.8 | 15.9 | 17.0 | 18.2 | 19.5 | 20.8 | 22.3 | 23.7 | 25.3 |
| 15                   | 14.7            | 15.7 | 16.8 | 18.0 | 19.2 | 20.5 | 21.8 | 23.2 | 24.7 | 26.2 | 27.8 |
| 16                   | 16.8            | 17.8 | 19.0 | 20.2 | 21.5 | 22.8 | 24.2 | 25.7 | 27.2 | 28.8 | 30.5 |
| 17                   | 18.9            | 20.1 | 21.3 | 22.5 | 23.9 | 25.3 | 26.8 | 28.3 | 29.9 | 31.6 | 33.3 |
| 18                   | 21.2            | 22.4 | 23.7 | 25.0 | 26.4 | 27.9 | 29.5 | 31.1 | 32.7 | 34.5 | 36.3 |
| 19                   | 23.6            | 24.9 | 26.2 | 27.7 | 29.1 | 30.7 | 32.3 | 33.9 | 35.7 | 37.5 | 39.3 |
| 20                   | 26.2            | 27.5 | 28.9 | 30.4 | 31.9 | 33.5 | 35.2 | 36.9 | 38.7 | 40.6 | 42.5 |
| 21                   | 28.9            | 30.3 | 31.7 | 33.3 | 34.9 | 36.6 | 38.3 | 40.1 | 42.0 | 43.9 | 45.9 |
| 22                   | 31.7            | 33.1 | 34.7 | 36.3 | 38.0 | 39.7 | 41.5 | 43.4 | 45.3 | 47.3 | 49.3 |
| 23                   | 34.6            | 36.2 | 37.8 | 39.4 | 41.2 | 43.0 | 44.8 | 46.8 | 48.8 | 50.8 | 52.9 |
| 24                   | 37.7            | 39.3 | 41.0 | 42.7 | 44.5 | 46.4 | 48.3 | 50.3 | 52.4 | 54.5 | 56.7 |
| 25                   | 40.9            | 42.6 | 44.3 | 46.1 | 48.0 | 49.9 | 51.9 | 54.0 | 56.1 | 58.3 | 60.5 |
| 26                   | 44.2            | 46.0 | 47.8 | 49.6 | 51.6 | 53.6 | 55.6 | 57.8 | 60.0 | 62.2 | 64.5 |
| 27                   | 47.7            | 49.5 | 51.4 | 53.3 | 55.3 | 57.4 | 59.5 | 61.7 | 63.9 | 66.3 | 68.7 |
| 28                   | 51.3            | 53.2 | 55.1 | 57.1 | 59.2 | 61.3 | 63.5 | 65.7 | 68.1 | 70.5 | 72.9 |
| 29                   | 55.0            | 57.0 | 59.0 | 61.0 | 63.2 | 65.3 | 67.6 | 69.9 | 72.3 | 74.8 | 77.3 |
| 30                   | 58.9            | 60.9 | 63.0 | 65.1 | 67.3 | 69.5 | 71.9 | 74.3 | 76.7 | 79.2 | 81.8 |
| 31                   | 62.9            | 65.0 | 67.1 | 69.3 | 71.5 | 73.9 | 76.2 | 78.7 | 81.2 | 83.8 | 86.5 |
| 32                   | 67.0            | 69.1 | 71.3 | 73.6 | 75.9 | 78.3 | 80.8 | 83.3 | 85.9 | 88.5 | 91.2 |
| 33                   | 71.3            | 73.5 | 75.7 | 78.0 | 80.4 | 82.9 | 85.4 | 88.0 | 90.6 | 93.4 | 96.1 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 75.7            | 77.9  | 80.2  | 82.6  | 85.1  | 87.6  | 90.2  | 92.8  | 95.6  | 98.3  | 101.2 |
| 35                   | 80.2            | 82.5  | 84.9  | 87.3  | 89.9  | 92.4  | 95.1  | 97.8  | 100.6 | 103.4 | 106.4 |
| 36                   | 84.8            | 87.2  | 89.7  | 92.2  | 94.8  | 97.4  | 100.1 | 102.9 | 105.8 | 108.7 | 111.7 |
| 37                   | 89.6            | 92.1  | 94.6  | 97.2  | 99.8  | 102.5 | 105.3 | 108.2 | 111.1 | 114.0 | 117.1 |
| 38                   | 94.5            | 97.0  | 99.6  | 102.3 | 105.0 | 107.8 | 110.6 | 113.5 | 116.5 | 119.5 | 122.6 |
| 39                   | 99.5            | 102.1 | 104.8 | 107.5 | 110.3 | 113.1 | 116.0 | 119.0 | 122.1 | 125.2 | 128.3 |
| 40                   | 104.7           | 107.4 | 110.1 | 112.9 | 115.7 | 118.6 | 121.6 | 124.6 | 127.8 | 130.9 | 134.2 |
| 41                   | 110.0           | 112.7 | 115.5 | 118.4 | 121.3 | 124.3 | 127.3 | 130.4 | 133.6 | 136.8 | 140.1 |
| 42                   | 115.5           | 118.2 | 121.1 | 124.0 | 127.0 | 130.0 | 133.1 | 136.3 | 139.5 | 142.8 | 146.2 |
| 43                   | 121.0           | 123.9 | 126.8 | 129.8 | 132.8 | 135.9 | 139.1 | 142.3 | 145.6 | 149.0 | 152.4 |
| 44                   | 126.7           | 129.6 | 132.6 | 135.6 | 138.7 | 141.9 | 145.2 | 148.5 | 151.8 | 155.3 | 158.8 |
| 45                   | 132.5           | 135.5 | 138.6 | 141.7 | 144.8 | 148.1 | 151.4 | 154.8 | 158.2 | 161.7 | 165.3 |
| 46                   | 138.5           | 141.5 | 144.6 | 147.8 | 151.1 | 154.4 | 157.7 | 161.2 | 164.7 | 168.2 | 171.9 |
| 47                   | 144.6           | 147.7 | 150.9 | 154.1 | 157.4 | 160.8 | 164.2 | 167.7 | 171.3 | 174.9 | 178.6 |
| 48                   | 150.8           | 154.0 | 157.2 | 160.5 | 163.9 | 167.3 | 170.8 | 174.4 | 178.0 | 181.7 | 185.5 |
| 49                   | 157.1           | 160.4 | 163.7 | 167.1 | 170.5 | 174.0 | 177.6 | 181.2 | 184.9 | 188.7 | 192.5 |
| 50                   | 163.6           | 166.9 | 170.3 | 173.7 | 177.2 | 180.8 | 184.4 | 188.1 | 191.9 | 195.7 | 199.6 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 13 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |      |      |       |       |
|----------------------|-----------------|------|------|------|------|------|------|------|------|-------|-------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7    | 8    | 9     | 10    |
| 2                    | .3              | .5   | .7   | 1.0  | 1.4  | 1.9  | 2.4  | 3.0  | 3.7  | 4.4   | 5.2   |
| 3                    | .6              | .9   | 1.2  | 1.6  | 2.1  | 2.6  | 3.2  | 3.9  | 4.6  | 5.4   | 6.3   |
| 4                    | 1.1             | 1.5  | 1.8  | 2.3  | 2.8  | 3.4  | 4.1  | 4.9  | 5.7  | 6.6   | 7.5   |
| 5                    | 1.8             | 2.2  | 2.6  | 3.2  | 3.8  | 4.4  | 5.2  | 6.0  | 6.9  | 7.8   | 8.9   |
| 6                    | 2.6             | 3.0  | 3.5  | 4.1  | 4.8  | 5.6  | 6.4  | 7.3  | 8.2  | 9.3   | 10.4  |
| 7                    | 3.5             | 4.0  | 4.6  | 5.3  | 6.0  | 6.8  | 7.7  | 8.7  | 9.7  | 10.8  | 12.0  |
| 8                    | 4.5             | 5.1  | 5.8  | 6.6  | 7.4  | 8.3  | 9.2  | 10.2 | 11.3 | 12.5  | 13.8  |
| 9                    | 5.7             | 6.4  | 7.2  | 8.0  | 8.9  | 9.8  | 10.8 | 11.9 | 13.1 | 14.4  | 15.7  |
| 10                   | 7.1             | 7.8  | 8.7  | 9.5  | 10.5 | 11.5 | 12.6 | 13.8 | 15.0 | 16.3  | 17.7  |
| 11                   | 8.6             | 9.4  | 10.3 | 11.2 | 12.3 | 13.4 | 14.5 | 15.8 | 17.1 | 18.5  | 19.9  |
| 12                   | 10.2            | 11.1 | 12.1 | 13.1 | 14.2 | 15.4 | 16.6 | 17.9 | 19.3 | 20.7  | 22.3  |
| 13                   | 12.0            | 12.9 | 14.0 | 15.1 | 16.2 | 17.5 | 18.8 | 20.2 | 21.6 | 23.1  | 24.7  |
| 14                   | 13.9            | 14.9 | 16.0 | 17.2 | 18.4 | 19.7 | 21.1 | 22.6 | 24.1 | 25.7  | 27.4  |
| 15                   | 16.0            | 17.1 | 18.2 | 19.5 | 20.8 | 22.2 | 23.6 | 25.1 | 26.7 | 28.4  | 30.1  |
| 16                   | 18.2            | 19.3 | 20.6 | 21.9 | 23.3 | 24.7 | 26.2 | 27.8 | 29.5 | 31.2  | 33.0  |
| 17                   | 20.5            | 21.7 | 23.0 | 24.4 | 25.9 | 27.4 | 29.0 | 30.7 | 32.4 | 34.2  | 36.1  |
| 18                   | 23.0            | 24.3 | 25.7 | 27.1 | 28.6 | 30.2 | 31.9 | 33.6 | 35.5 | 37.3  | 39.3  |
| 19                   | 25.6            | 27.0 | 28.4 | 30.0 | 31.6 | 33.2 | 35.0 | 36.8 | 38.6 | 40.6  | 42.6  |
| 20                   | 28.4            | 29.8 | 31.3 | 32.9 | 34.6 | 36.3 | 38.1 | 40.0 | 42.0 | 44.0  | 46.1  |
| 21                   | 31.3            | 32.8 | 34.4 | 36.1 | 37.8 | 39.6 | 41.5 | 43.4 | 45.4 | 47.5  | 49.7  |
| 22                   | 34.3            | 35.9 | 37.6 | 39.3 | 41.1 | 43.0 | 45.0 | 47.0 | 49.1 | 51.2  | 53.5  |
| 23                   | 37.5            | 39.2 | 40.9 | 42.7 | 44.6 | 46.5 | 48.6 | 50.7 | 52.8 | 55.1  | 57.4  |
| 24                   | 40.8            | 42.6 | 44.4 | 46.3 | 48.2 | 50.2 | 52.3 | 54.5 | 56.7 | 59.0  | 61.4  |
| 25                   | 44.3            | 46.1 | 48.0 | 50.0 | 52.0 | 54.1 | 56.2 | 58.5 | 60.8 | 63.1  | 65.6  |
| 26                   | 47.9            | 49.8 | 51.8 | 53.8 | 55.9 | 58.0 | 60.3 | 62.6 | 64.9 | 67.4  | 69.9  |
| 27                   | 51.7            | 53.6 | 55.7 | 57.7 | 59.9 | 62.1 | 64.4 | 66.8 | 69.3 | 71.8  | 74.4  |
| 28                   | 55.6            | 57.6 | 59.7 | 61.9 | 64.1 | 66.4 | 68.8 | 71.2 | 73.7 | 76.3  | 79.0  |
| 29                   | 59.6            | 61.7 | 63.9 | 66.1 | 68.4 | 70.8 | 73.2 | 75.8 | 78.3 | 81.0  | 83.7  |
| 30                   | 63.8            | 66.0 | 68.2 | 70.5 | 72.9 | 75.3 | 77.9 | 80.4 | 83.1 | 85.8  | 88.6  |
| 31                   | 68.1            | 70.4 | 72.7 | 75.0 | 77.5 | 80.0 | 82.6 | 85.3 | 88.0 | 90.8  | 93.7  |
| 32                   | 72.6            | 74.9 | 77.3 | 79.7 | 82.2 | 84.8 | 87.5 | 90.2 | 93.0 | 95.9  | 98.8  |
| 33                   | 77.2            | 79.6 | 82.0 | 84.6 | 87.1 | 89.8 | 92.5 | 95.3 | 98.2 | 101.1 | 104.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 82.0            | 84.4  | 86.9  | 89.5  | 92.2  | 94.9  | 97.7  | 100.6 | 103.5 | 106.5 | 109.6 |
| 35                   | 86.9            | 89.4  | 92.0  | 94.6  | 97.3  | 100.1 | 103.0 | 106.0 | 109.0 | 112.1 | 115.2 |
| 36                   | 91.9            | 94.5  | 97.1  | 99.9  | 102.7 | 105.5 | 108.5 | 111.5 | 114.6 | 117.7 | 121.0 |
| 37                   | 97.1            | 99.7  | 102.5 | 105.3 | 108.1 | 111.1 | 114.1 | 117.2 | 120.3 | 123.5 | 126.8 |
| 38                   | 102.4           | 105.1 | 107.9 | 110.8 | 113.7 | 116.7 | 119.8 | 123.0 | 126.2 | 129.5 | 132.9 |
| 39                   | 107.8           | 110.6 | 113.5 | 116.5 | 119.5 | 122.6 | 125.7 | 128.9 | 132.2 | 135.6 | 139.0 |
| 40                   | 113.4           | 116.3 | 119.3 | 122.3 | 125.4 | 128.5 | 131.7 | 135.0 | 138.4 | 141.8 | 145.3 |
| 41                   | 119.2           | 122.1 | 125.1 | 128.2 | 131.4 | 134.6 | 137.9 | 141.3 | 144.7 | 148.2 | 151.8 |
| 42                   | 125.1           | 128.1 | 131.2 | 134.3 | 137.5 | 140.8 | 144.2 | 147.7 | 151.2 | 154.7 | 158.4 |
| 43                   | 131.1           | 134.2 | 137.3 | 140.6 | 143.9 | 147.2 | 150.7 | 154.2 | 157.8 | 161.4 | 165.1 |
| 44                   | 137.3           | 140.4 | 143.6 | 146.9 | 150.3 | 153.8 | 157.3 | 160.8 | 164.5 | 168.2 | 172.0 |
| 45                   | 143.6           | 146.8 | 150.1 | 153.5 | 156.9 | 160.4 | 164.0 | 167.6 | 171.4 | 175.2 | 179.0 |
| 46                   | 150.0           | 153.3 | 156.7 | 160.1 | 163.6 | 167.2 | 170.9 | 174.6 | 178.4 | 182.3 | 186.2 |
| 47                   | 156.6           | 160.0 | 163.4 | 166.9 | 170.5 | 174.2 | 177.9 | 181.7 | 185.6 | 189.5 | 193.5 |
| 48                   | 163.4           | 166.8 | 170.3 | 173.9 | 177.5 | 181.3 | 185.1 | 188.9 | 192.9 | 196.9 | 200.9 |
| 49                   | 170.2           | 173.7 | 177.3 | 181.0 | 184.7 | 188.5 | 192.4 | 196.3 | 200.3 | 204.4 | 208.5 |
| 50                   | 177.3           | 180.8 | 184.5 | 188.2 | 192.0 | 195.9 | 199.8 | 203.8 | 207.9 | 212.0 | 216.3 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 14 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |      |      |      |       |       |       |       |
|----------------------|-----------------|------|------|------|------|------|------|-------|-------|-------|-------|
|                      | 0               | 1    | 2    | 3    | 4    | 5    | 6    | 7     | 8     | 9     | 10    |
| 2                    | .3              | .5   | .8   | 1.1  | 1.5  | 2.0  | 2.6  | 3.2   | 4.0   | 4.8   | 5.7   |
| 3                    | .7              | 1.0  | 1.3  | 1.7  | 2.2  | 2.8  | 3.4  | 4.2   | 5.0   | 5.8   | 6.8   |
| 4                    | 1.2             | 1.6  | 2.0  | 2.5  | 3.1  | 3.7  | 4.4  | 5.2   | 6.1   | 7.1   | 8.1   |
| 5                    | 1.9             | 2.3  | 2.8  | 3.4  | 4.0  | 4.8  | 5.6  | 6.5   | 7.4   | 8.4   | 9.5   |
| 6                    | 2.7             | 3.2  | 3.8  | 4.5  | 5.2  | 6.0  | 6.9  | 7.8   | 8.9   | 10.0  | 11.1  |
| 7                    | 3.7             | 4.3  | 5.0  | 5.7  | 6.5  | 7.4  | 8.3  | 9.4   | 10.5  | 11.6  | 12.9  |
| 8                    | 4.9             | 5.5  | 6.3  | 7.1  | 7.9  | 8.9  | 9.9  | 11.0  | 12.2  | 13.5  | 14.8  |
| 9                    | 6.2             | 6.9  | 7.7  | 8.6  | 9.5  | 10.6 | 11.7 | 12.9  | 14.1  | 15.5  | 16.9  |
| 10                   | 7.6             | 8.4  | 9.3  | 10.3 | 11.3 | 12.4 | 13.6 | 14.9  | 16.2  | 17.6  | 19.1  |
| 11                   | 9.2             | 10.1 | 11.1 | 12.1 | 13.2 | 14.4 | 15.7 | 17.0  | 18.4  | 19.9  | 21.5  |
| 12                   | 11.0            | 11.9 | 13.0 | 14.1 | 15.3 | 16.5 | 17.9 | 19.3  | 20.8  | 22.3  | 24.0  |
| 13                   | 12.9            | 13.9 | 15.0 | 16.2 | 17.5 | 18.8 | 20.2 | 21.7  | 23.3  | 24.9  | 26.6  |
| 14                   | 15.0            | 16.1 | 17.3 | 18.5 | 19.9 | 21.3 | 22.8 | 24.3  | 26.0  | 27.7  | 29.5  |
| 15                   | 17.2            | 18.4 | 19.6 | 21.0 | 22.4 | 23.9 | 25.4 | 27.1  | 28.8  | 30.6  | 32.5  |
| 16                   | 19.5            | 20.8 | 22.1 | 23.6 | 25.0 | 26.6 | 28.3 | 30.0  | 31.8  | 33.6  | 35.6  |
| 17                   | 22.1            | 23.4 | 24.8 | 26.3 | 27.9 | 29.5 | 31.2 | 33.0  | 34.9  | 36.8  | 38.9  |
| 18                   | 24.7            | 26.2 | 27.6 | 29.2 | 30.8 | 32.6 | 34.4 | 36.2  | 38.2  | 40.2  | 42.3  |
| 19                   | 27.6            | 29.1 | 30.6 | 32.3 | 34.0 | 35.8 | 37.6 | 39.6  | 41.6  | 43.7  | 45.9  |
| 20                   | 30.5            | 32.1 | 33.7 | 35.5 | 37.3 | 39.1 | 41.1 | 43.1  | 45.2  | 47.4  | 49.6  |
| 21                   | 33.7            | 35.3 | 37.0 | 38.8 | 40.7 | 42.6 | 44.7 | 46.8  | 48.9  | 51.2  | 53.5  |
| 22                   | 37.0            | 38.7 | 40.5 | 42.3 | 44.3 | 46.3 | 48.4 | 50.6  | 52.8  | 55.2  | 57.6  |
| 23                   | 40.4            | 42.2 | 44.1 | 46.0 | 48.0 | 50.1 | 52.3 | 54.6  | 56.9  | 59.3  | 61.8  |
| 24                   | 44.0            | 45.9 | 47.8 | 49.8 | 51.9 | 54.1 | 56.4 | 58.7  | 61.1  | 63.6  | 66.1  |
| 25                   | 47.7            | 49.7 | 51.7 | 53.8 | 56.0 | 58.2 | 60.6 | 63.0  | 65.4  | 68.0  | 70.6  |
| 26                   | 51.6            | 53.6 | 55.7 | 57.9 | 60.2 | 62.5 | 64.9 | 67.4  | 69.9  | 72.6  | 75.3  |
| 27                   | 55.7            | 57.8 | 59.9 | 62.2 | 64.5 | 66.9 | 69.4 | 72.0  | 74.6  | 77.3  | 80.1  |
| 28                   | 59.9            | 62.0 | 64.3 | 66.6 | 69.0 | 71.5 | 74.1 | 76.7  | 79.4  | 82.2  | 85.1  |
| 29                   | 64.2            | 66.5 | 68.8 | 71.2 | 73.7 | 76.2 | 78.9 | 81.6  | 84.4  | 87.2  | 90.2  |
| 30                   | 68.7            | 71.0 | 73.5 | 75.9 | 78.5 | 81.1 | 83.8 | 86.6  | 89.5  | 92.4  | 95.4  |
| 31                   | 73.4            | 75.8 | 78.3 | 80.8 | 83.5 | 86.2 | 89.0 | 91.8  | 94.8  | 97.8  | 100.9 |
| 32                   | 78.2            | 80.7 | 83.2 | 85.9 | 88.6 | 91.4 | 94.2 | 97.2  | 100.2 | 103.3 | 106.4 |
| 33                   | 83.2            | 85.7 | 88.3 | 91.1 | 93.8 | 96.7 | 99.6 | 102.7 | 105.8 | 108.9 | 112.2 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 88.3            | 90.9  | 93.6  | 96.4  | 99.3  | 102.2 | 105.2 | 108.3 | 111.5 | 114.7 | 118.0 |
| 35                   | 93.5            | 96.2  | 99.0  | 101.9 | 104.8 | 107.9 | 110.9 | 114.1 | 117.4 | 120.7 | 124.1 |
| 36                   | 99.0            | 101.7 | 104.6 | 107.5 | 110.6 | 113.7 | 116.8 | 120.1 | 123.4 | 126.8 | 130.3 |
| 37                   | 104.5           | 107.4 | 110.3 | 113.4 | 116.4 | 119.6 | 122.9 | 126.2 | 129.6 | 133.1 | 136.6 |
| 38                   | 110.3           | 113.2 | 116.2 | 119.3 | 122.5 | 125.7 | 129.0 | 132.4 | 135.9 | 139.5 | 143.1 |
| 39                   | 116.1           | 119.2 | 122.2 | 125.4 | 128.7 | 132.0 | 135.4 | 138.9 | 142.4 | 146.0 | 149.7 |
| 40                   | 122.2           | 125.3 | 128.4 | 131.7 | 135.0 | 138.4 | 141.9 | 145.4 | 149.0 | 152.8 | 156.5 |
| 41                   | 128.4           | 131.5 | 134.8 | 138.1 | 141.5 | 145.0 | 148.5 | 152.1 | 155.8 | 159.6 | 163.5 |
| 42                   | 134.7           | 137.9 | 141.3 | 144.7 | 148.1 | 151.7 | 155.3 | 159.0 | 162.8 | 166.6 | 170.6 |
| 43                   | 141.2           | 144.5 | 147.9 | 151.4 | 154.9 | 158.6 | 162.3 | 166.0 | 169.9 | 173.8 | 177.8 |
| 44                   | 147.8           | 151.2 | 154.7 | 158.2 | 161.9 | 165.6 | 169.4 | 173.2 | 177.1 | 181.2 | 185.2 |
| 45                   | 154.6           | 158.1 | 161.6 | 165.3 | 169.0 | 172.8 | 176.6 | 180.5 | 184.6 | 188.6 | 192.8 |
| 46                   | 161.6           | 165.1 | 168.7 | 172.5 | 176.2 | 180.1 | 184.0 | 188.0 | 192.1 | 196.3 | 200.5 |
| 47                   | 168.7           | 172.3 | 176.0 | 179.8 | 183.6 | 187.6 | 191.6 | 195.7 | 199.8 | 204.1 | 208.4 |
| 48                   | 175.9           | 179.6 | 183.4 | 187.3 | 191.2 | 195.2 | 199.3 | 203.5 | 207.7 | 212.0 | 216.4 |
| 49                   | 183.3           | 187.1 | 191.0 | 194.9 | 198.9 | 203.0 | 207.2 | 211.4 | 215.7 | 220.1 | 224.6 |
| 50                   | 190.9           | 194.7 | 198.7 | 202.7 | 206.8 | 210.9 | 215.2 | 219.5 | 223.9 | 228.3 | 232.9 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 15 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |      |      |       |       |       |       |       |       |       |
|----------------------|-----------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1    | 2    | 3    | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .3              | .5   | .8   | 1.2  | 1.6   | 2.2   | 2.8   | 3.5   | 4.3   | 5.1   | 6.1   |
| 3                    | .7              | 1.0  | 1.4  | 1.8  | 2.4   | 3.0   | 3.7   | 4.5   | 5.3   | 6.3   | 7.3   |
| 4                    | 1.3             | 1.7  | 2.1  | 2.7  | 3.3   | 4.0   | 4.7   | 5.6   | 6.5   | 7.6   | 8.7   |
| 5                    | 2.0             | 2.5  | 3.0  | 3.6  | 4.3   | 5.1   | 6.0   | 6.9   | 7.9   | 9.0   | 10.2  |
| 6                    | 2.9             | 3.5  | 4.1  | 4.8  | 5.6   | 6.4   | 7.4   | 8.4   | 9.5   | 10.7  | 11.9  |
| 7                    | 4.0             | 4.6  | 5.3  | 6.1  | 7.0   | 7.9   | 8.9   | 10.0  | 11.2  | 12.5  | 13.8  |
| 8                    | 5.2             | 5.9  | 6.7  | 7.6  | 8.5   | 9.5   | 10.6  | 11.8  | 13.1  | 14.4  | 15.9  |
| 9                    | 6.6             | 7.4  | 8.3  | 9.2  | 10.2  | 11.3  | 12.5  | 13.8  | 15.1  | 16.6  | 18.1  |
| 10                   | 8.2             | 9.0  | 10.0 | 11.0 | 12.1  | 13.3  | 14.6  | 15.9  | 17.3  | 18.9  | 20.5  |
| 11                   | 9.9             | 10.8 | 11.9 | 13.0 | 14.2  | 15.4  | 16.8  | 18.2  | 19.7  | 21.3  | 23.0  |
| 12                   | 11.8            | 12.8 | 13.9 | 15.1 | 16.4  | 17.7  | 19.1  | 20.7  | 22.3  | 23.9  | 25.7  |
| 13                   | 13.8            | 14.9 | 16.1 | 17.4 | 18.7  | 20.2  | 21.7  | 23.3  | 25.0  | 26.7  | 28.6  |
| 14                   | 16.0            | 17.2 | 18.5 | 19.8 | 21.3  | 22.8  | 24.4  | 26.1  | 27.8  | 29.7  | 31.6  |
| 15                   | 18.4            | 19.7 | 21.0 | 22.5 | 24.0  | 25.6  | 27.2  | 29.0  | 30.8  | 32.8  | 34.8  |
| 16                   | 20.9            | 22.3 | 23.7 | 25.2 | 26.8  | 28.5  | 30.3  | 32.1  | 34.0  | 36.0  | 38.1  |
| 17                   | 23.6            | 25.1 | 26.6 | 28.2 | 29.9  | 31.6  | 33.5  | 35.4  | 37.4  | 39.5  | 41.6  |
| 18                   | 26.5            | 28.0 | 29.6 | 31.3 | 33.1  | 34.9  | 36.8  | 38.8  | 40.9  | 43.1  | 45.3  |
| 19                   | 29.5            | 31.1 | 32.8 | 34.6 | 36.4  | 38.3  | 40.3  | 42.4  | 44.6  | 46.8  | 49.2  |
| 20                   | 32.7            | 34.4 | 36.2 | 38.0 | 39.9  | 41.9  | 44.0  | 46.2  | 48.4  | 50.8  | 53.2  |
| 21                   | 36.1            | 37.8 | 39.7 | 41.6 | 43.6  | 45.7  | 47.9  | 50.1  | 52.4  | 54.9  | 57.3  |
| 22                   | 39.6            | 41.4 | 43.4 | 45.4 | 47.4  | 49.6  | 51.9  | 54.2  | 56.6  | 59.1  | 61.7  |
| 23                   | 43.3            | 45.2 | 47.2 | 49.3 | 51.5  | 53.7  | 56.0  | 58.5  | 60.9  | 63.5  | 66.2  |
| 24                   | 47.1            | 49.1 | 51.2 | 53.4 | 55.6  | 58.0  | 60.4  | 62.9  | 65.4  | 68.1  | 70.8  |
| 25                   | 51.1            | 53.2 | 55.4 | 57.6 | 60.0  | 62.4  | 64.9  | 67.5  | 70.1  | 72.9  | 75.7  |
| 26                   | 55.3            | 57.5 | 59.7 | 62.1 | 64.5  | 67.0  | 69.5  | 72.2  | 74.9  | 77.8  | 80.7  |
| 27                   | 59.6            | 61.9 | 64.2 | 66.6 | 69.1  | 71.7  | 74.4  | 77.1  | 79.9  | 82.8  | 85.8  |
| 28                   | 64.1            | 66.5 | 68.9 | 71.4 | 74.0  | 76.6  | 79.4  | 82.2  | 85.1  | 88.1  | 91.1  |
| 29                   | 68.8            | 71.2 | 73.7 | 76.3 | 78.9  | 81.7  | 84.5  | 87.4  | 90.4  | 93.5  | 96.6  |
| 30                   | 73.6            | 76.1 | 78.7 | 81.4 | 84.1  | 86.9  | 89.8  | 92.8  | 95.9  | 99.0  | 102.3 |
| 31                   | 78.6            | 81.2 | 83.9 | 86.6 | 89.4  | 92.3  | 95.3  | 98.4  | 101.5 | 104.8 | 108.1 |
| 32                   | 83.8            | 86.4 | 89.2 | 92.0 | 94.9  | 97.9  | 101.0 | 104.1 | 107.3 | 110.6 | 114.0 |
| 33                   | 89.1            | 91.8 | 94.7 | 97.6 | 100.5 | 103.6 | 106.8 | 110.0 | 113.3 | 116.7 | 120.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 94.6            | 97.4  | 100.3 | 103.3 | 106.4 | 109.5 | 112.7 | 116.0 | 119.4 | 122.9 | 126.5 |
| 35                   | 100.2           | 103.1 | 106.1 | 109.2 | 112.3 | 115.6 | 118.9 | 122.3 | 125.7 | 129.3 | 132.9 |
| 36                   | 106.0           | 109.0 | 112.1 | 115.2 | 118.5 | 121.8 | 125.2 | 128.6 | 132.2 | 135.8 | 139.6 |
| 37                   | 112.0           | 115.1 | 118.2 | 121.4 | 124.8 | 128.2 | 131.6 | 135.2 | 138.8 | 142.6 | 146.4 |
| 38                   | 118.1           | 121.3 | 124.5 | 127.8 | 131.2 | 134.7 | 138.3 | 141.9 | 145.6 | 149.4 | 153.3 |
| 39                   | 124.4           | 127.7 | 131.0 | 134.4 | 137.8 | 141.4 | 145.0 | 148.8 | 152.6 | 156.5 | 160.4 |
| 40                   | 130.9           | 134.2 | 137.6 | 141.1 | 144.6 | 148.3 | 152.0 | 155.8 | 159.7 | 163.7 | 167.7 |
| 41                   | 137.5           | 140.9 | 144.4 | 148.0 | 151.6 | 155.3 | 159.1 | 163.0 | 167.0 | 171.0 | 175.2 |
| 42                   | 144.3           | 147.8 | 151.3 | 155.0 | 158.7 | 162.5 | 166.4 | 170.4 | 174.4 | 178.6 | 182.8 |
| 43                   | 151.3           | 154.8 | 158.5 | 162.2 | 166.0 | 169.9 | 173.8 | 177.9 | 182.0 | 186.2 | 190.5 |
| 44                   | 158.4           | 162.0 | 165.7 | 169.6 | 173.4 | 177.4 | 181.5 | 185.6 | 189.8 | 194.1 | 198.5 |
| 45                   | 165.7           | 169.4 | 173.2 | 177.1 | 181.0 | 185.1 | 189.2 | 193.4 | 197.7 | 202.1 | 206.6 |
| 46                   | 173.1           | 176.9 | 180.8 | 184.8 | 188.8 | 192.9 | 197.2 | 201.5 | 205.8 | 210.3 | 214.8 |
| 47                   | 180.7           | 184.6 | 188.6 | 192.6 | 196.8 | 201.0 | 205.3 | 209.6 | 214.1 | 218.6 | 223.3 |
| 48                   | 188.5           | 192.5 | 196.5 | 200.6 | 204.9 | 209.1 | 213.5 | 218.0 | 222.5 | 227.1 | 231.8 |
| 49                   | 196.4           | 200.5 | 204.6 | 208.8 | 213.1 | 217.5 | 222.0 | 226.5 | 231.1 | 235.8 | 240.6 |
| 50                   | 204.5           | 208.7 | 212.9 | 217.2 | 221.5 | 226.0 | 230.5 | 235.2 | 239.9 | 244.7 | 249.5 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 16 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |      |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1    | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .3              | .6   | .9    | 1.3   | 1.7   | 2.3   | 3.0   | 3.7   | 4.5   | 5.5   | 6.5   |
| 3                    | .8              | 1.1  | 1.5   | 2.0   | 2.5   | 3.2   | 3.9   | 4.8   | 5.7   | 6.7   | 7.8   |
| 4                    | 1.4             | 1.8  | 2.3   | 2.8   | 3.5   | 4.2   | 5.1   | 6.0   | 7.0   | 8.1   | 9.2   |
| 5                    | 2.2             | 2.7  | 3.2   | 3.9   | 4.6   | 5.5   | 6.4   | 7.4   | 8.5   | 9.6   | 10.9  |
| 6                    | 3.1             | 3.7  | 4.4   | 5.1   | 5.9   | 6.9   | 7.9   | 8.9   | 10.1  | 11.4  | 12.7  |
| 7                    | 4.3             | 4.9  | 5.7   | 6.5   | 7.4   | 8.4   | 9.5   | 10.7  | 12.0  | 13.3  | 14.7  |
| 8                    | 5.6             | 6.3  | 7.2   | 8.1   | 9.1   | 10.2  | 11.3  | 12.6  | 14.0  | 15.4  | 16.9  |
| 9                    | 7.1             | 7.9  | 8.8   | 9.8   | 10.9  | 12.1  | 13.4  | 14.7  | 16.1  | 17.7  | 19.3  |
| 10                   | 8.7             | 9.6  | 10.6  | 11.7  | 12.9  | 14.2  | 15.5  | 17.0  | 18.5  | 20.1  | 21.8  |
| 11                   | 10.6            | 11.6 | 12.7  | 13.8  | 15.1  | 16.4  | 17.9  | 19.4  | 21.0  | 22.7  | 24.5  |
| 12                   | 12.6            | 13.7 | 14.8  | 16.1  | 17.5  | 18.9  | 20.4  | 22.0  | 23.7  | 25.5  | 27.4  |
| 13                   | 14.7            | 15.9 | 17.2  | 18.5  | 20.0  | 21.5  | 23.1  | 24.8  | 26.6  | 28.5  | 30.5  |
| 14                   | 17.1            | 18.4 | 19.7  | 21.2  | 22.7  | 24.3  | 26.0  | 27.8  | 29.7  | 31.6  | 33.7  |
| 15                   | 19.6            | 21.0 | 22.4  | 24.0  | 25.6  | 27.3  | 29.1  | 30.9  | 32.9  | 34.9  | 37.1  |
| 16                   | 22.3            | 23.8 | 25.3  | 26.9  | 28.6  | 30.4  | 32.3  | 34.3  | 36.3  | 38.4  | 40.7  |
| 17                   | 25.2            | 26.7 | 28.4  | 30.1  | 31.9  | 33.7  | 35.7  | 37.7  | 39.9  | 42.1  | 44.4  |
| 18                   | 28.3            | 29.9 | 31.6  | 33.4  | 35.3  | 37.2  | 39.3  | 41.4  | 43.6  | 45.9  | 48.3  |
| 19                   | 31.5            | 33.2 | 35.0  | 36.9  | 38.8  | 40.9  | 43.0  | 45.2  | 47.6  | 50.0  | 52.4  |
| 20                   | 34.9            | 36.7 | 38.6  | 40.5  | 42.6  | 44.7  | 46.9  | 49.3  | 51.7  | 54.1  | 56.7  |
| 21                   | 38.5            | 40.4 | 42.3  | 44.4  | 46.5  | 48.7  | 51.0  | 53.4  | 55.9  | 58.5  | 61.2  |
| 22                   | 42.2            | 44.2 | 46.2  | 48.4  | 50.6  | 52.9  | 55.3  | 57.8  | 60.4  | 63.0  | 65.8  |
| 23                   | 46.2            | 48.2 | 50.4  | 52.6  | 54.9  | 57.3  | 59.8  | 62.4  | 65.0  | 67.8  | 70.6  |
| 24                   | 50.3            | 52.4 | 54.6  | 56.9  | 59.3  | 61.8  | 64.4  | 67.1  | 69.8  | 72.6  | 75.6  |
| 25                   | 54.5            | 56.8 | 59.1  | 61.5  | 64.0  | 66.5  | 69.2  | 71.9  | 74.8  | 77.7  | 80.7  |
| 26                   | 59.0            | 61.3 | 63.7  | 66.2  | 68.8  | 71.4  | 74.2  | 77.0  | 79.9  | 82.9  | 86.0  |
| 27                   | 63.6            | 66.0 | 68.5  | 71.1  | 73.7  | 76.5  | 79.3  | 82.2  | 85.3  | 88.4  | 91.5  |
| 28                   | 68.4            | 70.9 | 73.5  | 76.1  | 78.9  | 81.7  | 84.6  | 87.7  | 90.8  | 93.9  | 97.2  |
| 29                   | 73.4            | 76.0 | 78.6  | 81.4  | 84.2  | 87.1  | 90.1  | 93.2  | 96.4  | 99.7  | 103.1 |
| 30                   | 78.5            | 81.2 | 83.9  | 86.8  | 89.7  | 92.7  | 95.8  | 99.0  | 102.3 | 105.6 | 109.1 |
| 31                   | 83.9            | 86.6 | 89.4  | 92.4  | 95.4  | 98.5  | 101.7 | 104.9 | 108.3 | 111.7 | 115.3 |
| 32                   | 89.4            | 92.2 | 95.1  | 98.1  | 101.2 | 104.4 | 107.7 | 111.0 | 114.5 | 118.0 | 121.6 |
| 33                   | 95.0            | 98.0 | 101.0 | 104.1 | 107.2 | 110.5 | 113.9 | 117.3 | 120.9 | 124.5 | 128.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 100.9           | 103.9 | 107.0 | 110.2 | 113.4 | 116.8 | 120.2 | 123.8 | 127.4 | 131.1 | 134.9 |
| 35                   | 106.9           | 110.0 | 113.2 | 116.5 | 119.8 | 123.3 | 126.8 | 130.4 | 134.1 | 137.9 | 141.8 |
| 36                   | 113.1           | 116.3 | 119.6 | 122.9 | 126.4 | 129.9 | 133.5 | 137.2 | 141.0 | 144.9 | 148.9 |
| 37                   | 119.5           | 122.7 | 126.1 | 129.5 | 133.1 | 136.7 | 140.4 | 144.2 | 148.1 | 152.1 | 156.1 |
| 38                   | 126.0           | 129.4 | 132.8 | 136.4 | 140.0 | 143.7 | 147.5 | 151.4 | 155.3 | 159.4 | 163.5 |
| 39                   | 132.7           | 136.2 | 139.7 | 143.3 | 147.0 | 150.8 | 154.7 | 158.7 | 162.7 | 166.9 | 171.1 |
| 40                   | 139.6           | 143.2 | 146.8 | 150.5 | 154.3 | 158.2 | 162.1 | 166.2 | 170.3 | 174.6 | 178.9 |
| 41                   | 146.7           | 150.3 | 154.0 | 157.8 | 161.7 | 165.7 | 169.7 | 173.9 | 178.1 | 182.4 | 186.8 |
| 42                   | 153.9           | 157.6 | 161.4 | 165.3 | 169.3 | 173.3 | 177.5 | 181.7 | 186.0 | 190.5 | 194.9 |
| 43                   | 161.4           | 165.1 | 169.0 | 173.0 | 177.1 | 181.2 | 185.4 | 189.8 | 194.2 | 198.7 | 203.2 |
| 44                   | 168.9           | 172.8 | 176.8 | 180.9 | 185.0 | 189.2 | 193.6 | 198.0 | 202.5 | 207.0 | 211.7 |
| 45                   | 176.7           | 180.7 | 184.7 | 188.9 | 193.1 | 197.4 | 201.8 | 206.3 | 210.9 | 215.6 | 220.3 |
| 46                   | 184.7           | 188.7 | 192.9 | 197.1 | 201.4 | 205.8 | 210.3 | 214.9 | 219.6 | 224.3 | 229.2 |
| 47                   | 192.8           | 196.9 | 201.1 | 205.5 | 209.9 | 214.4 | 218.9 | 223.6 | 228.4 | 233.2 | 238.1 |
| 48                   | 201.1           | 205.3 | 209.6 | 214.0 | 218.5 | 223.1 | 227.8 | 232.5 | 237.4 | 242.3 | 247.3 |
| 49                   | 209.5           | 213.8 | 218.2 | 222.7 | 227.3 | 232.0 | 236.7 | 241.6 | 246.5 | 251.5 | 256.6 |
| 50                   | 218.2           | 222.6 | 227.1 | 231.6 | 236.3 | 241.1 | 245.9 | 250.8 | 255.9 | 261.0 | 266.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 17 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .4              | .6    | .9    | 1.3   | 1.9   | 2.5   | 3.2   | 3.9   | 4.8   | 5.8   | 6.9   |
| 3                    | .8              | 1.2   | 1.6   | 2.1   | 2.7   | 3.4   | 4.2   | 5.1   | 6.0   | 7.1   | 8.3   |
| 4                    | 1.5             | 1.9   | 2.4   | 3.0   | 3.7   | 4.5   | 5.4   | 6.4   | 7.4   | 8.6   | 9.8   |
| 5                    | 2.3             | 2.8   | 3.4   | 4.1   | 4.9   | 5.8   | 6.8   | 7.8   | 9.0   | 10.2  | 11.6  |
| 6                    | 3.3             | 3.9   | 4.6   | 5.4   | 6.3   | 7.3   | 8.3   | 9.5   | 10.8  | 12.1  | 13.5  |
| 7                    | 4.5             | 5.2   | 6.0   | 6.9   | 7.9   | 8.9   | 10.1  | 11.4  | 12.7  | 14.1  | 15.7  |
| 8                    | 5.9             | 6.7   | 7.6   | 8.6   | 9.6   | 10.8  | 12.1  | 13.4  | 14.8  | 16.4  | 18.0  |
| 9                    | 7.5             | 8.4   | 9.4   | 10.4  | 11.6  | 12.8  | 14.2  | 15.6  | 17.2  | 18.8  | 20.5  |
| 10                   | 9.3             | 10.2  | 11.3  | 12.5  | 13.7  | 15.1  | 16.5  | 18.0  | 19.7  | 21.4  | 23.2  |
| 11                   | 11.2            | 12.3  | 13.4  | 14.7  | 16.0  | 17.5  | 19.0  | 20.6  | 22.3  | 24.2  | 26.1  |
| 12                   | 13.4            | 14.5  | 15.8  | 17.1  | 18.5  | 20.1  | 21.7  | 23.4  | 25.2  | 27.1  | 29.1  |
| 13                   | 15.7            | 16.9  | 18.3  | 19.7  | 21.2  | 22.9  | 24.6  | 26.4  | 28.3  | 30.3  | 32.4  |
| 14                   | 18.2            | 19.5  | 21.0  | 22.5  | 24.1  | 25.8  | 27.6  | 29.5  | 31.5  | 33.6  | 35.8  |
| 15                   | 20.9            | 22.3  | 23.8  | 25.5  | 27.2  | 29.0  | 30.9  | 32.9  | 35.0  | 37.1  | 39.4  |
| 16                   | 23.7            | 25.3  | 26.9  | 28.6  | 30.4  | 32.3  | 34.3  | 36.4  | 38.6  | 40.8  | 43.2  |
| 17                   | 26.8            | 28.4  | 30.1  | 31.9  | 33.8  | 35.8  | 37.9  | 40.1  | 42.4  | 44.7  | 47.2  |
| 18                   | 30.0            | 31.8  | 33.6  | 35.5  | 37.5  | 39.5  | 41.7  | 44.0  | 46.4  | 48.8  | 51.4  |
| 19                   | 33.5            | 35.3  | 37.2  | 39.2  | 41.3  | 43.4  | 45.7  | 48.1  | 50.5  | 53.1  | 55.7  |
| 20                   | 37.1            | 39.0  | 41.0  | 43.1  | 45.2  | 47.5  | 49.9  | 52.3  | 54.9  | 57.5  | 60.3  |
| 21                   | 40.9            | 42.9  | 45.0  | 47.1  | 49.4  | 51.8  | 54.2  | 56.8  | 59.4  | 62.2  | 65.0  |
| 22                   | 44.9            | 47.0  | 49.1  | 51.4  | 53.8  | 56.2  | 58.8  | 61.4  | 64.2  | 67.0  | 69.9  |
| 23                   | 49.0            | 51.2  | 53.5  | 55.9  | 58.3  | 60.9  | 63.5  | 66.2  | 69.1  | 72.0  | 75.0  |
| 24                   | 53.4            | 55.7  | 58.0  | 60.5  | 63.0  | 65.7  | 68.4  | 71.3  | 74.2  | 77.2  | 80.3  |
| 25                   | 57.9            | 60.3  | 62.8  | 65.3  | 68.0  | 70.7  | 73.5  | 76.4  | 79.5  | 82.6  | 85.8  |
| 26                   | 62.7            | 65.1  | 67.7  | 70.3  | 73.1  | 75.9  | 78.8  | 81.8  | 84.9  | 88.1  | 91.4  |
| 27                   | 67.6            | 70.1  | 72.8  | 75.5  | 78.3  | 81.3  | 84.3  | 87.4  | 90.6  | 93.9  | 97.3  |
| 28                   | 72.7            | 75.3  | 78.1  | 80.9  | 83.8  | 86.8  | 89.9  | 93.1  | 96.4  | 99.8  | 103.3 |
| 29                   | 78.0            | 80.7  | 83.5  | 86.5  | 89.5  | 92.6  | 95.8  | 99.1  | 102.5 | 105.9 | 109.5 |
| 30                   | 83.4            | 86.3  | 89.2  | 92.2  | 95.3  | 98.5  | 101.8 | 105.2 | 108.7 | 112.2 | 115.9 |
| 31                   | 89.1            | 92.0  | 95.0  | 98.1  | 101.3 | 104.6 | 108.0 | 111.5 | 115.1 | 118.7 | 122.5 |
| 32                   | 94.9            | 98.0  | 101.1 | 104.3 | 107.6 | 110.9 | 114.4 | 118.0 | 121.6 | 125.4 | 129.2 |
| 33                   | 101.0           | 104.1 | 107.3 | 110.6 | 114.0 | 117.4 | 121.0 | 124.7 | 128.4 | 132.3 | 136.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 107.2           | 110.4 | 113.7 | 117.1 | 120.5 | 124.1 | 127.8 | 131.5 | 135.4 | 139.3 | 143.3 |
| 35                   | 113.6           | 116.9 | 120.3 | 123.7 | 127.3 | 131.0 | 134.7 | 138.6 | 142.5 | 146.5 | 150.7 |
| 36                   | 120.2           | 123.5 | 127.0 | 130.6 | 134.3 | 138.0 | 141.9 | 145.8 | 149.8 | 154.0 | 158.2 |
| 37                   | 126.9           | 130.4 | 134.0 | 137.6 | 141.4 | 145.2 | 149.2 | 153.2 | 157.3 | 161.6 | 165.9 |
| 38                   | 133.9           | 137.5 | 141.1 | 144.9 | 148.7 | 152.7 | 156.7 | 160.8 | 165.0 | 169.3 | 173.8 |
| 39                   | 141.0           | 144.7 | 148.4 | 152.3 | 156.2 | 160.3 | 164.4 | 168.6 | 172.9 | 177.3 | 181.8 |
| 40                   | 148.3           | 152.1 | 156.0 | 159.9 | 163.9 | 168.1 | 172.3 | 176.6 | 181.0 | 185.5 | 190.1 |
| 41                   | 155.9           | 159.7 | 163.6 | 167.7 | 171.8 | 176.0 | 180.3 | 184.7 | 189.2 | 193.8 | 198.5 |
| 42                   | 163.6           | 167.5 | 171.5 | 175.7 | 179.9 | 184.2 | 188.6 | 193.1 | 197.7 | 202.4 | 207.1 |
| 43                   | 171.4           | 175.5 | 179.6 | 183.8 | 188.1 | 192.5 | 197.0 | 201.6 | 206.3 | 211.1 | 215.9 |
| 44                   | 179.5           | 183.6 | 187.8 | 192.2 | 196.6 | 201.1 | 205.6 | 210.3 | 215.1 | 220.0 | 224.9 |
| 45                   | 187.8           | 192.0 | 196.3 | 200.7 | 205.2 | 209.8 | 214.5 | 219.2 | 224.1 | 229.1 | 234.1 |
| 46                   | 196.2           | 200.5 | 204.9 | 209.4 | 214.0 | 218.7 | 223.5 | 228.3 | 233.3 | 238.3 | 243.5 |
| 47                   | 204.8           | 209.2 | 213.7 | 218.3 | 223.0 | 227.8 | 232.6 | 237.6 | 242.6 | 247.8 | 253.0 |
| 48                   | 213.6           | 218.1 | 222.7 | 227.4 | 232.2 | 237.0 | 242.0 | 247.0 | 252.2 | 257.4 | 262.8 |
| 49                   | 222.6           | 227.2 | 231.9 | 236.7 | 241.5 | 246.5 | 251.5 | 256.7 | 261.9 | 267.3 | 272.7 |
| 50                   | 231.8           | 236.5 | 241.3 | 246.1 | 251.1 | 256.1 | 261.3 | 266.5 | 271.8 | 277.3 | 282.8 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 18 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .4              | .6    | 1.0   | 1.4   | 2.0   | 2.6   | 3.3   | 4.2   | 5.1   | 6.1   | 7.3   |
| 3                    | .9              | 1.2   | 1.7   | 2.2   | 2.8   | 3.6   | 4.4   | 5.4   | 6.4   | 7.5   | 8.7   |
| 4                    | 1.6             | 2.0   | 2.6   | 3.2   | 3.9   | 4.8   | 5.7   | 6.7   | 7.9   | 9.1   | 10.4  |
| 5                    | 2.5             | 3.0   | 3.6   | 4.4   | 5.2   | 6.1   | 7.2   | 8.3   | 9.5   | 10.8  | 12.3  |
| 6                    | 3.5             | 4.2   | 4.9   | 5.7   | 6.7   | 7.7   | 8.8   | 10.1  | 11.4  | 12.8  | 14.3  |
| 7                    | 4.8             | 5.5   | 6.4   | 7.3   | 8.3   | 9.5   | 10.7  | 12.0  | 13.4  | 15.0  | 16.6  |
| 8                    | 6.3             | 7.1   | 8.1   | 9.1   | 10.2  | 11.4  | 12.8  | 14.2  | 15.7  | 17.3  | 19.0  |
| 9                    | 8.0             | 8.9   | 9.9   | 11.0  | 12.3  | 13.6  | 15.0  | 16.5  | 18.2  | 19.9  | 21.7  |
| 10                   | 9.8             | 10.8  | 12.0  | 13.2  | 14.5  | 16.0  | 17.5  | 19.1  | 20.8  | 22.6  | 24.5  |
| 11                   | 11.9            | 13.0  | 14.2  | 15.6  | 17.0  | 18.5  | 20.1  | 21.8  | 23.7  | 25.6  | 27.6  |
| 12                   | 14.1            | 15.4  | 16.7  | 18.1  | 19.6  | 21.3  | 23.0  | 24.8  | 26.7  | 28.7  | 30.8  |
| 13                   | 16.6            | 17.9  | 19.3  | 20.9  | 22.5  | 24.2  | 26.0  | 27.9  | 29.9  | 32.1  | 34.3  |
| 14                   | 19.2            | 20.7  | 22.2  | 23.8  | 25.5  | 27.3  | 29.3  | 31.3  | 33.4  | 35.6  | 37.9  |
| 15                   | 22.1            | 23.6  | 25.2  | 26.9  | 28.8  | 30.7  | 32.7  | 34.8  | 37.0  | 39.3  | 41.7  |
| 16                   | 25.1            | 26.8  | 28.5  | 30.3  | 32.2  | 34.2  | 36.3  | 38.5  | 40.8  | 43.2  | 45.7  |
| 17                   | 28.4            | 30.1  | 31.9  | 33.8  | 35.8  | 37.9  | 40.2  | 42.5  | 44.9  | 47.4  | 50.0  |
| 18                   | 31.8            | 33.6  | 35.5  | 37.6  | 39.7  | 41.9  | 44.2  | 46.6  | 49.1  | 51.7  | 54.4  |
| 19                   | 35.4            | 37.4  | 39.4  | 41.5  | 43.7  | 46.0  | 48.4  | 50.9  | 53.5  | 56.2  | 59.0  |
| 20                   | 39.3            | 41.3  | 43.4  | 45.6  | 47.9  | 50.3  | 52.8  | 55.4  | 58.1  | 60.9  | 63.8  |
| 21                   | 43.3            | 45.4  | 47.6  | 49.9  | 52.3  | 54.8  | 57.4  | 60.1  | 62.9  | 65.8  | 68.8  |
| 22                   | 47.5            | 49.7  | 52.0  | 54.4  | 56.9  | 59.5  | 62.2  | 65.0  | 67.9  | 70.9  | 74.0  |
| 23                   | 51.9            | 54.2  | 56.6  | 59.1  | 61.8  | 64.4  | 67.2  | 70.1  | 73.1  | 76.2  | 79.4  |
| 24                   | 56.5            | 59.0  | 61.5  | 64.1  | 66.8  | 69.6  | 72.5  | 75.4  | 78.5  | 81.7  | 85.0  |
| 25                   | 61.4            | 63.9  | 66.5  | 69.2  | 72.0  | 74.9  | 77.9  | 80.9  | 84.1  | 87.4  | 90.8  |
| 26                   | 66.4            | 69.0  | 71.7  | 74.5  | 77.4  | 80.4  | 83.4  | 86.6  | 89.9  | 93.3  | 96.8  |
| 27                   | 71.6            | 74.3  | 77.1  | 80.0  | 83.0  | 86.0  | 89.2  | 92.5  | 95.9  | 99.4  | 103.0 |
| 28                   | 77.0            | 79.8  | 82.7  | 85.7  | 88.7  | 91.9  | 95.2  | 98.6  | 102.1 | 105.7 | 109.4 |
| 29                   | 82.6            | 85.5  | 88.5  | 91.5  | 94.7  | 98.0  | 101.4 | 104.9 | 108.5 | 112.2 | 115.9 |
| 30                   | 88.4            | 91.3  | 94.4  | 97.6  | 100.9 | 104.3 | 107.8 | 111.4 | 115.1 | 118.8 | 122.7 |
| 31                   | 94.3            | 97.4  | 100.6 | 103.9 | 107.3 | 110.8 | 114.4 | 118.1 | 121.8 | 125.7 | 129.7 |
| 32                   | 100.5           | 103.7 | 107.0 | 110.4 | 113.9 | 117.5 | 121.1 | 124.9 | 128.8 | 132.8 | 136.9 |
| 33                   | 106.9           | 110.2 | 113.6 | 117.1 | 120.7 | 124.3 | 128.1 | 132.0 | 136.0 | 140.0 | 144.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 113.5           | 116.9 | 120.4 | 123.9 | 127.6 | 131.4 | 135.3 | 139.3 | 143.3 | 147.5 | 151.8 |
| 35                   | 120.3           | 123.7 | 127.3 | 131.0 | 134.8 | 138.7 | 142.6 | 146.7 | 150.9 | 155.2 | 159.5 |
| 36                   | 127.2           | 130.8 | 134.5 | 138.3 | 142.2 | 146.1 | 150.2 | 154.4 | 158.6 | 163.0 | 167.5 |
| 37                   | 134.4           | 138.1 | 141.9 | 145.7 | 149.7 | 153.8 | 158.0 | 162.2 | 166.6 | 171.1 | 175.6 |
| 38                   | 141.8           | 145.5 | 149.4 | 153.4 | 157.5 | 161.6 | 165.9 | 170.3 | 174.7 | 179.3 | 184.0 |
| 39                   | 149.3           | 153.2 | 157.2 | 161.2 | 165.4 | 169.7 | 174.1 | 178.5 | 183.1 | 187.8 | 192.5 |
| 40                   | 157.1           | 161.1 | 165.1 | 169.3 | 173.6 | 177.9 | 182.4 | 187.0 | 191.6 | 196.4 | 201.3 |
| 41                   | 165.0           | 169.1 | 173.3 | 177.5 | 181.9 | 186.4 | 190.9 | 195.6 | 200.4 | 205.2 | 210.2 |
| 42                   | 173.2           | 177.3 | 181.6 | 186.0 | 190.5 | 195.0 | 199.7 | 204.4 | 209.3 | 214.3 | 219.3 |
| 43                   | 181.5           | 185.8 | 190.2 | 194.6 | 199.2 | 203.9 | 208.6 | 213.5 | 218.4 | 223.5 | 228.6 |
| 44                   | 190.1           | 194.4 | 198.9 | 203.5 | 208.1 | 212.9 | 217.7 | 222.7 | 227.8 | 232.9 | 238.2 |
| 45                   | 198.8           | 203.3 | 207.8 | 212.5 | 217.3 | 222.1 | 227.1 | 232.1 | 237.3 | 242.5 | 247.9 |
| 46                   | 207.7           | 212.3 | 217.0 | 221.7 | 226.6 | 231.5 | 236.6 | 241.7 | 247.0 | 252.4 | 257.8 |
| 47                   | 216.9           | 221.5 | 226.3 | 231.1 | 236.1 | 241.2 | 246.3 | 251.6 | 256.9 | 262.4 | 267.9 |
| 48                   | 226.2           | 230.9 | 235.8 | 240.8 | 245.8 | 251.0 | 256.2 | 261.6 | 267.0 | 272.6 | 278.2 |
| 49                   | 235.7           | 240.6 | 245.5 | 250.6 | 255.7 | 261.0 | 266.3 | 271.8 | 277.3 | 283.0 | 288.7 |
| 50                   | 245.4           | 250.4 | 255.4 | 260.6 | 265.8 | 271.2 | 276.6 | 282.2 | 287.8 | 293.6 | 299.4 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 19 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .4              | .7    | 1.0   | 1.5   | 2.1   | 2.7   | 3.5   | 4.4   | 5.4   | 6.5   | 7.7   |
| 3                    | .9              | 1.3   | 1.8   | 2.3   | 3.0   | 3.8   | 4.7   | 5.6   | 6.7   | 7.9   | 9.2   |
| 4                    | 1.7             | 2.1   | 2.7   | 3.4   | 4.1   | 5.0   | 6.0   | 7.1   | 8.3   | 9.6   | 11.0  |
| 5                    | 2.6             | 3.2   | 3.8   | 4.6   | 5.5   | 6.5   | 7.6   | 8.8   | 10.1  | 11.5  | 13.0  |
| 6                    | 3.7             | 4.4   | 5.2   | 6.1   | 7.0   | 8.1   | 9.3   | 10.6  | 12.0  | 13.5  | 15.1  |
| 7                    | 5.1             | 5.9   | 6.7   | 7.7   | 8.8   | 10.0  | 11.3  | 12.7  | 14.2  | 15.8  | 17.5  |
| 8                    | 6.6             | 7.5   | 8.5   | 9.6   | 10.8  | 12.1  | 13.5  | 15.0  | 16.6  | 18.3  | 20.1  |
| 9                    | 8.4             | 9.4   | 10.5  | 11.7  | 13.0  | 14.4  | 15.9  | 17.5  | 19.2  | 21.0  | 22.9  |
| 10                   | 10.4            | 11.5  | 12.6  | 13.9  | 15.3  | 16.8  | 18.4  | 20.2  | 22.0  | 23.9  | 25.9  |
| 11                   | 12.5            | 13.7  | 15.0  | 16.4  | 17.9  | 19.5  | 21.2  | 23.1  | 25.0  | 27.0  | 29.1  |
| 12                   | 14.9            | 16.2  | 17.6  | 19.1  | 20.7  | 22.4  | 24.2  | 26.2  | 28.2  | 30.3  | 32.5  |
| 13                   | 17.5            | 18.9  | 20.4  | 22.0  | 23.7  | 25.5  | 27.5  | 29.5  | 31.6  | 33.8  | 36.2  |
| 14                   | 20.3            | 21.8  | 23.4  | 25.1  | 26.9  | 28.9  | 30.9  | 33.0  | 35.2  | 37.6  | 40.0  |
| 15                   | 23.3            | 24.9  | 26.6  | 28.4  | 30.4  | 32.4  | 34.5  | 36.7  | 39.1  | 41.5  | 44.0  |
| 16                   | 26.5            | 28.2  | 30.1  | 32.0  | 34.0  | 36.1  | 38.3  | 40.7  | 43.1  | 45.6  | 48.3  |
| 17                   | 29.9            | 31.8  | 33.7  | 35.7  | 37.8  | 40.1  | 42.4  | 44.8  | 47.4  | 50.0  | 52.7  |
| 18                   | 33.6            | 35.5  | 37.5  | 39.6  | 41.9  | 44.2  | 46.6  | 49.2  | 51.8  | 54.6  | 57.4  |
| 19                   | 37.4            | 39.4  | 41.6  | 43.8  | 46.1  | 48.5  | 51.1  | 53.7  | 56.5  | 59.3  | 62.3  |
| 20                   | 41.5            | 43.6  | 45.8  | 48.1  | 50.6  | 53.1  | 55.8  | 58.5  | 61.3  | 64.3  | 67.4  |
| 21                   | 45.7            | 47.9  | 50.3  | 52.7  | 55.2  | 57.9  | 60.6  | 63.5  | 66.4  | 69.5  | 72.6  |
| 22                   | 50.2            | 52.5  | 54.9  | 57.5  | 60.1  | 62.8  | 65.7  | 68.7  | 71.7  | 74.9  | 78.1  |
| 23                   | 54.8            | 57.3  | 59.8  | 62.4  | 65.2  | 68.0  | 71.0  | 74.0  | 77.2  | 80.5  | 83.8  |
| 24                   | 59.7            | 62.2  | 64.9  | 67.6  | 70.5  | 73.4  | 76.5  | 79.6  | 82.9  | 86.3  | 89.7  |
| 25                   | 64.8            | 67.4  | 70.2  | 73.0  | 76.0  | 79.0  | 82.2  | 85.4  | 88.8  | 92.3  | 95.9  |
| 26                   | 70.1            | 72.8  | 75.6  | 78.6  | 81.7  | 84.8  | 88.1  | 91.4  | 94.9  | 98.5  | 102.2 |
| 27                   | 75.5            | 78.4  | 81.3  | 84.4  | 87.6  | 90.8  | 94.2  | 97.7  | 101.2 | 104.9 | 108.7 |
| 28                   | 81.2            | 84.2  | 87.3  | 90.4  | 93.7  | 97.0  | 100.5 | 104.1 | 107.8 | 111.6 | 115.4 |
| 29                   | 87.1            | 90.2  | 93.4  | 96.6  | 100.0 | 103.5 | 107.0 | 110.7 | 114.5 | 118.4 | 122.4 |
| 30                   | 93.3            | 96.4  | 99.7  | 103.1 | 106.5 | 110.1 | 113.8 | 117.6 | 121.4 | 125.4 | 129.5 |
| 31                   | 99.6            | 102.8 | 106.2 | 109.7 | 113.3 | 116.9 | 120.7 | 124.6 | 128.6 | 132.7 | 136.9 |
| 32                   | 106.1           | 109.5 | 113.0 | 116.5 | 120.2 | 124.0 | 127.9 | 131.9 | 136.0 | 140.2 | 144.5 |
| 33                   | 112.8           | 116.3 | 119.9 | 123.6 | 127.4 | 131.2 | 135.2 | 139.3 | 143.5 | 147.8 | 152.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 119.8           | 123.4 | 127.0 | 130.8 | 134.7 | 138.7 | 142.8 | 147.0 | 151.3 | 155.7 | 160.2 |
| 35                   | 126.9           | 130.6 | 134.4 | 138.3 | 142.3 | 146.4 | 150.6 | 154.9 | 159.3 | 163.8 | 168.4 |
| 36                   | 134.3           | 138.1 | 142.0 | 146.0 | 150.1 | 154.2 | 158.5 | 163.0 | 167.5 | 172.1 | 176.8 |
| 37                   | 141.9           | 145.7 | 149.7 | 153.8 | 158.0 | 162.3 | 166.7 | 171.2 | 175.9 | 180.6 | 185.4 |
| 38                   | 149.6           | 153.6 | 157.7 | 161.9 | 166.2 | 170.6 | 175.1 | 179.7 | 184.5 | 189.3 | 194.2 |
| 39                   | 157.6           | 161.7 | 165.9 | 170.2 | 174.6 | 179.1 | 183.7 | 188.4 | 193.3 | 198.2 | 203.2 |
| 40                   | 165.8           | 170.0 | 174.3 | 178.7 | 183.2 | 187.8 | 192.5 | 197.4 | 202.3 | 207.3 | 212.4 |
| 41                   | 174.2           | 178.5 | 182.9 | 187.4 | 192.0 | 196.7 | 201.6 | 206.5 | 211.5 | 216.6 | 221.9 |
| 42                   | 182.8           | 187.2 | 191.7 | 196.3 | 201.0 | 205.9 | 210.8 | 215.8 | 220.9 | 226.2 | 231.5 |
| 43                   | 191.6           | 196.1 | 200.7 | 205.4 | 210.3 | 215.2 | 220.2 | 225.3 | 230.6 | 235.9 | 241.3 |
| 44                   | 200.6           | 205.2 | 209.9 | 214.8 | 219.7 | 224.7 | 229.8 | 235.1 | 240.4 | 245.9 | 251.4 |
| 45                   | 209.8           | 214.6 | 219.4 | 224.3 | 229.3 | 234.5 | 239.7 | 245.0 | 250.5 | 256.0 | 261.7 |
| 46                   | 219.3           | 224.1 | 229.0 | 234.0 | 239.2 | 244.4 | 249.7 | 255.2 | 260.7 | 266.4 | 272.1 |
| 47                   | 228.9           | 233.8 | 238.9 | 244.0 | 249.2 | 254.6 | 260.0 | 265.5 | 271.2 | 276.9 | 282.8 |
| 48                   | 238.8           | 243.8 | 248.9 | 254.1 | 259.5 | 264.9 | 270.5 | 276.1 | 281.9 | 287.7 | 293.7 |
| 49                   | 248.8           | 253.9 | 259.2 | 264.5 | 269.9 | 275.5 | 281.1 | 286.9 | 292.7 | 298.7 | 304.8 |
| 50                   | 259.1           | 264.3 | 269.6 | 275.1 | 280.6 | 286.3 | 292.0 | 297.9 | 303.8 | 309.9 | 316.1 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

\*\*\* Segment Length = 20 Ft. \*\*\*

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 2                    | .4              | .7    | 1.1   | 1.6   | 2.2   | 2.9   | 3.7   | 4.6   | 5.7   | 6.8   | 8.1   |
| 3                    | 1.0             | 1.4   | 1.9   | 2.5   | 3.2   | 4.0   | 4.9   | 5.9   | 7.1   | 8.3   | 9.7   |
| 4                    | 1.7             | 2.2   | 2.8   | 3.5   | 4.4   | 5.3   | 6.3   | 7.5   | 8.7   | 10.1  | 11.6  |
| 5                    | 2.7             | 3.3   | 4.0   | 4.9   | 5.8   | 6.8   | 8.0   | 9.2   | 10.6  | 12.1  | 13.6  |
| 6                    | 3.9             | 4.6   | 5.5   | 6.4   | 7.4   | 8.6   | 9.8   | 11.2  | 12.7  | 14.2  | 15.9  |
| 7                    | 5.3             | 6.2   | 7.1   | 8.1   | 9.3   | 10.5  | 11.9  | 13.4  | 14.9  | 16.6  | 18.4  |
| 8                    | 7.0             | 7.9   | 8.9   | 10.1  | 11.3  | 12.7  | 14.2  | 15.8  | 17.5  | 19.3  | 21.2  |
| 9                    | 8.8             | 9.9   | 11.0  | 12.3  | 13.6  | 15.1  | 16.7  | 18.4  | 20.2  | 22.1  | 24.1  |
| 10                   | 10.9            | 12.1  | 13.3  | 14.7  | 16.1  | 17.7  | 19.4  | 21.2  | 23.1  | 25.1  | 27.3  |
| 11                   | 13.2            | 14.5  | 15.8  | 17.3  | 18.9  | 20.6  | 22.4  | 24.3  | 26.3  | 28.4  | 30.7  |
| 12                   | 15.7            | 17.1  | 18.5  | 20.1  | 21.8  | 23.6  | 25.5  | 27.5  | 29.7  | 31.9  | 34.3  |
| 13                   | 18.4            | 19.9  | 21.5  | 23.2  | 25.0  | 26.9  | 28.9  | 31.0  | 33.3  | 35.6  | 38.1  |
| 14                   | 21.4            | 23.0  | 24.7  | 26.5  | 28.4  | 30.4  | 32.5  | 34.7  | 37.1  | 39.5  | 42.1  |
| 15                   | 24.5            | 26.2  | 28.0  | 29.9  | 32.0  | 34.1  | 36.3  | 38.7  | 41.1  | 43.7  | 46.4  |
| 16                   | 27.9            | 29.7  | 31.6  | 33.7  | 35.8  | 38.0  | 40.4  | 42.8  | 45.4  | 48.0  | 50.8  |
| 17                   | 31.5            | 33.4  | 35.5  | 37.6  | 39.8  | 42.2  | 44.6  | 47.2  | 49.8  | 52.6  | 55.5  |
| 18                   | 35.3            | 37.4  | 39.5  | 41.7  | 44.1  | 46.5  | 49.1  | 51.8  | 54.5  | 57.4  | 60.4  |
| 19                   | 39.4            | 41.5  | 43.7  | 46.1  | 48.5  | 51.1  | 53.8  | 56.6  | 59.4  | 62.4  | 65.6  |
| 20                   | 43.6            | 45.9  | 48.2  | 50.7  | 53.2  | 55.9  | 58.7  | 61.6  | 64.6  | 67.7  | 70.9  |
| 21                   | 48.1            | 50.4  | 52.9  | 55.5  | 58.1  | 60.9  | 63.8  | 66.8  | 69.9  | 73.1  | 76.5  |
| 22                   | 52.8            | 55.2  | 57.8  | 60.5  | 63.3  | 66.2  | 69.2  | 72.3  | 75.5  | 78.8  | 82.2  |
| 23                   | 57.7            | 60.3  | 62.9  | 65.7  | 68.6  | 71.6  | 74.7  | 77.9  | 81.3  | 84.7  | 88.2  |
| 24                   | 62.8            | 65.5  | 68.3  | 71.2  | 74.2  | 77.3  | 80.5  | 83.8  | 87.3  | 90.8  | 94.5  |
| 25                   | 68.2            | 71.0  | 73.8  | 76.8  | 80.0  | 83.2  | 86.5  | 89.9  | 93.5  | 97.1  | 100.9 |
| 26                   | 73.7            | 76.6  | 79.6  | 82.7  | 86.0  | 89.3  | 92.7  | 96.3  | 99.9  | 103.7 | 107.6 |
| 27                   | 79.5            | 82.5  | 85.6  | 88.8  | 92.2  | 95.6  | 99.2  | 102.8 | 106.6 | 110.4 | 114.4 |
| 28                   | 85.5            | 88.6  | 91.8  | 95.2  | 98.6  | 102.2 | 105.8 | 109.6 | 113.4 | 117.4 | 121.5 |
| 29                   | 91.7            | 95.0  | 98.3  | 101.7 | 105.3 | 108.9 | 112.7 | 116.6 | 120.5 | 124.6 | 128.8 |
| 30                   | 98.2            | 101.5 | 104.9 | 108.5 | 112.1 | 115.9 | 119.8 | 123.8 | 127.8 | 132.0 | 136.4 |
| 31                   | 104.8           | 108.3 | 111.8 | 115.5 | 119.2 | 123.1 | 127.1 | 131.2 | 135.4 | 139.7 | 144.1 |
| 32                   | 111.7           | 115.2 | 118.9 | 122.7 | 126.5 | 130.5 | 134.6 | 138.8 | 143.1 | 147.5 | 152.1 |
| 33                   | 118.8           | 122.4 | 126.2 | 130.1 | 134.1 | 138.1 | 142.3 | 146.7 | 151.1 | 155.6 | 160.2 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 2 -- (Continued)**

**Cubic Foot Log Volumes**

| Small<br>End<br>Dia. | Inches of Taper |       |       |       |       |       |       |       |       |       |       |
|----------------------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 0               | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 34                   | 126.1           | 129.9 | 133.7 | 137.7 | 141.8 | 146.0 | 150.3 | 154.7 | 159.3 | 163.9 | 168.6 |
| 35                   | 133.6           | 137.5 | 141.5 | 145.6 | 149.8 | 154.1 | 158.5 | 163.0 | 167.7 | 172.4 | 177.3 |
| 36                   | 141.4           | 145.3 | 149.4 | 153.6 | 157.9 | 162.4 | 166.9 | 171.5 | 176.3 | 181.1 | 186.1 |
| 37                   | 149.3           | 153.4 | 157.6 | 161.9 | 166.3 | 170.9 | 175.5 | 180.3 | 185.1 | 190.1 | 195.1 |
| 38                   | 157.5           | 161.7 | 166.0 | 170.4 | 175.0 | 179.6 | 184.3 | 189.2 | 194.2 | 199.2 | 204.4 |
| 39                   | 165.9           | 170.2 | 174.6 | 179.2 | 183.8 | 188.5 | 193.4 | 198.4 | 203.4 | 208.6 | 213.9 |
| 40                   | 174.5           | 178.9 | 183.5 | 188.1 | 192.9 | 197.7 | 202.7 | 207.7 | 212.9 | 218.2 | 223.6 |
| 41                   | 183.4           | 187.9 | 192.5 | 197.3 | 202.1 | 207.1 | 212.2 | 217.3 | 222.6 | 228.0 | 233.5 |
| 42                   | 192.4           | 197.1 | 201.8 | 206.7 | 211.6 | 216.7 | 221.9 | 227.2 | 232.6 | 238.1 | 243.7 |
| 43                   | 201.7           | 206.4 | 211.3 | 216.3 | 221.3 | 226.5 | 231.8 | 237.2 | 242.7 | 248.3 | 254.0 |
| 44                   | 211.2           | 216.0 | 221.0 | 226.1 | 231.2 | 236.5 | 241.9 | 247.4 | 253.1 | 258.8 | 264.6 |
| 45                   | 220.9           | 225.9 | 230.9 | 236.1 | 241.4 | 246.8 | 252.3 | 257.9 | 263.6 | 269.5 | 275.4 |
| 46                   | 230.8           | 235.9 | 241.1 | 246.4 | 251.8 | 257.3 | 262.9 | 268.6 | 274.4 | 280.4 | 286.4 |
| 47                   | 241.0           | 246.1 | 251.4 | 256.8 | 262.3 | 268.0 | 273.7 | 279.5 | 285.5 | 291.5 | 297.7 |
| 48                   | 251.3           | 256.6 | 262.0 | 267.5 | 273.1 | 278.9 | 284.7 | 290.6 | 296.7 | 302.9 | 309.1 |
| 49                   | 261.9           | 267.3 | 272.8 | 278.4 | 284.2 | 290.0 | 295.9 | 302.0 | 308.2 | 314.4 | 320.8 |
| 50                   | 272.7           | 278.2 | 283.8 | 289.6 | 295.4 | 301.3 | 307.4 | 313.6 | 319.8 | 326.2 | 332.7 |

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

**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 3 -- Cubic Foot Half Cylinder Volumes**

To determine cubic foot half cylinder volumes, use the following equation:

$$\text{Half cylinder volume (ft}^3\text{)} = .002727 \times D^2 \times SL$$

| Small<br>End<br>Dia. | Segment Length in Feet |      |       |       |       |       |       |       |       |       |
|----------------------|------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 1                      | 2    | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 1                    | .00                    | .01  | .01   | .01   | .01   | .02   | .02   | .02   | .02   | .03   |
| 2                    | .01                    | .02  | .03   | .04   | .05   | .07   | .08   | .09   | .10   | .11   |
| 3                    | .02                    | .05  | .07   | .10   | .12   | .15   | .17   | .20   | .22   | .25   |
| 4                    | .04                    | .09  | .13   | .17   | .22   | .26   | .31   | .35   | .39   | .44   |
| 5                    | .07                    | .14  | .20   | .27   | .34   | .41   | .48   | .55   | .61   | .68   |
| 6                    | .10                    | .20  | .29   | .39   | .49   | .59   | .69   | .79   | .88   | .98   |
| 7                    | .13                    | .27  | .40   | .53   | .67   | .80   | .94   | 1.07  | 1.20  | 1.34  |
| 8                    | .17                    | .35  | .52   | .70   | .87   | 1.05  | 1.22  | 1.40  | 1.57  | 1.75  |
| 9                    | .22                    | .44  | .66   | .88   | 1.10  | 1.33  | 1.55  | 1.77  | 1.99  | 2.21  |
| 10                   | .27                    | .55  | .82   | 1.09  | 1.36  | 1.64  | 1.91  | 2.18  | 2.45  | 2.73  |
| 11                   | .33                    | .66  | .99   | 1.32  | 1.65  | 1.98  | 2.31  | 2.64  | 2.97  | 3.30  |
| 12                   | .39                    | .79  | 1.18  | 1.57  | 1.96  | 2.36  | 2.75  | 3.14  | 3.53  | 3.93  |
| 13                   | .46                    | .92  | 1.38  | 1.84  | 2.30  | 2.77  | 3.23  | 3.69  | 4.15  | 4.61  |
| 14                   | .53                    | 1.07 | 1.60  | 2.14  | 2.67  | 3.21  | 3.74  | 4.28  | 4.81  | 5.34  |
| 15                   | .61                    | 1.23 | 1.84  | 2.45  | 3.07  | 3.68  | 4.30  | 4.91  | 5.52  | 6.14  |
| 16                   | .70                    | 1.40 | 2.09  | 2.79  | 3.49  | 4.19  | 4.89  | 5.58  | 6.28  | 6.98  |
| 17                   | .79                    | 1.58 | 2.36  | 3.15  | 3.94  | 4.73  | 5.52  | 6.30  | 7.09  | 7.88  |
| 18                   | .88                    | 1.77 | 2.65  | 3.53  | 4.42  | 5.30  | 6.18  | 7.07  | 7.95  | 8.84  |
| 19                   | .98                    | 1.97 | 2.95  | 3.94  | 4.92  | 5.91  | 6.89  | 7.88  | 8.86  | 9.84  |
| 20                   | 1.09                   | 2.18 | 3.27  | 4.36  | 5.45  | 6.54  | 7.64  | 8.73  | 9.82  | 10.91 |
| 21                   | 1.20                   | 2.41 | 3.61  | 4.81  | 6.01  | 7.22  | 8.42  | 9.62  | 10.82 | 12.03 |
| 22                   | 1.32                   | 2.64 | 3.96  | 5.28  | 6.60  | 7.92  | 9.24  | 10.56 | 11.88 | 13.20 |
| 23                   | 1.44                   | 2.89 | 4.33  | 5.77  | 7.21  | 8.66  | 10.10 | 11.54 | 12.98 | 14.43 |
| 24                   | 1.57                   | 3.14 | 4.71  | 6.28  | 7.85  | 9.42  | 11.00 | 12.57 | 14.14 | 15.71 |
| 25                   | 1.70                   | 3.41 | 5.11  | 6.82  | 8.52  | 10.23 | 11.93 | 13.63 | 15.34 | 17.04 |
| 26                   | 1.84                   | 3.69 | 5.53  | 7.37  | 9.22  | 11.06 | 12.90 | 14.75 | 16.59 | 18.43 |
| 27                   | 1.99                   | 3.98 | 5.96  | 7.95  | 9.94  | 11.93 | 13.92 | 15.90 | 17.89 | 19.88 |
| 28                   | 2.14                   | 4.28 | 6.41  | 8.55  | 10.69 | 12.83 | 14.97 | 17.10 | 19.24 | 21.38 |
| 29                   | 2.29                   | 4.59 | 6.88  | 9.17  | 11.47 | 13.76 | 16.05 | 18.35 | 20.64 | 22.93 |
| 30                   | 2.45                   | 4.91 | 7.36  | 9.82  | 12.27 | 14.73 | 17.18 | 19.63 | 22.09 | 24.54 |
| 31                   | 2.62                   | 5.24 | 7.86  | 10.48 | 13.10 | 15.72 | 18.34 | 20.97 | 23.59 | 26.21 |
| 32                   | 2.79                   | 5.58 | 8.38  | 11.17 | 13.96 | 16.75 | 19.55 | 22.34 | 25.13 | 27.92 |
| 33                   | 2.97                   | 5.94 | 8.91  | 11.88 | 14.85 | 17.82 | 20.79 | 23.76 | 26.73 | 29.70 |
| 34                   | 3.15                   | 6.30 | 9.46  | 12.61 | 15.76 | 18.91 | 22.07 | 25.22 | 28.37 | 31.52 |
| 35                   | 3.34                   | 6.68 | 10.02 | 13.36 | 16.70 | 20.04 | 23.38 | 26.72 | 30.07 | 33.41 |
| 36                   | 3.53                   | 7.07 | 10.60 | 14.14 | 17.67 | 21.21 | 24.74 | 28.27 | 31.81 | 35.34 |
| 37                   | 3.73                   | 7.47 | 11.20 | 14.93 | 18.67 | 22.40 | 26.13 | 29.87 | 33.60 | 37.33 |
| 38                   | 3.94                   | 7.88 | 11.81 | 15.75 | 19.69 | 23.63 | 27.56 | 31.50 | 35.44 | 39.38 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 3 -- (Continued)**

**Cubic Foot Half Cylinder Volumes**

| Small<br>End<br>Dia. | Segment Length in Feet |       |       |       |       |        |        |        |        |        |
|----------------------|------------------------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
|                      | 1                      | 2     | 3     | 4     | 5     | 6      | 7      | 8      | 9      | 10     |
| 39                   | 4.15                   | 8.30  | 12.44 | 16.59 | 20.74 | 24.89  | 29.03  | 33.18  | 37.33  | 41.48  |
| 40                   | 4.36                   | 8.73  | 13.09 | 17.45 | 21.82 | 26.18  | 30.54  | 34.91  | 39.27  | 43.63  |
| 41                   | 4.58                   | 9.17  | 13.75 | 18.34 | 22.92 | 27.50  | 32.09  | 36.67  | 41.26  | 45.84  |
| 42                   | 4.81                   | 9.62  | 14.43 | 19.24 | 24.05 | 28.86  | 33.67  | 38.48  | 43.29  | 48.10  |
| 43                   | 5.04                   | 10.08 | 15.13 | 20.17 | 25.21 | 30.25  | 35.30  | 40.34  | 45.38  | 50.42  |
| 44                   | 5.28                   | 10.56 | 15.84 | 21.12 | 26.40 | 31.68  | 36.96  | 42.24  | 47.52  | 52.79  |
| 45                   | 5.52                   | 11.04 | 16.57 | 22.09 | 27.61 | 33.13  | 38.66  | 44.18  | 49.70  | 55.22  |
| 46                   | 5.77                   | 11.54 | 17.31 | 23.08 | 28.85 | 34.62  | 40.39  | 46.16  | 51.93  | 57.70  |
| 47                   | 6.02                   | 12.05 | 18.07 | 24.10 | 30.12 | 36.14  | 42.17  | 48.19  | 54.22  | 60.24  |
| 48                   | 6.28                   | 12.57 | 18.85 | 25.13 | 31.42 | 37.70  | 43.98  | 50.26  | 56.55  | 62.83  |
| 49                   | 6.55                   | 13.10 | 19.64 | 26.19 | 32.74 | 39.29  | 45.83  | 52.38  | 58.93  | 65.48  |
| 50                   | 6.82                   | 13.64 | 20.45 | 27.27 | 34.09 | 40.90  | 47.72  | 54.54  | 61.36  | 68.18  |
| 51                   | 7.09                   | 14.19 | 21.28 | 28.37 | 35.46 | 42.56  | 49.65  | 56.74  | 63.84  | 70.93  |
| 52                   | 7.37                   | 14.75 | 22.12 | 29.50 | 36.87 | 44.24  | 51.62  | 58.99  | 66.36  | 73.74  |
| 53                   | 7.66                   | 15.32 | 22.98 | 30.64 | 38.30 | 45.96  | 53.62  | 61.28  | 68.94  | 76.60  |
| 54                   | 7.95                   | 15.90 | 23.86 | 31.81 | 39.76 | 47.71  | 55.66  | 63.62  | 71.57  | 79.52  |
| 55                   | 8.25                   | 16.50 | 24.75 | 33.00 | 41.25 | 49.50  | 57.74  | 65.99  | 74.24  | 82.49  |
| 56                   | 8.55                   | 17.10 | 25.66 | 34.21 | 42.76 | 51.31  | 59.86  | 68.41  | 76.97  | 85.52  |
| 57                   | 8.86                   | 17.72 | 26.58 | 35.44 | 44.30 | 53.16  | 62.02  | 70.88  | 79.74  | 88.60  |
| 58                   | 9.17                   | 18.35 | 27.52 | 36.69 | 45.87 | 55.04  | 64.22  | 73.39  | 82.56  | 91.74  |
| 59                   | 9.49                   | 18.99 | 28.48 | 37.97 | 47.46 | 56.96  | 66.45  | 75.94  | 85.43  | 94.93  |
| 60                   | 9.82                   | 19.63 | 29.45 | 39.27 | 49.09 | 58.90  | 68.72  | 78.54  | 88.35  | 98.17  |
| 61                   | 10.15                  | 20.29 | 30.44 | 40.59 | 50.74 | 60.88  | 71.03  | 81.18  | 91.32  | 101.47 |
| 62                   | 10.48                  | 20.97 | 31.45 | 41.93 | 52.41 | 62.90  | 73.38  | 83.86  | 94.34  | 104.83 |
| 63                   | 10.82                  | 21.65 | 32.47 | 43.29 | 54.12 | 64.94  | 75.76  | 86.59  | 97.41  | 108.23 |
| 64                   | 11.17                  | 22.34 | 33.51 | 44.68 | 55.85 | 67.02  | 78.19  | 89.36  | 100.53 | 111.70 |
| 65                   | 11.52                  | 23.04 | 34.56 | 46.09 | 57.61 | 69.13  | 80.65  | 92.17  | 103.69 | 115.22 |
| 66                   | 11.88                  | 23.76 | 35.64 | 47.52 | 59.39 | 71.27  | 83.15  | 95.03  | 106.91 | 118.79 |
| 67                   | 12.24                  | 24.48 | 36.72 | 48.97 | 61.21 | 73.45  | 85.69  | 97.93  | 110.17 | 122.42 |
| 68                   | 12.61                  | 25.22 | 37.83 | 50.44 | 63.05 | 75.66  | 88.27  | 100.88 | 113.49 | 126.10 |
| 69                   | 12.98                  | 25.97 | 38.95 | 51.93 | 64.92 | 77.90  | 90.88  | 103.87 | 116.85 | 129.83 |
| 70                   | 13.36                  | 26.72 | 40.09 | 53.45 | 66.81 | 80.17  | 93.54  | 106.90 | 120.26 | 133.62 |
| 71                   | 13.75                  | 27.49 | 41.24 | 54.99 | 68.73 | 82.48  | 96.23  | 109.97 | 123.72 | 137.47 |
| 72                   | 14.14                  | 28.27 | 42.41 | 56.55 | 70.68 | 84.82  | 98.96  | 113.09 | 127.23 | 141.37 |
| 73                   | 14.53                  | 29.06 | 43.60 | 58.13 | 72.66 | 87.19  | 101.73 | 116.26 | 130.79 | 145.32 |
| 74                   | 14.93                  | 29.87 | 44.80 | 59.73 | 74.67 | 89.60  | 104.53 | 119.46 | 134.40 | 149.33 |
| 75                   | 15.34                  | 30.68 | 46.02 | 61.36 | 76.70 | 92.04  | 107.38 | 122.72 | 138.05 | 153.39 |
| 76                   | 15.75                  | 31.50 | 47.25 | 63.00 | 78.76 | 94.51  | 110.26 | 126.01 | 141.76 | 157.51 |
| 77                   | 16.17                  | 32.34 | 48.51 | 64.67 | 80.84 | 97.01  | 113.18 | 129.35 | 145.52 | 161.68 |
| 78                   | 16.59                  | 33.18 | 49.77 | 66.36 | 82.96 | 99.55  | 116.14 | 132.73 | 149.32 | 165.91 |
| 79                   | 17.02                  | 34.04 | 51.06 | 68.08 | 85.10 | 102.12 | 119.13 | 136.15 | 153.17 | 170.19 |
| 80                   | 17.45                  | 34.91 | 52.36 | 69.81 | 87.26 | 104.72 | 122.17 | 139.62 | 157.08 | 174.53 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

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**Appendix 3 -- (Continued)**

**Cubic Foot Half Cylinder Volumes**

| Small<br>End<br>Dia. | Segment Length in Feet |       |       |       |       |       |       |       |       |       |
|----------------------|------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      | 11                     | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    |
| 1                    | .03                    | .03   | .04   | .04   | .04   | .04   | .05   | .05   | .05   | .05   |
| 2                    | .12                    | .13   | .14   | .15   | .16   | .17   | .19   | .20   | .21   | .22   |
| 3                    | .27                    | .29   | .32   | .34   | .37   | .39   | .42   | .44   | .47   | .49   |
| 4                    | .48                    | .52   | .57   | .61   | .65   | .70   | .74   | .79   | .83   | .87   |
| 5                    | .75                    | .82   | .89   | .95   | 1.02  | 1.09  | 1.16  | 1.23  | 1.30  | 1.36  |
| 6                    | 1.08                   | 1.18  | 1.28  | 1.37  | 1.47  | 1.57  | 1.67  | 1.77  | 1.87  | 1.96  |
| 7                    | 1.47                   | 1.60  | 1.74  | 1.87  | 2.00  | 2.14  | 2.27  | 2.41  | 2.54  | 2.67  |
| 8                    | 1.92                   | 2.09  | 2.27  | 2.44  | 2.62  | 2.79  | 2.97  | 3.14  | 3.32  | 3.49  |
| 9                    | 2.43                   | 2.65  | 2.87  | 3.09  | 3.31  | 3.53  | 3.76  | 3.98  | 4.20  | 4.42  |
| 10                   | 3.00                   | 3.27  | 3.55  | 3.82  | 4.09  | 4.36  | 4.64  | 4.91  | 5.18  | 5.45  |
| 11                   | 3.63                   | 3.96  | 4.29  | 4.62  | 4.95  | 5.28  | 5.61  | 5.94  | 6.27  | 6.60  |
| 12                   | 4.32                   | 4.71  | 5.10  | 5.50  | 5.89  | 6.28  | 6.68  | 7.07  | 7.46  | 7.85  |
| 13                   | 5.07                   | 5.53  | 5.99  | 6.45  | 6.91  | 7.37  | 7.83  | 8.30  | 8.76  | 9.22  |
| 14                   | 5.88                   | 6.41  | 6.95  | 7.48  | 8.02  | 8.55  | 9.09  | 9.62  | 10.16 | 10.69 |
| 15                   | 6.75                   | 7.36  | 7.98  | 8.59  | 9.20  | 9.82  | 10.43 | 11.04 | 11.66 | 12.27 |
| 16                   | 7.68                   | 8.38  | 9.08  | 9.77  | 10.47 | 11.17 | 11.87 | 12.57 | 13.26 | 13.96 |
| 17                   | 8.67                   | 9.46  | 10.25 | 11.03 | 11.82 | 12.61 | 13.40 | 14.19 | 14.97 | 15.76 |
| 18                   | 9.72                   | 10.60 | 11.49 | 12.37 | 13.25 | 14.14 | 15.02 | 15.90 | 16.79 | 17.67 |
| 19                   | 10.83                  | 11.81 | 12.80 | 13.78 | 14.77 | 15.75 | 16.74 | 17.72 | 18.70 | 19.69 |
| 20                   | 12.00                  | 13.09 | 14.18 | 15.27 | 16.36 | 17.45 | 18.54 | 19.63 | 20.73 | 21.82 |
| 21                   | 13.23                  | 14.43 | 15.63 | 16.84 | 18.04 | 19.24 | 20.44 | 21.65 | 22.85 | 24.05 |
| 22                   | 14.52                  | 15.84 | 17.16 | 18.48 | 19.80 | 21.12 | 22.44 | 23.76 | 25.08 | 26.40 |
| 23                   | 15.87                  | 17.31 | 18.75 | 20.20 | 21.64 | 23.08 | 24.52 | 25.97 | 27.41 | 28.85 |
| 24                   | 17.28                  | 18.85 | 20.42 | 21.99 | 23.56 | 25.13 | 26.70 | 28.27 | 29.84 | 31.42 |
| 25                   | 18.75                  | 20.45 | 22.16 | 23.86 | 25.57 | 27.27 | 28.97 | 30.68 | 32.38 | 34.09 |
| 26                   | 20.28                  | 22.12 | 23.96 | 25.81 | 27.65 | 29.50 | 31.34 | 33.18 | 35.03 | 36.87 |
| 27                   | 21.87                  | 23.86 | 25.84 | 27.83 | 29.82 | 31.81 | 33.80 | 35.78 | 37.77 | 39.76 |
| 28                   | 23.52                  | 25.66 | 27.79 | 29.93 | 32.07 | 34.21 | 36.35 | 38.48 | 40.62 | 42.76 |
| 29                   | 25.23                  | 27.52 | 29.81 | 32.11 | 34.40 | 36.69 | 38.99 | 41.28 | 43.57 | 45.87 |
| 30                   | 27.00                  | 29.45 | 31.91 | 34.36 | 36.81 | 39.27 | 41.72 | 44.18 | 46.63 | 49.09 |
| 31                   | 28.83                  | 31.45 | 34.07 | 36.69 | 39.31 | 41.93 | 44.55 | 47.17 | 49.79 | 52.41 |
| 32                   | 30.72                  | 33.51 | 36.30 | 39.09 | 41.89 | 44.68 | 47.47 | 50.26 | 53.06 | 55.85 |
| 33                   | 32.67                  | 35.64 | 38.61 | 41.58 | 44.55 | 47.52 | 50.48 | 53.45 | 56.42 | 59.39 |
| 34                   | 34.68                  | 37.83 | 40.98 | 44.13 | 47.29 | 50.44 | 53.59 | 56.74 | 59.90 | 63.05 |
| 35                   | 36.75                  | 40.09 | 43.43 | 46.77 | 50.11 | 53.45 | 56.79 | 60.13 | 63.47 | 66.81 |
| 36                   | 38.88                  | 42.41 | 45.94 | 49.48 | 53.01 | 56.55 | 60.08 | 63.62 | 67.15 | 70.68 |
| 37                   | 41.07                  | 44.80 | 48.53 | 52.27 | 56.00 | 59.73 | 63.47 | 67.20 | 70.93 | 74.67 |
| 38                   | 43.32                  | 47.25 | 51.19 | 55.13 | 59.07 | 63.00 | 66.94 | 70.88 | 74.82 | 78.76 |
| 39                   | 45.63                  | 49.77 | 53.92 | 58.07 | 62.22 | 66.36 | 70.51 | 74.66 | 78.81 | 82.96 |
| 40                   | 48.00                  | 52.36 | 56.72 | 61.08 | 65.45 | 69.81 | 74.17 | 78.54 | 82.90 | 87.26 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

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**Appendix 3 -- (Continued)**

**Cubic Foot Half Cylinder Volumes**

| Small<br>End<br>Dia. | Segment Length in Feet |        |        |        |        |        |        |        |        |        |
|----------------------|------------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
|                      | 11                     | 12     | 13     | 14     | 15     | 16     | 17     | 18     | 19     | 20     |
| 41                   | 50.42                  | 55.01  | 59.59  | 64.18  | 68.76  | 73.35  | 77.93  | 82.51  | 87.10  | 91.68  |
| 42                   | 52.91                  | 57.73  | 62.54  | 67.35  | 72.16  | 76.97  | 81.78  | 86.59  | 91.40  | 96.21  |
| 43                   | 55.46                  | 60.51  | 65.55  | 70.59  | 75.63  | 80.68  | 85.72  | 90.76  | 95.80  | 100.84 |
| 44                   | 58.07                  | 63.35  | 68.63  | 73.91  | 79.19  | 84.47  | 89.75  | 95.03  | 100.31 | 105.59 |
| 45                   | 60.74                  | 66.27  | 71.79  | 77.31  | 82.83  | 88.35  | 93.88  | 99.40  | 104.92 | 110.44 |
| 46                   | 63.47                  | 69.24  | 75.01  | 80.78  | 86.55  | 92.33  | 98.10  | 103.87 | 109.64 | 115.41 |
| 47                   | 66.26                  | 72.29  | 78.31  | 84.34  | 90.36  | 96.38  | 102.41 | 108.43 | 114.45 | 120.48 |
| 48                   | 69.11                  | 75.40  | 81.68  | 87.96  | 94.25  | 100.53 | 106.81 | 113.09 | 119.38 | 125.66 |
| 49                   | 72.02                  | 78.57  | 85.12  | 91.67  | 98.21  | 104.76 | 111.31 | 117.86 | 124.40 | 130.95 |
| 50                   | 74.99                  | 81.81  | 88.63  | 95.45  | 102.26 | 109.08 | 115.90 | 122.71 | 129.53 | 136.35 |
| 51                   | 78.02                  | 85.12  | 92.21  | 99.30  | 106.39 | 113.49 | 120.58 | 127.67 | 134.77 | 141.86 |
| 52                   | 81.11                  | 88.49  | 95.86  | 103.23 | 110.61 | 117.98 | 125.35 | 132.73 | 140.10 | 147.48 |
| 53                   | 84.26                  | 91.92  | 99.58  | 107.24 | 114.90 | 122.56 | 130.22 | 137.88 | 145.54 | 153.20 |
| 54                   | 87.47                  | 95.42  | 103.38 | 111.33 | 119.28 | 127.23 | 135.18 | 143.13 | 151.09 | 159.04 |
| 55                   | 90.74                  | 98.99  | 107.24 | 115.49 | 123.74 | 131.99 | 140.24 | 148.49 | 156.73 | 164.98 |
| 56                   | 94.07                  | 102.62 | 111.17 | 119.73 | 128.28 | 136.83 | 145.38 | 153.93 | 162.49 | 171.04 |
| 57                   | 97.46                  | 106.32 | 115.18 | 124.04 | 132.90 | 141.76 | 150.62 | 159.48 | 168.34 | 177.20 |
| 58                   | 100.91                 | 110.08 | 119.26 | 128.43 | 137.60 | 146.78 | 155.95 | 165.13 | 174.30 | 183.47 |
| 59                   | 104.42                 | 113.91 | 123.40 | 132.90 | 142.39 | 151.88 | 161.38 | 170.87 | 180.36 | 189.85 |
| 60                   | 107.99                 | 117.81 | 127.62 | 137.44 | 147.26 | 157.08 | 166.89 | 176.71 | 186.53 | 196.34 |
| 61                   | 111.62                 | 121.77 | 131.91 | 142.06 | 152.21 | 162.35 | 172.50 | 182.65 | 192.80 | 202.94 |
| 62                   | 115.31                 | 125.79 | 136.27 | 146.76 | 157.24 | 167.72 | 178.20 | 188.69 | 199.17 | 209.65 |
| 63                   | 119.06                 | 129.88 | 140.71 | 151.53 | 162.35 | 173.18 | 184.00 | 194.82 | 205.65 | 216.47 |
| 64                   | 122.87                 | 134.04 | 145.21 | 156.38 | 167.55 | 178.72 | 189.89 | 201.06 | 212.23 | 223.40 |
| 65                   | 126.74                 | 138.26 | 149.78 | 161.30 | 172.82 | 184.35 | 195.87 | 207.39 | 218.91 | 230.43 |
| 66                   | 130.67                 | 142.55 | 154.42 | 166.30 | 178.18 | 190.06 | 201.94 | 213.82 | 225.70 | 237.58 |
| 67                   | 134.66                 | 146.90 | 159.14 | 171.38 | 183.62 | 195.86 | 208.11 | 220.35 | 232.59 | 244.83 |
| 68                   | 138.71                 | 151.32 | 163.93 | 176.54 | 189.14 | 201.75 | 214.36 | 226.97 | 239.58 | 252.19 |
| 69                   | 142.82                 | 155.80 | 168.78 | 181.77 | 194.75 | 207.73 | 220.72 | 233.70 | 246.68 | 259.67 |
| 70                   | 146.99                 | 160.35 | 173.71 | 187.07 | 200.43 | 213.80 | 227.16 | 240.52 | 253.88 | 267.25 |
| 71                   | 151.21                 | 164.96 | 178.71 | 192.46 | 206.20 | 219.95 | 233.70 | 247.44 | 261.19 | 274.94 |
| 72                   | 155.50                 | 169.64 | 183.78 | 197.91 | 212.05 | 226.19 | 240.32 | 254.46 | 268.60 | 282.74 |
| 73                   | 159.85                 | 174.39 | 188.92 | 203.45 | 217.98 | 232.51 | 247.05 | 261.58 | 276.11 | 290.64 |
| 74                   | 164.26                 | 179.20 | 194.13 | 209.06 | 224.00 | 238.93 | 253.86 | 268.79 | 283.73 | 298.66 |
| 75                   | 168.73                 | 184.07 | 199.41 | 214.75 | 230.09 | 245.43 | 260.77 | 276.11 | 291.45 | 306.79 |
| 76                   | 173.26                 | 189.01 | 204.77 | 220.52 | 236.27 | 252.02 | 267.77 | 283.52 | 299.27 | 315.02 |
| 77                   | 177.85                 | 194.02 | 210.19 | 226.36 | 242.53 | 258.69 | 274.86 | 291.03 | 307.20 | 323.37 |
| 78                   | 182.50                 | 199.09 | 215.68 | 232.27 | 248.87 | 265.46 | 282.05 | 298.64 | 315.23 | 331.82 |
| 79                   | 187.21                 | 204.23 | 221.25 | 238.27 | 255.29 | 272.31 | 289.33 | 306.35 | 323.36 | 340.38 |
| 80                   | 191.98                 | 209.43 | 226.89 | 244.34 | 261.79 | 279.24 | 296.70 | 314.15 | 331.60 | 349.06 |

**Appendix 4 -- Length Cut Table**

Instructions: Use this table for logs with interior defects to determine when to use the length cut deduction method rather than the squared area method.

If the defect diameter for the segment equals or exceeds the table value, take a length cut rather than using the squared area deduction method.

Use this table is used in conjunction with the table in Appendix 9.

| Segment<br>Small End<br>Diameter<br>(Inches) | Defect<br>Diameter<br>(Inches) |
|----------------------------------------------|--------------------------------|
| 6                                            | 3                              |
| 7                                            | 4                              |
| 8                                            | 4                              |
| 9                                            | 5                              |
| 10                                           | 7                              |
| 11                                           | 7                              |
| 12                                           | 8                              |
| 13                                           | 9                              |
| 14                                           | 9                              |
| 15                                           | 11                             |
| 16                                           | 12                             |
| 17                                           | 12                             |
| 18                                           | 13                             |
| 19                                           | 14                             |
| 20                                           | 16                             |
| 21                                           | 16                             |
| 22                                           | 17                             |
| 23                                           | 18                             |
| 24                                           | 19                             |
| 25                                           | 20                             |
| 26                                           | 21                             |
| 27                                           | 22                             |
| 28                                           | 23                             |
| 29                                           | 23                             |
| 30                                           | 24                             |

| Segment<br>Small End<br>Diameter<br>(Inches) | Defect<br>Diameter<br>(Inches) |
|----------------------------------------------|--------------------------------|
| 31                                           | 25                             |
| 32                                           | 26                             |
| 33                                           | 26                             |
| 34                                           | 27                             |
| 35                                           | 28                             |
| 36                                           | 29                             |
| 37                                           | 30                             |
| 38                                           | 31                             |
| 39                                           | 32                             |
| 40                                           | 33                             |
| 41                                           | 34                             |
| 42                                           | 35                             |
| 43                                           | 36                             |
| 44                                           | 37                             |
| 45                                           | 37                             |
| 46                                           | 38                             |
| 47                                           | 39                             |
| 48                                           | 40                             |
| 49                                           | 41                             |
| 50                                           | 41                             |

**Appendix 5 -- Length Factor Table**

Instructions: Use this table only in cull log determination (sec. 22.5). When a length cut is taken on a segment that is not 16 feet in recorded length, the length cut must be weighted for use in the cull log factor system. The weighted length cut can be computed (sec. 22.52) or the factor can be read from the table. \*Factor = 16 feet ÷ segment length (for example, 16 feet ÷ 8 feet = 2.00).

Example: Assume a 4-foot length cut is made on a 14-foot segment. Read across the table to a 4-foot length cut and down to a 14-segment length. The factor or weighted length cut is 4.57.

| Factor | Segment Length | Length Cut |      |      |      |      |      |       |       |       |
|--------|----------------|------------|------|------|------|------|------|-------|-------|-------|
|        |                | 1          | 2    | 3    | 4    | 6    | 8    | 10    | 12    | 14    |
| 2.000  | 8              | 2.00       | 4.00 |      |      |      |      |       |       |       |
| 1.778  | 9              | 1.78       | 3.56 | 5.33 |      |      |      |       |       |       |
| 1.600  | 10             | 1.60       | 3.20 | 4.80 | 6.40 |      |      |       |       |       |
| 1.454  | 11             | 1.45       | 2.91 | 4.36 | 5.82 |      |      |       |       |       |
| 1.333  | 12             | 1.33       | 2.67 | 4.00 | 5.33 | 8.00 |      |       |       |       |
| 1.231  | 13             | 1.23       | 2.46 | 3.69 | 4.92 | 7.39 |      |       |       |       |
| 1.143  | 14             | 1.14       | 2.29 | 3.43 | 4.57 | 6.86 | 9.14 |       |       |       |
| 1.067  | 15             | 1.07       | 2.13 | 3.18 | 4.27 | 6.40 | 8.54 |       |       |       |
| 1.000  | 16             | 1.00       | 2.00 | 3.00 | 4.00 | 6.00 | 8.00 | 10.00 |       |       |
| 0.941  | 17             | 0.94       | 1.88 | 2.82 | 3.76 | 5.65 | 7.53 | 9.41  |       |       |
| 0.889  | 18             | 0.89       | 1.78 | 2.67 | 3.56 | 5.33 | 7.11 | 8.89  | 10.67 |       |
| 0.842  | 19             | 0.84       | 1.68 | 2.53 | 3.37 | 5.05 | 6.74 | 8.42  | 10.10 |       |
| 0.800  | 20             | 0.80       | 1.60 | 2.40 | 3.20 | 4.80 | 6.40 | 8.00  | 9.60  | 11.20 |

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**Chapter 60 - Appendixes**

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**Appendix 6 -- Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |       |       |       |       |       |       |       |       |
|----------------------|----------------------------------|---------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |                                  | 2                                                 | 3     | 4     | 5     | 6     | 7     | 8     | 9     | 10    |
| 4                    | .063                             | 16.00                                             |       |       |       |       |       |       |       |       |
| 5                    | .125                             | 8.00                                              | 16.00 |       |       |       |       |       |       |       |
| 6                    | .125                             | 8.00                                              | 16.00 |       |       |       |       |       |       |       |
| 7                    | .188                             | 5.33                                              | 10.67 | 16.00 |       |       |       |       |       |       |
| 8                    | .188                             | 5.33                                              | 10.67 | 16.00 |       |       |       |       |       |       |
| 9                    | .250                             | 4.00                                              | 8.00  | 12.00 | 16.00 | 20.00 |       |       |       |       |
| 10                   | .375                             | 2.67                                              | 5.33  | 8.00  | 10.67 | 13.33 | 18.67 |       |       |       |
| 11                   | .438                             | 2.29                                              | 4.57  | 6.86  | 9.14  | 11.43 | 16.00 |       |       |       |
| 12                   | .500                             | 2.00                                              | 4.00  | 6.00  | 8.00  | 10.00 | 14.00 | 18.00 |       |       |
| 13                   | .625                             | 1.60                                              | 3.20  | 4.80  | 6.40  | 8.00  | 11.20 | 14.40 | 17.60 |       |
| 14                   | .688                             | 1.45                                              | 2.91  | 4.36  | 5.82  | 7.27  | 10.18 | 13.09 | 16.00 | 18.91 |
| 15                   | .875                             | 1.14                                              | 2.29  | 3.43  | 4.57  | 5.71  | 8.00  | 10.29 | 12.57 | 14.86 |
| 16                   | 1.000                            | 1.00                                              | 2.00  | 3.00  | 4.00  | 5.00  | 7.00  | 9.00  | 11.00 | 13.00 |
| 17                   | 1.125                            | .89                                               | 1.78  | 2.67  | 3.56  | 4.44  | 6.22  | 8.00  | 9.78  | 11.56 |
| 18                   | 1.313                            | .76                                               | 1.52  | 2.29  | 3.05  | 3.81  | 5.33  | 6.86  | 8.38  | 9.90  |
| 19                   | 1.500                            | .67                                               | 1.33  | 2.00  | 2.67  | 3.33  | 4.67  | 6.00  | 7.33  | 8.67  |
| 20                   | 1.750                            | .57                                               | 1.14  | 1.71  | 2.29  | 2.86  | 4.00  | 5.14  | 6.29  | 7.43  |
| 21                   | 1.875                            | .53                                               | 1.07  | 1.60  | 2.13  | 2.67  | 3.73  | 4.80  | 5.87  | 6.93  |
| 22                   | 2.063                            | .48                                               | .97   | 1.45  | 1.94  | 2.42  | 3.39  | 4.36  | 5.33  | 6.30  |
| 23                   | 2.375                            | .42                                               | .84   | 1.26  | 1.68  | 2.11  | 2.95  | 3.79  | 4.63  | 5.47  |
| 24                   | 2.500                            | .40                                               | .80   | 1.20  | 1.60  | 2.00  | 2.80  | 3.60  | 4.40  | 5.20  |
| 25                   | 2.875                            | .35                                               | .70   | 1.04  | 1.39  | 1.74  | 2.43  | 3.13  | 3.83  | 4.52  |
| 26                   | 3.125                            | .32                                               | .64   | .96   | 1.28  | 1.60  | 2.24  | 2.88  | 3.52  | 4.16  |
| 27                   | 3.438                            | .29                                               | .58   | .87   | 1.16  | 1.45  | 2.04  | 2.62  | 3.20  | 3.78  |
| 28                   | 3.625                            | .28                                               | .55   | .83   | 1.10  | 1.38  | 1.93  | 2.48  | 3.03  | 3.59  |
| 29                   | 3.813                            | .26                                               | .52   | .79   | 1.05  | 1.31  | 1.84  | 2.36  | 2.89  | 3.41  |
| 30                   | 4.125                            | .24                                               | .48   | .73   | .97   | 1.21  | 1.70  | 2.18  | 2.67  | 3.15  |
| 31                   | 4.438                            | .23                                               | .45   | .68   | .90   | 1.13  | 1.58  | 2.03  | 2.48  | 2.93  |
| 32                   | 4.625                            | .22                                               | .43   | .65   | .86   | 1.08  | 1.51  | 1.95  | 2.38  | 2.81  |
| 33                   | 4.875                            | .21                                               | .41   | .62   | .82   | 1.03  | 1.44  | 1.85  | 2.26  | 2.67  |
| 34                   | 5.000                            | .20                                               | .40   | .60   | .80   | 1.00  | 1.40  | 1.80  | 2.20  | 2.60  |
| 35                   | 5.500                            | .18                                               | .36   | .55   | .73   | .91   | 1.27  | 1.64  | 2.00  | 2.36  |
| 36                   | 5.750                            | .17                                               | .35   | .52   | .70   | .87   | 1.22  | 1.57  | 1.91  | 2.26  |
| 37                   | 6.438                            | .16                                               | .31   | .47   | .62   | .78   | 1.09  | 1.40  | 1.71  | 2.02  |
| 38                   | 6.688                            | .15                                               | .30   | .45   | .60   | .75   | 1.05  | 1.35  | 1.64  | 1.94  |

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Chapter 60 - Appendixes

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Appendix 6 -- (Continued)

**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |     |     |     |     |      |      |      |      |
|----------------------|----------------------------------|---------------------------------------------------|-----|-----|-----|-----|------|------|------|------|
|                      |                                  | 2                                                 | 3   | 4   | 5   | 6   | 7    | 8    | 9    | 10   |
| 39                   | 7.000                            | .14                                               | .29 | .43 | .57 | .71 | 1.00 | 1.29 | 1.57 | 1.86 |
| 40                   | 7.500                            | .13                                               | .27 | .40 | .53 | .67 | .93  | 1.20 | 1.47 | 1.73 |
| 41                   | 7.938                            | .13                                               | .25 | .38 | .50 | .63 | .88  | 1.13 | 1.39 | 1.64 |
| 42                   | 8.375                            | .12                                               | .24 | .36 | .48 | .60 | .84  | 1.07 | 1.31 | 1.55 |
| 43                   | 8.750                            | .11                                               | .23 | .34 | .46 | .57 | .80  | 1.03 | 1.26 | 1.49 |
| 44                   | 9.250                            | .11                                               | .22 | .32 | .43 | .54 | .76  | .97  | 1.19 | 1.41 |
| 45                   | 9.500                            | .11                                               | .21 | .32 | .42 | .53 | .74  | .95  | 1.16 | 1.37 |
| 46                   | 9.938                            | .10                                               | .20 | .30 | .40 | .50 | .70  | .91  | 1.11 | 1.31 |
| 47                   | 10.375                           | .10                                               | .19 | .29 | .39 | .48 | .67  | .87  | 1.06 | 1.25 |
| 48                   | 10.813                           | .09                                               | .18 | .28 | .37 | .46 | .65  | .83  | 1.02 | 1.20 |
| 49                   | 11.250                           | .09                                               | .18 | .27 | .36 | .44 | .62  | .80  | .98  | 1.16 |
| 50                   | 11.688                           | .09                                               | .17 | .26 | .34 | .43 | .60  | .77  | .94  | 1.11 |

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**Appendix 6 -- (Continued)**

**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |       |       |       |       |       |       |       |       |       |
|----------------------|----------------------------------|---------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |                                  | 11                                                | 12    | 13    | 14    | 15    | 16    | 17    | 18    | 19    | 20    |
| 4                    | .063                             |                                                   |       |       |       |       |       |       |       |       |       |
| 5                    | .125                             |                                                   |       |       |       |       |       |       |       |       |       |
| 6                    | .125                             |                                                   |       |       |       |       |       |       |       |       |       |
| 7                    | .188                             |                                                   |       |       |       |       |       |       |       |       |       |
| 8                    | .188                             |                                                   |       |       |       |       |       |       |       |       |       |
| 9                    | .250                             |                                                   |       |       |       |       |       |       |       |       |       |
| 10                   | .375                             |                                                   |       |       |       |       |       |       |       |       |       |
| 11                   | .438                             |                                                   |       |       |       |       |       |       |       |       |       |
| 12                   | .500                             |                                                   |       |       |       |       |       |       |       |       |       |
| 13                   | .625                             |                                                   |       |       |       |       |       |       |       |       |       |
| 14                   | .688                             |                                                   |       |       |       |       |       |       |       |       |       |
| 15                   | .875                             | 17.14                                             |       |       |       |       |       |       |       |       |       |
| 16                   | 1.000                            | 15.00                                             | 18.00 |       |       |       |       |       |       |       |       |
| 17                   | 1.125                            | 13.33                                             | 16.00 | 18.67 |       |       |       |       |       |       |       |
| 18                   | 1.313                            | 11.43                                             | 13.71 | 16.00 | 18.29 |       |       |       |       |       |       |
| 19                   | 1.500                            | 10.00                                             | 12.00 | 14.00 | 16.00 | 18.00 |       |       |       |       |       |
| 20                   | 1.750                            | 8.57                                              | 10.29 | 12.00 | 13.71 | 15.43 | 17.71 | 20.00 |       |       |       |
| 21                   | 1.875                            | 8.00                                              | 9.60  | 11.20 | 12.80 | 14.40 | 16.53 | 18.67 |       |       |       |
| 22                   | 2.063                            | 7.27                                              | 8.73  | 10.18 | 11.64 | 13.09 | 15.03 | 16.97 | 18.91 |       |       |
| 23                   | 2.375                            | 6.32                                              | 7.58  | 8.84  | 10.11 | 11.37 | 13.05 | 14.74 | 16.42 | 18.11 | 19.79 |
| 24                   | 2.500                            | 6.00                                              | 7.20  | 8.40  | 9.60  | 10.80 | 12.40 | 14.00 | 15.60 | 17.20 | 18.80 |
| 25                   | 2.875                            | 5.22                                              | 6.26  | 7.30  | 8.35  | 9.39  | 10.78 | 12.17 | 13.57 | 14.96 | 16.35 |
| 26                   | 3.125                            | 4.80                                              | 5.76  | 6.72  | 7.68  | 8.64  | 9.92  | 11.20 | 12.48 | 13.76 | 15.04 |
| 27                   | 3.438                            | 4.36                                              | 5.24  | 6.11  | 6.98  | 7.85  | 9.02  | 10.18 | 11.35 | 12.51 | 13.67 |
| 28                   | 3.625                            | 4.14                                              | 4.97  | 5.79  | 6.62  | 7.45  | 8.55  | 9.66  | 10.76 | 11.86 | 12.97 |
| 29                   | 3.813                            | 3.93                                              | 4.72  | 5.51  | 6.30  | 7.08  | 8.13  | 9.18  | 10.23 | 11.28 | 12.33 |
| 30                   | 4.125                            | 3.64                                              | 4.36  | 5.09  | 5.82  | 6.55  | 7.52  | 8.48  | 9.45  | 10.42 | 11.39 |
| 31                   | 4.438                            | 3.38                                              | 4.06  | 4.73  | 5.41  | 6.08  | 6.99  | 7.89  | 8.79  | 9.69  | 10.59 |
| 32                   | 4.625                            | 3.24                                              | 3.89  | 4.54  | 5.19  | 5.84  | 6.70  | 7.57  | 8.43  | 9.30  | 10.16 |
| 33                   | 4.875                            | 3.08                                              | 3.69  | 4.31  | 4.92  | 5.54  | 6.36  | 7.18  | 8.00  | 8.82  | 9.64  |
| 34                   | 5.000                            | 3.00                                              | 3.60  | 4.20  | 4.80  | 5.40  | 6.20  | 7.00  | 7.80  | 8.60  | 9.40  |
| 35                   | 5.500                            | 2.73                                              | 3.27  | 3.82  | 4.36  | 4.91  | 5.64  | 6.36  | 7.09  | 7.82  | 8.55  |

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**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |      |      |      |      |      |      |      |      |      |
|----------------------|----------------------------------|---------------------------------------------------|------|------|------|------|------|------|------|------|------|
|                      |                                  | 11                                                | 12   | 13   | 14   | 15   | 16   | 17   | 18   | 19   | 20   |
| 36                   | 5.750                            | 2.61                                              | 3.13 | 3.65 | 4.17 | 4.70 | 5.39 | 6.09 | 6.78 | 7.48 | 8.17 |
| 37                   | 6.438                            | 2.33                                              | 2.80 | 3.26 | 3.73 | 4.19 | 4.82 | 5.44 | 6.06 | 6.68 | 7.30 |
| 38                   | 6.688                            | 2.24                                              | 2.69 | 3.14 | 3.59 | 4.04 | 4.64 | 5.23 | 5.83 | 6.43 | 7.03 |
| 39                   | 7.000                            | 2.14                                              | 2.57 | 3.00 | 3.43 | 3.86 | 4.43 | 5.00 | 5.57 | 6.14 | 6.71 |
| 40                   | 7.500                            | 2.00                                              | 2.40 | 2.80 | 3.20 | 3.60 | 4.13 | 4.67 | 5.20 | 5.73 | 6.27 |
| 41                   | 7.938                            | 1.89                                              | 2.27 | 2.65 | 3.02 | 3.40 | 3.91 | 4.41 | 4.91 | 5.42 | 5.92 |
| 42                   | 8.375                            | 1.79                                              | 2.15 | 2.51 | 2.87 | 3.22 | 3.70 | 4.18 | 4.66 | 5.13 | 5.61 |
| 43                   | 8.750                            | 1.71                                              | 2.06 | 2.40 | 2.74 | 3.09 | 3.54 | 4.00 | 4.46 | 4.91 | 5.37 |
| 44                   | 9.250                            | 1.62                                              | 1.95 | 2.27 | 2.59 | 2.92 | 3.35 | 3.78 | 4.22 | 4.65 | 5.08 |
| 45                   | 9.500                            | 1.58                                              | 1.89 | 2.21 | 2.53 | 2.84 | 3.26 | 3.68 | 4.11 | 4.53 | 4.95 |
| 46                   | 9.938                            | 1.51                                              | 1.81 | 2.11 | 2.42 | 2.72 | 3.12 | 3.52 | 3.92 | 4.33 | 4.73 |
| 47                   | 10.375                           | 1.45                                              | 1.73 | 2.02 | 2.31 | 2.60 | 2.99 | 3.37 | 3.76 | 4.14 | 4.53 |
| 48                   | 10.813                           | 1.39                                              | 1.66 | 1.94 | 2.22 | 2.50 | 2.87 | 3.24 | 3.61 | 3.98 | 4.35 |
| 49                   | 11.250                           | 1.33                                              | 1.60 | 1.87 | 2.13 | 2.40 | 2.76 | 3.11 | 3.47 | 3.82 | 4.18 |
| 50                   | 11.688                           | 1.28                                              | 1.54 | 1.80 | 2.05 | 2.31 | 2.65 | 2.99 | 3.34 | 3.68 | 4.02 |

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**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |       |       |       |       |       |       |       |       |       |
|----------------------|----------------------------------|---------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |                                  | 21                                                | 22    | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    |
| 4                    | .063                             |                                                   |       |       |       |       |       |       |       |       |       |
| 5                    | .125                             |                                                   |       |       |       |       |       |       |       |       |       |
| 6                    | .125                             |                                                   |       |       |       |       |       |       |       |       |       |
| 7                    | .188                             |                                                   |       |       |       |       |       |       |       |       |       |
| 8                    | .188                             |                                                   |       |       |       |       |       |       |       |       |       |
| 9                    | .250                             |                                                   |       |       |       |       |       |       |       |       |       |
| 10                   | .375                             |                                                   |       |       |       |       |       |       |       |       |       |
| 11                   | .438                             |                                                   |       |       |       |       |       |       |       |       |       |
| 12                   | .500                             |                                                   |       |       |       |       |       |       |       |       |       |
| 13                   | .625                             |                                                   |       |       |       |       |       |       |       |       |       |
| 14                   | .688                             |                                                   |       |       |       |       |       |       |       |       |       |
| 15                   | .875                             |                                                   |       |       |       |       |       |       |       |       |       |
| 16                   | 1.000                            |                                                   |       |       |       |       |       |       |       |       |       |
| 17                   | 1.125                            |                                                   |       |       |       |       |       |       |       |       |       |
| 18                   | 1.313                            |                                                   |       |       |       |       |       |       |       |       |       |
| 19                   | 1.500                            |                                                   |       |       |       |       |       |       |       |       |       |
| 20                   | 1.750                            |                                                   |       |       |       |       |       |       |       |       |       |
| 21                   | 1.875                            |                                                   |       |       |       |       |       |       |       |       |       |
| 22                   | 2.063                            |                                                   |       |       |       |       |       |       |       |       |       |
| 23                   | 2.375                            |                                                   |       |       |       |       |       |       |       |       |       |
| 24                   | 2.500                            |                                                   |       |       |       |       |       |       |       |       |       |
| 25                   | 2.875                            | 18.09                                             | 19.48 |       |       |       |       |       |       |       |       |
| 26                   | 3.125                            | 16.64                                             | 17.92 | 19.52 |       |       |       |       |       |       |       |
| 27                   | 3.438                            | 15.13                                             | 16.29 | 17.75 | 19.49 |       |       |       |       |       |       |
| 28                   | 3.625                            | 14.34                                             | 15.45 | 16.83 | 18.48 | 19.86 |       |       |       |       |       |
| 29                   | 3.813                            | 13.64                                             | 14.69 | 16.00 | 17.57 | 18.89 |       |       |       |       |       |
| 30                   | 4.125                            | 12.61                                             | 13.58 | 14.79 | 16.24 | 17.45 | 18.91 |       |       |       |       |
| 31                   | 4.438                            | 11.72                                             | 12.62 | 13.75 | 15.10 | 16.23 | 17.58 | 18.93 |       |       |       |
| 32                   | 4.625                            | 11.24                                             | 12.11 | 13.19 | 14.49 | 15.57 | 16.86 | 18.16 | 19.46 |       |       |
| 33                   | 4.875                            | 10.67                                             | 11.49 | 12.51 | 13.74 | 14.77 | 16.00 | 17.23 | 18.46 | 19.69 |       |
| 34                   | 5.000                            | 10.40                                             | 11.20 | 12.20 | 13.40 | 14.40 | 15.60 | 16.80 | 18.00 | 19.20 |       |
| 35                   | 5.500                            | 9.45                                              | 10.18 | 11.09 | 12.18 | 13.09 | 14.18 | 15.27 | 16.36 | 17.45 | 18.73 |

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**Chapter 60 - Appendixes**

**Amendment:** 2409.11a-2002-4

**Effective date:** August 06, 2002

**Appendix 6 -- (Continued)**

**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |      |       |       |       |       |       |       |       |       |
|----------------------|----------------------------------|---------------------------------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |                                  | 21                                                | 22   | 23    | 24    | 25    | 26    | 27    | 28    | 29    | 30    |
| 36                   | 5.750                            | 9.04                                              | 9.74 | 10.61 | 11.65 | 12.52 | 13.57 | 14.61 | 15.65 | 16.70 | 17.91 |
| 37                   | 6.438                            | 8.08                                              | 8.70 | 9.48  | 10.41 | 11.18 | 12.12 | 13.05 | 13.98 | 14.91 | 16.00 |
| 38                   | 6.688                            | 7.78                                              | 8.37 | 9.12  | 10.02 | 10.77 | 11.66 | 12.56 | 13.46 | 14.36 | 15.40 |
| 39                   | 7.000                            | 7.43                                              | 8.00 | 8.71  | 9.57  | 10.29 | 11.14 | 12.00 | 12.86 | 13.71 | 14.71 |
| 40                   | 7.500                            | 6.93                                              | 7.47 | 8.13  | 8.93  | 9.60  | 10.40 | 11.20 | 12.00 | 12.80 | 13.73 |
| 41                   | 7.938                            | 6.55                                              | 7.06 | 7.69  | 8.44  | 9.07  | 9.83  | 10.58 | 11.34 | 12.09 | 12.98 |
| 42                   | 8.375                            | 6.21                                              | 6.69 | 7.28  | 8.00  | 8.60  | 9.31  | 10.03 | 10.75 | 11.46 | 12.30 |
| 43                   | 8.750                            | 5.94                                              | 6.40 | 6.97  | 7.66  | 8.23  | 8.91  | 9.60  | 10.29 | 10.97 | 11.77 |
| 44                   | 9.250                            | 5.62                                              | 6.05 | 6.59  | 7.24  | 7.78  | 8.43  | 9.08  | 9.73  | 10.38 | 11.14 |
| 45                   | 9.500                            | 5.47                                              | 5.89 | 6.42  | 7.05  | 7.58  | 8.21  | 8.84  | 9.47  | 10.11 | 10.84 |
| 46                   | 9.938                            | 5.23                                              | 5.64 | 6.14  | 6.74  | 7.25  | 7.85  | 8.45  | 9.06  | 9.66  | 10.36 |
| 47                   | 10.375                           | 5.01                                              | 5.40 | 5.88  | 6.46  | 6.94  | 7.52  | 8.10  | 8.67  | 9.25  | 9.93  |
| 48                   | 10.813                           | 4.81                                              | 5.18 | 5.64  | 6.20  | 6.66  | 7.21  | 7.77  | 8.32  | 8.88  | 9.53  |
| 49                   | 11.250                           | 4.62                                              | 4.98 | 5.42  | 5.96  | 6.40  | 6.93  | 7.47  | 8.00  | 8.53  | 9.16  |
| 50                   | 11.688                           | 4.45                                              | 4.79 | 5.22  | 5.73  | 6.16  | 6.67  | 7.19  | 7.70  | 8.21  | 8.81  |

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Chapter 60 - Appendixes

Amendment: 2409.11a-2002-4

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Appendix 6 -- (Continued)

**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |    |    |    |    |    |    |    |    |    |
|----------------------|----------------------------------|---------------------------------------------------|----|----|----|----|----|----|----|----|----|
|                      |                                  | 31                                                | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 |
| 4                    | .063                             |                                                   |    |    |    |    |    |    |    |    |    |
| 5                    | .125                             |                                                   |    |    |    |    |    |    |    |    |    |
| 6                    | .125                             |                                                   |    |    |    |    |    |    |    |    |    |
| 7                    | .188                             |                                                   |    |    |    |    |    |    |    |    |    |
| 8                    | .188                             |                                                   |    |    |    |    |    |    |    |    |    |
| 9                    | .250                             |                                                   |    |    |    |    |    |    |    |    |    |
| 10                   | .375                             |                                                   |    |    |    |    |    |    |    |    |    |
| 11                   | .438                             |                                                   |    |    |    |    |    |    |    |    |    |
| 12                   | .500                             |                                                   |    |    |    |    |    |    |    |    |    |
| 13                   | .625                             |                                                   |    |    |    |    |    |    |    |    |    |
| 14                   | .688                             |                                                   |    |    |    |    |    |    |    |    |    |
| 15                   | .875                             |                                                   |    |    |    |    |    |    |    |    |    |
| 16                   | 1.000                            |                                                   |    |    |    |    |    |    |    |    |    |
| 17                   | 1.125                            |                                                   |    |    |    |    |    |    |    |    |    |
| 18                   | 1.313                            |                                                   |    |    |    |    |    |    |    |    |    |
| 19                   | 1.500                            |                                                   |    |    |    |    |    |    |    |    |    |
| 20                   | 1.750                            |                                                   |    |    |    |    |    |    |    |    |    |
| 21                   | 1.875                            |                                                   |    |    |    |    |    |    |    |    |    |
| 22                   | 2.063                            |                                                   |    |    |    |    |    |    |    |    |    |
| 23                   | 2.375                            |                                                   |    |    |    |    |    |    |    |    |    |
| 24                   | 2.500                            |                                                   |    |    |    |    |    |    |    |    |    |
| 25                   | 2.875                            |                                                   |    |    |    |    |    |    |    |    |    |
| 26                   | 3.125                            |                                                   |    |    |    |    |    |    |    |    |    |
| 27                   | 3.438                            |                                                   |    |    |    |    |    |    |    |    |    |
| 28                   | 3.625                            |                                                   |    |    |    |    |    |    |    |    |    |
| 29                   | 3.813                            |                                                   |    |    |    |    |    |    |    |    |    |
| 30                   | 4.125                            |                                                   |    |    |    |    |    |    |    |    |    |
| 31                   | 4.438                            |                                                   |    |    |    |    |    |    |    |    |    |
| 32                   | 4.625                            |                                                   |    |    |    |    |    |    |    |    |    |
| 33                   | 4.875                            |                                                   |    |    |    |    |    |    |    |    |    |
| 34                   | 5.000                            |                                                   |    |    |    |    |    |    |    |    |    |
| 35                   | 5.500                            | 19.82                                             |    |    |    |    |    |    |    |    |    |

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**Chapter 60 - Appendixes**

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**Effective date:** August 06, 2002

**Appendix 6 -- (Continued)**

**Interior Defect Factor Table**

| Small<br>End<br>Dia. | Vol./Ft.<br>16' Log<br>(bd. ft.) | Squared Defect Size<br>(Side of square in inches) |       |       |       |       |       |       |       |       |       |
|----------------------|----------------------------------|---------------------------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
|                      |                                  | 31                                                | 32    | 33    | 34    | 35    | 36    | 37    | 38    | 39    | 40    |
| 36                   | 5.750                            | 18.96                                             |       |       |       |       |       |       |       |       |       |
| 37                   | 6.438                            | 16.93                                             | 18.02 | 19.11 |       |       |       |       |       |       |       |
| 38                   | 6.688                            | 16.30                                             | 17.35 | 18.39 | 19.59 |       |       |       |       |       |       |
| 39                   | 7.000                            | 15.57                                             | 16.57 | 17.57 | 18.71 | 19.71 |       |       |       |       |       |
| 40                   | 7.500                            | 14.53                                             | 15.47 | 16.40 | 17.47 | 18.40 | 19.47 |       |       |       |       |
| 41                   | 7.938                            | 13.73                                             | 14.61 | 15.50 | 16.50 | 17.39 | 18.39 | 19.40 |       |       |       |
| 42                   | 8.375                            | 13.01                                             | 13.85 | 14.69 | 15.64 | 16.48 | 17.43 | 18.39 | 19.34 |       |       |
| 43                   | 8.750                            | 12.46                                             | 13.26 | 14.06 | 14.97 | 15.77 | 16.69 | 17.60 | 18.51 | 19.54 |       |
| 44                   | 9.250                            | 11.78                                             | 12.54 | 13.30 | 14.16 | 14.92 | 15.78 | 16.65 | 17.51 | 18.49 | 19.35 |
| 45                   | 9.500                            | 11.47                                             | 12.21 | 12.95 | 13.79 | 14.53 | 15.37 | 16.21 | 17.05 | 18.00 | 18.84 |
| 46                   | 9.938                            | 10.97                                             | 11.67 | 12.38 | 13.18 | 13.89 | 14.69 | 15.50 | 16.30 | 17.21 | 18.01 |
| 47                   | 10.375                           | 10.51                                             | 11.18 | 11.86 | 12.63 | 13.30 | 14.07 | 14.84 | 15.61 | 16.48 | 17.25 |
| 48                   | 10.813                           | 10.08                                             | 10.73 | 11.38 | 12.12 | 12.76 | 13.50 | 14.24 | 14.98 | 15.82 | 16.55 |
| 49                   | 11.250                           | 9.69                                              | 10.31 | 10.93 | 11.64 | 12.27 | 12.98 | 13.69 | 14.40 | 15.20 | 15.91 |
| 50                   | 11.688                           | 9.33                                              | 9.93  | 10.52 | 11.21 | 11.81 | 12.49 | 13.18 | 13.86 | 14.63 | 15.32 |