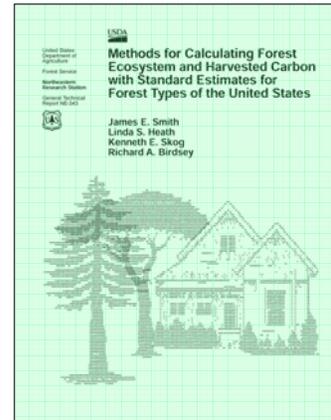


# Consistent Standard Estimates of Carbon in Forest Ecosystems and Harvested Wood

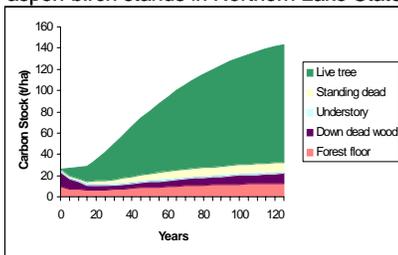
Downloadable tables from forestry appendix of revised 1605(b) rules and guidelines and the publication describing the simple use and modification of these estimates.

This methodology for consistent standard forest carbon estimates was adopted by the U.S. Voluntary Greenhouse Gas Reporting Program, also referred to as 1605(b). The estimates and methods also follow guidelines for reporting forest carbon as developed by the Intergovernmental Panel on Climate Change. Look-up tables for carbon in forests and harvested wood are based on linked empirical models and forest statistics. Data sources and level of detail are likely to vary among users. The methods were developed to produce consistent estimates across scale or source of data.



**Why use this and who is interested:** The tables provide a quick and inexpensive approach for individuals or organizations to use to identify likely carbon stocks and rates of sequestration associated with forests or proposed carbon projects.

Example of forest ecosystem carbon yields for aspen-birch stands in Northern Lake States

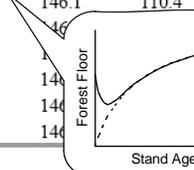
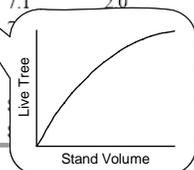
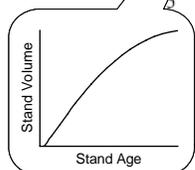


## Carbon in forest ecosystem – default tables, readily customized:

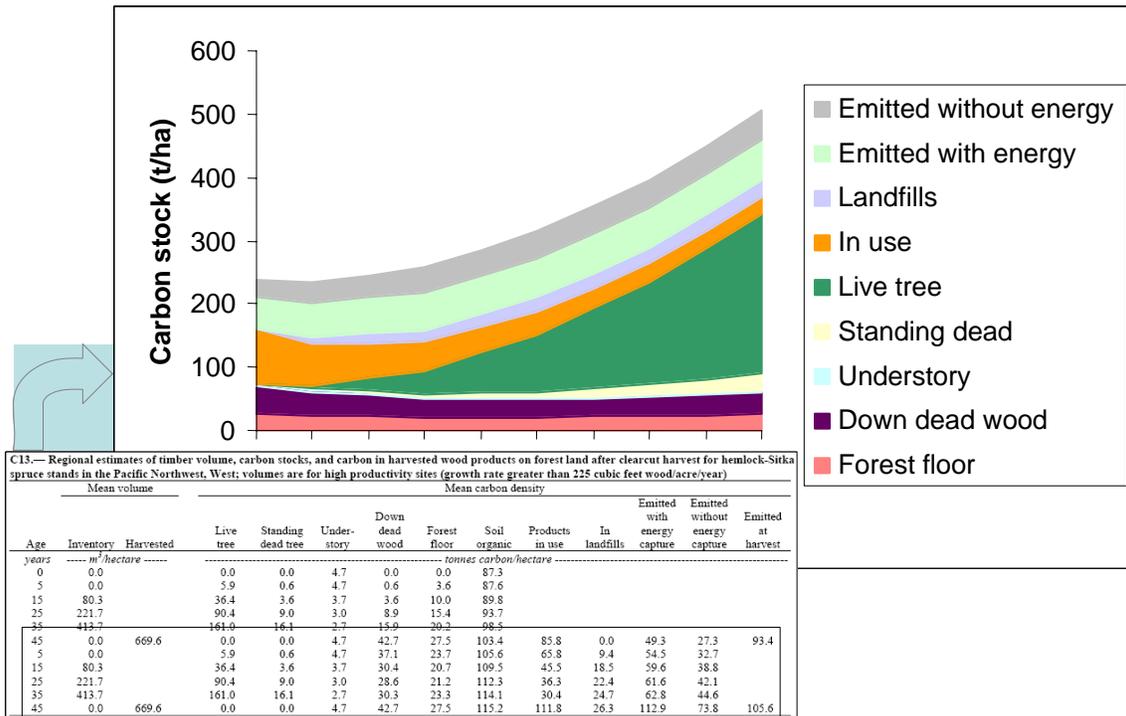
Tabular summaries are based on individual models for the separate carbon pools, each developed from inventory data. Thus, users can pick and choose portions according to their particular data needs and substitute more locally-specific data where available. Tables, representing average stand-level merchantable volume and carbon pools according to stand age, were developed for 51 forest types within 10 regions of the United States.

A7.— Regional estimates of timber volume and carbon stocks for aspen-birch stands on forest land after clearcut harvest in the Northern Lake States

Age	Mean volume	Mean carbon density						Total nonsoil
		Live tree	Standing dead tree	Understory	Down dead wood	Forest floor	Soil organic	
years	m <sup>3</sup> /hectare	tonnes carbon/hectare						
0	0.0	0.0	0.0	2.0	13.4	10.2	146.1	25.6
5	0.0	7.3	0.5	2.1	9.5	7.5	146.1	26.8
15	2.9	13.9	1.4	2.1	5.0	6.0	146.1	28.4
25	21.5	26.8	2.7	2.1	3.9	6.5	146.1	42.0
35	47.2	40.8	4.1	2.0	4.0	7.5	146.1	58.4
45	72.8	53.5	5.3	2.0	4.6	8.5	146.1	74.0
55	97.1	64.9	6.1	2.0	5.4	9.3	146.1	87.7
65	119.5	75.0	6.7	2.0	6.1	10.1	146.1	99.8
75	139.7	83.8	7.1	2.0	6.8	10.7	146.1	110.4
85	157.5	91.5	7.4	2.0	7.4	11.3	146.1	121.0
95	173.0	98.0	7.9	2.0	7.9	11.8	146.1	131.6
105	186.0	103.4	8.4	2.0	8.4	12.2	146.1	142.2
115	196.4	107.7	8.7	2.0	8.7	12.5	146.1	152.8
120	204.3	110.9	9.0	2.0	9.0	12.9	146.1	163.4

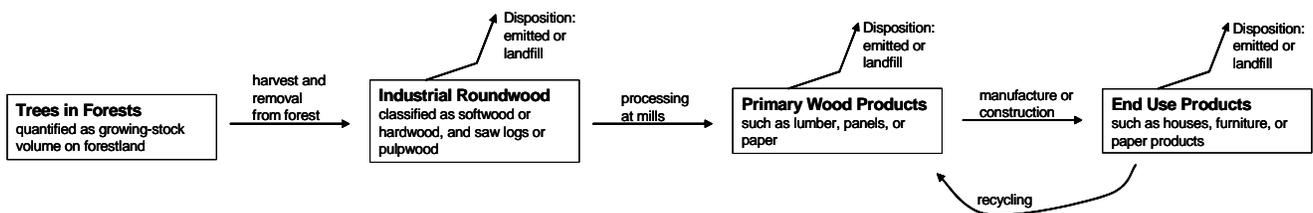
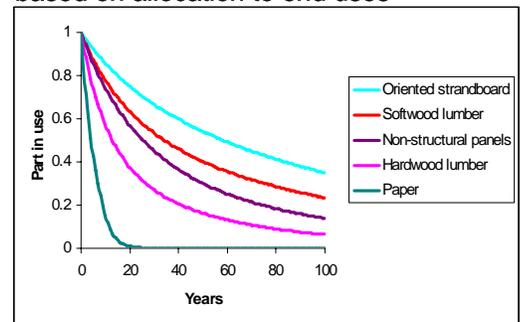


**Carbon in harvested wood products – default tables:** The fate of carbon harvested and incorporated into products, is allocated to products in use, landfills, emitted to the atmosphere with concomitant energy capture, or emitted without energy capture.



**Carbon in harvested wood products – customized according to data availability:** The fate of carbon in harvested wood depends on production of primary wood products, allocation to end uses, and subsequent lifespan. Default components of these processes are provided at different starting points along the path from forest to final product.

Examples of longevity of primary wood products based on allocation to end uses



**Details:**

Smith, James E.; Heath, Linda S.; Skog, Kenneth E.; Birdsey, Richard A. 2006. Methods for calculating forest ecosystem and harvested carbon with standard estimates for forest types of the United States. Gen. Tech. Rep. NE-343. Newtown Square, PA: U.S. Department of Agriculture, Forest Service, Northeastern Research Station. 216 p.

Standard tables (two formats) and documentation: <http://nrs.fs.fed.us/carbon/tools/>