

Instructions for Biomass Calculations

Definitions:

Cubic Volume: Refers to the amount of wood in a tree or log expressed as cubic feet. Please see the table below for the cubic volume by DBH class. So if you have 10 trees that are 9 inches DBH the volume of each tree is 6 cubic feet, multiplied by 10 trees so, the total volume would be 60 cubic feet.

Cord: A standard cord of firewood is 128 cubic feet of wood, generally measured as a pile 8 feet long by 4 feet tall by 4 feet deep.

Lineal feet: is the accumulated length so if you have 10 poles each 8 feet long the total lineal feet would be 80.

Green ton: Please see the table below

Diameter Breast Height (DBH) is measured 4.5 feet above the ground level on the uphill side of the tree.

Diameter Breast Height (DBH)	Cubic Volume	Density Conversion Factor (Bole and Branch)	Weight per Cubic Foot	Tree Weight (lbs)
4	1.0	2.12	48	101
5	1.5	2.09	48	150
6	2.0	2.05	48	196
7	3.5	2.02	48	339
8	5.0	1.98	48	475
9	6.0	1.94	48	559
10	7.0	1.85	48	622
11	8.0	1.77	48	680
12	11.5	1.70	48	938
13	15.5	1.62	48	1205
14	20.0	1.58	48	1516

To find the number of green tons: All of the conversions have been made in the table above, so all you have to do is count the number of trees in each diameter class, and multiply that by the **Tree Weight** (column 5) for that diameter. As an example you are removing 30 trees that are 8 inch DBH, and 50 trees that are 10 inch DBH; So you would multiply $30 * 475 \text{ lbs} = 14,250 \text{ lbs}$ plus $50 \text{ trees} * 622 \text{ lbs} = 31,100 \text{ lbs}$. Then add $14,250 + 31,100 = 45,350 \text{ lbs}$

$45,350 \text{ lbs}$ divided by $2,000 \text{ lbs}$ (1-ton) = 22.68 green tons