

Timber Sales



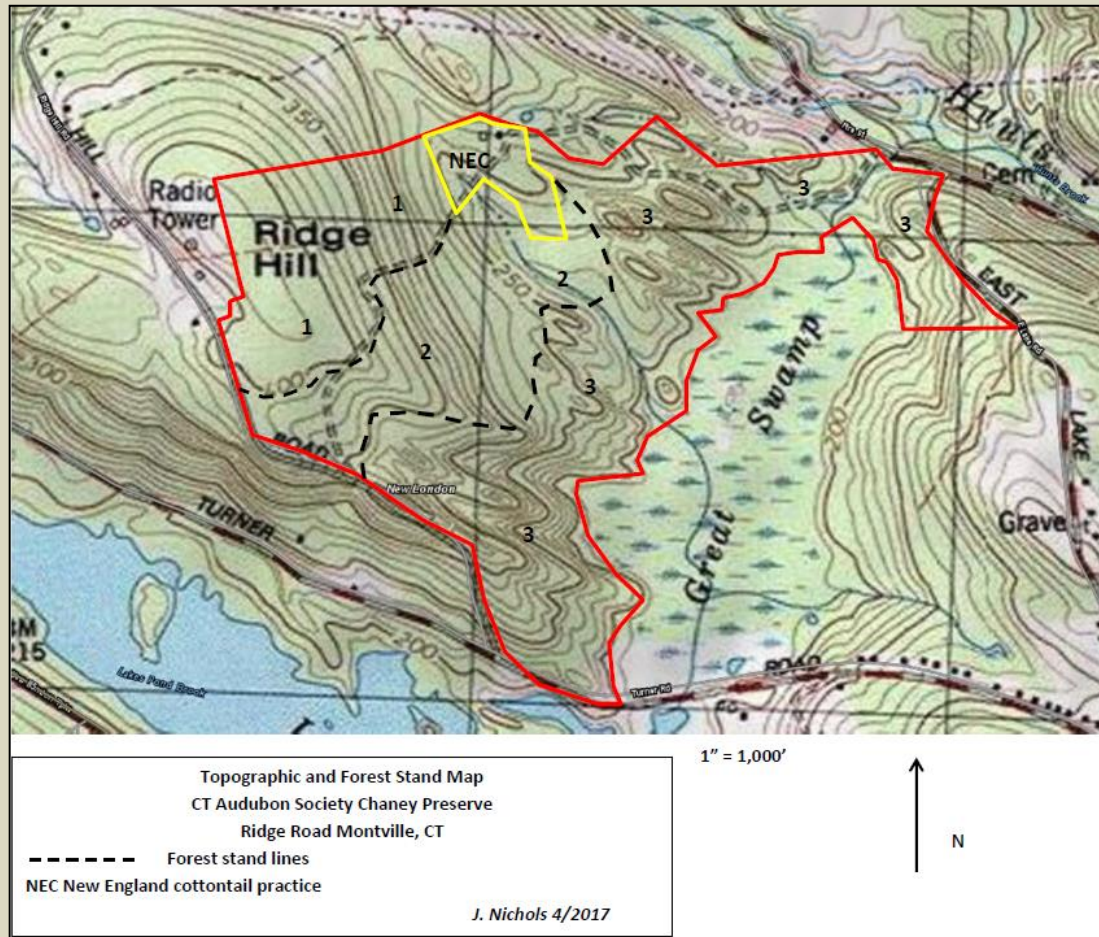
Forestry 101: Meet Landowner's Objective

Why do landowners sell timber?

- ❖ Financial: They need \$\$
- ❖ Forest healthy: Forest is overcrowded, pathogens, insects.
- ❖ Wildlife: Diversify wildlife habitat, create early successional habitat, enhance bird habitat, improve hunting opportunity.
- ❖ Water quality: Maintain or improve water quality.
- ❖ Sustainability: Keep woods healthy and derive periodic income from sale of timber.
- ❖ Salvage: Remove dead and dying trees impacted by insects, disease or storm events. Hazardous tree removal.
- ❖ Conversion to non-forest: Developing property.



Forest Stand Map



Forest stand: A contiguous community of trees sufficiently uniform in composition, structure, age and size class distribution, spatial arrangement, site quality, condition, or location to distinguish it from adjacent communities.



Estimating Total Volume of Timber on a Woodlot



Total merchantable sawtimber = Total board footage (bf.) per acre X number of acres growing sawtimber.

Example:

Total acreage: 30 acres

Hay field: 5 acres

Sawtimber stand: 25 acres

Board footage per acre: 3,000 bf./acre

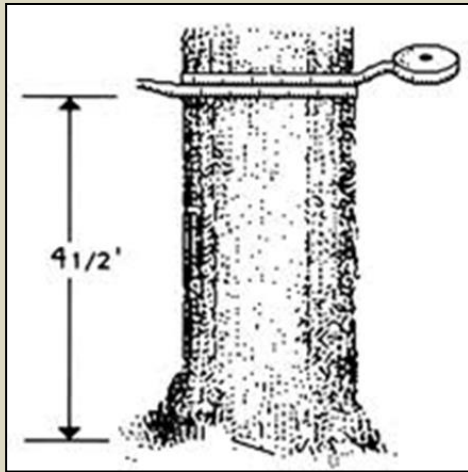
Total estimated board footage:

25 acres X 3,000 bf./acre = 75,000 bf.

***Note:* Board foot: 12"x12"x1"**



Measuring Standing Timber



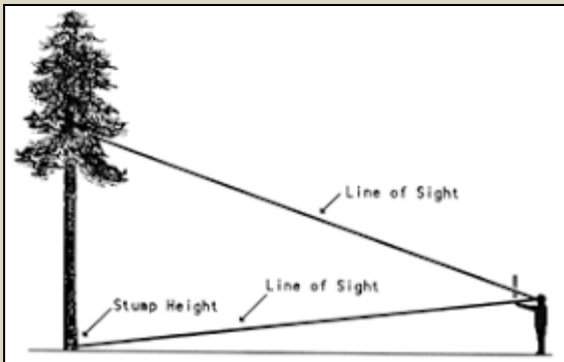
❖ Estimated by obtaining two measurements and applying these to tree scale volume tables.

❖ The two measurements are diameter and merchantable height.

❖ Diameter: Measured outside bark at breast height (DBH) (4 ½ feet above ground)

❖ Merchantable height: Measured from stump height (6" + above ground) to a point on the stem beyond which marketable sawlogs cannot be cut.

❖ Generally merchantable height is to a top diameter of 10".

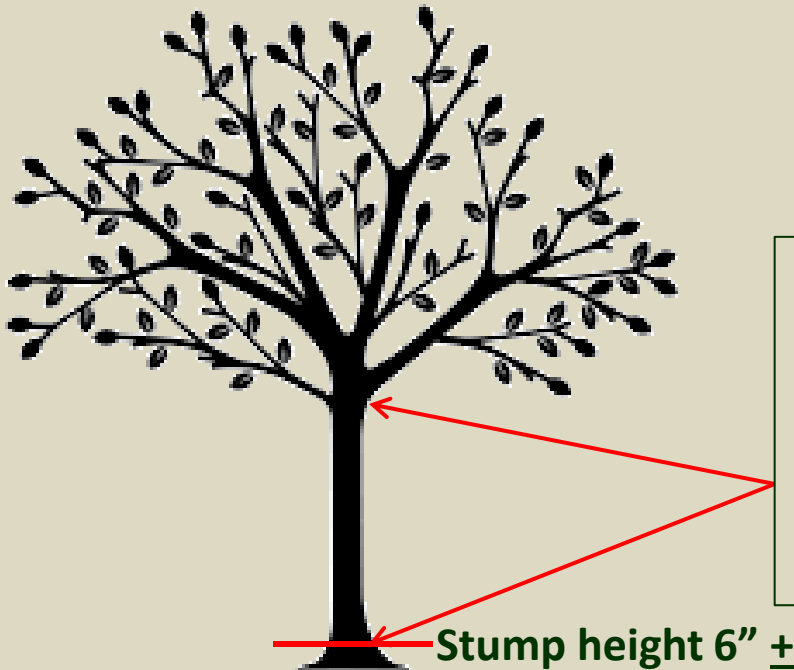


What is merchantable height?

Sawlogs are measured in 8' sections (1/2 log) and 16' sections (log).

Sawtimber is the straight, sound stem of the tree that can be cut into sawlogs to produce lumber, timbers, or railroad ties.

Factors such as excessive sweep, rot, heavy branching, open wounds, cavities, scars and cankers can reduce the merchantability of a tree for sawlogs.



Examples:

8' merchantable height = ½ log

16' merchantable height = 1 log

24' merchantable height = 1 ½ logs

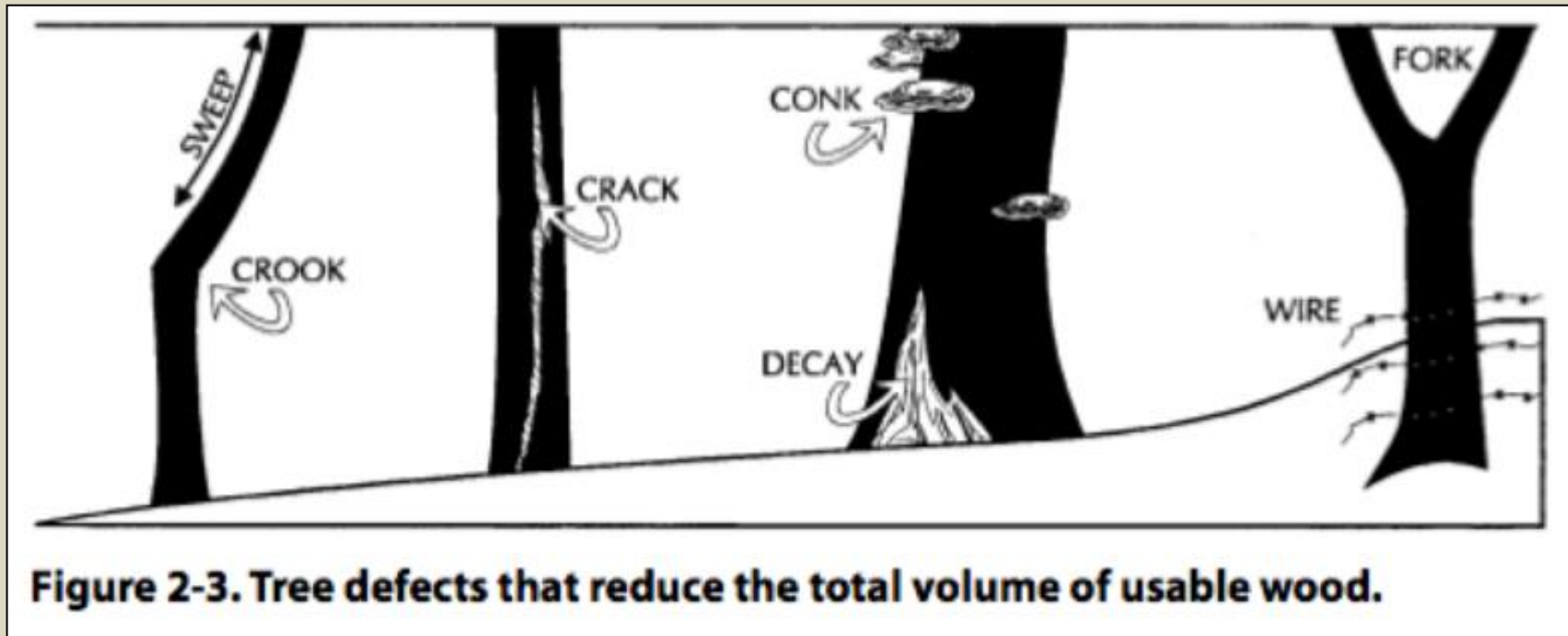
32' merchantable height = 2 logs

40' merchantable height = 2 ½ logs



Factors That Reduce Sawlog Merchantability

Factors such as excessive sweep, rot, heavy branching, open wounds, cavities, scars and cankers, can reduce the merchantability of a tree for sawlogs.



<http://woodlandstewardship.org>



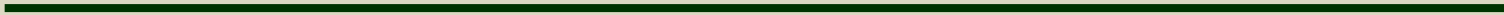
Timber Tally



Q: What are we tallying?

A: Tree species, diameters and heights of all merchantable sawtimber sized trees 12" DBH and larger.

Sawlogs are measured in 8' sections (1/2 log) or 16' sections (log)



Timber Volume Tables

International 1/4" board foot volume

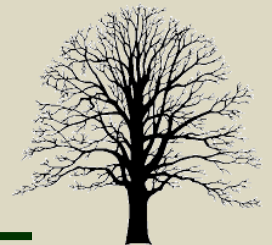
Form Class 78

DBH (in)	Merchantable Height in Logs (16 ft. sections)									
	1/2	1	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5
12	30	56	74	92	106	120	128	137		
14	40	78	105	132	153	174	187	200		
16	60	106	143	180	210	241	263	285		
18	70	136	184	233	274	314	344	374		
20	90	171	234	296	348	401	440	480	511	542
22	110	211	290	368	434	500	552	603	647	691
24	130	251	346	441	523	605	664	723	782	840
26	160	299	414	528	626	725	801	877	949	1021
28	190	347	482	616	733	850	938	1027	1114	1201
30	220	403	560	718	854	991	1094	1198	1306	1415
32		462	644	826	988	1149	1274	1400	1518	1637
34		521	728	934	1119	1304	1447	1590	1727	1864
36		589	826	1063	1274	1485	1650	1814	1974	2135
38		656	921	1186	1428	1670	1854	2038	2224	2410
40		731	1030	1329	1598	1868	2081	2294	2494	2693



Mock Timber Tally

	Tree #	Species	Diameter	# 16' logs	Bf./tree
	1	Northern red oak	18"	2	233 bf.
	2	White oak	14"	1	78 bf.
	3	Sugar maple	24"	1.5	346 bf.
	4	Red maple	12"	1	56 bf.
Totals	4 trees				713 bf.



Mock Timber Tally - Test

	Tree #	Species	Diameter	# 16' logs	Bf./tree
	1	Northern red oak	20"	2	
	2	White oak	16"	1.5	
	3	Sugar maple	20"	1.5	
	4	Red maple	14"	1.5	
	5	Sugar maple	24"	2	
	6	Black birch	12"	1	
Totals:					

How many trees were tallied?

What is the total board footage for all trees tallied?

What is the total board footage for all sugar maple tallied?

