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The Forest Biomass Resource of the United States

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[1]Forest Service experiment stations are: SE=Southeastern; PNW=Pacific Northwest; SO=Southern; NC=North Central; INT=Intermountain; NE=Northeastern.

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Highlights

- The dry weight of all live trees on timberland is almost 18 billion dry tons, or 36.9 dry tons per acre.

- Tree biomass is evenly divided between the two major species groups -- softwoods accounting for 48 percent and hardwoods for 52 percent.

- Most of the softwood biomass--more than 5 billion dry tons, or 61 percent of the softwood tree biomass--is in the West. Approximately 9 billion dry tons, or 93 percent of the hardwood tree biomass, is in the East.

- The largest portion of total tree biomass, almost 72 percent, is found in tree boles. Tree tops account for 17 percent, and cull trees 11 percent.

- Most of the total tree biomass is on privately owned land. Ten billion dry tons, or 55 percent of the total tree biomass, is on lands owned by individuals and corporations (other than forest industry).

- Almost 3 billion dry tons of total tree biomass, or 81 percent of all national forest biomass, is on national forests in the West. Two billion dry tons of biomass on forest industry lands, or 77 percent of all forest industry biomass, is concentrated in the South and West.

- Information on additional components of total forest biomass varies by region. These components can contribute significant amounts of biomass. Hardwood tree biomass in the Lake States, for example, is 73 percent of the total hardwood forest biomass. The remainder is stumps, foliage, seedlings, saplings, and shrubs.

Background

Over the last decade, biomass statistics have been published for most states. However, the existing aggregate data are either limited or out of date. The most recent statistics on biomass were for 1980 (U.S. Department of Agriculture 1981). The development of such data continues to lag even though user interest is high. This study was initiated to provide current biomass data for the United States and was conducted by Forest Service research units throughout the country.

Initially, biomass statistics were used primarily to determine the amount of logging residue that might be generated from commercial timber harvesting. Biomass statistics were reported according to timber-oriented components of the total forest resource: wood and bark weight, biomass of the tree bole, biomass on timberland, etc. Many of the conventional definitions of tree biomass are still slanted toward industrial wood use.

However, recent policy is being made at the State, national, and international level on the optimum allocation of the total forest resource for a variety of traditional and nontraditional uses. New segments of the research community have begun to study the global effects of climate change and the effect of manmade pollution on major ecosystems of the world. Current biomass standards may have little application for environmental assessments and global resource analyses.

The biomass statistics presented in this report remain focused on standards related to the timber component of the forest resource, since most users of forest resource data continue to think in terms of timber production. For the first time, though, additional data has been compiled on the total forest resource, which includes all forest land areas regardless of productivity potential. It also includes stumps, foliage, seedlings, saplings, and shrubs.

The biomass statistics we developed were based on current data. Under the authority of the Forest and Rangeland Renewable Resources Planning Act of 1974 and the Forest and Rangeland Renewable Resources Research Act of 1978, the USDA Forest Service conducts periodic forest inventories of all States. We used the most current biomass data from these forest inventories.

The data was compiled from existing data bases. Where no data existed, volume data compiled from the timber chapter of the 1989 Resource Planning Act assessment were used as a base, applying appropriate conversion factors to estimate bole biomass. Total tree biomass estimates were developed through two methods: one from integrated biomass equations and the other from component estimates that were added to the information from the data base. Additional components for both methods were provided as available.

Definition of Terms

Biomass

Forest biomass. The weight of wood, bark, and foliage in all living woody plants above the ground, measured in oven-dry tons. Includes tree biomass; stump and foliage biomass associated with tree biomass; and the biomass of seedlings, saplings, and shrubs. Does not include the biomass of grasses, forbs, etc.

Tree biomass. The weight of wood and bark in all living trees 5.0 inches in diameter at breast height and larger above a 1-foot stump height, measured in oven-dry tons. Includes the biomass of live sound trees and the biomass of live cull trees.

Forest Components

Commercial tree species. Softwood and hardwood tree species suitable for industrial wood products. Excludes tree species of typically small size, poor form, or inferior quality.

Foliage. The leaves and fruits of live sound and live cull trees, 5.0 inches in diameter at breast height and larger.

Hardwoods. Dicotyledonous trees, usually broad-leaved and deciduous.

Live sound trees. Live trees of commercial species 5.0 inches in diameter at breast height and larger, above a 1-foot stump height, and meeting regional specifications for freedom from defect. Includes tree boles and tree tops.

Live cull trees. Live trees 5.0 inches in diameter at breast height and larger, above a 1-foot stump height, not meeting regional specifications for freedom from defect. This includes live trees of commercial tree species that have such poor form that they do not contain a sawlog, that are not commercial tree species, and in which 50 percent of the cull is rotten.

Saplings. Live trees between 1.0 inch and 4.9 inches in diameter at breast height.

Seedlings. Live trees less than 1.0 inch in diameter at breast height that are free to grow.

Shrubs. Plants that have persistent, woody stems and relatively low growth habits, and that generally produce several basal shoots instead of a single bole. They differ from trees by their low stature and nonarborescent form (Society of Range Management 1974).

Softwoods. Coniferous trees, usually evergreen and having needles or scalelike leaves.

Stumps. The central stem of live sound and live cull trees, 5.0 inches in diameter at breast height and larger, between the ground and a 1-foot height.

Tree boles. The central stem of live trees, 5.0 inches in diameter at breast height and larger, between a 1-foot stump height and a 4-inch top diameter outside the bark, or until the stem breaks into branches before it reaches this minimum diameter.

Tree tops. The branches of live sound and live cull trees, 5.0 inches in diameter at breast height and larger, outside of the minimum top diameter for tree boles. Includes the upper stem, limbs, twigs, etc.

Land Classes

Forest industry lands. Lands owned by companies or individuals that operate primary wood-using facilities.

Forest land. Land areas 1 acre in size at least 10-percent stocked with trees of any size. Does not include productive-reserved land.

National forest lands. Federal lands legally designated as national forests or purchase units.

Other forest land. Forest land not producing or capable of producing at least 20 cubic feet of annual crops of commercial timber. Does not include productive-reserved land.

Other private lands. All privately owned lands except forest industry lands.

Other public lands. Lands other than national forests that are administered by Federal, State, county, or local municipalities.

Productive-Reserved land. Forest land withdrawn from timber utilization because of administrative designation, such as park land.

Timberland. Forest land producing or capable of producing at least 20 cubic feet of annual crops of commercial timber. Does not include productive-reserved land.

Literature Cited

Society for Range Management, Range Term Committee, M.M. Kothmann, Chair. 1974. A Glossary of Terms Used in Range Management. Denver, CO: Soc. for Range Management: 25.

U.S. Department of Agriculture. 1981. Tree Biomass--a state-of-the art compilation. Gen. Tech. Rep. WO-33; Washington, DC: U.S. Department of Agriculture, Forest Service. 34 p.

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The data are presented in tables of tree biomass by class of timber and ownership; forest biomass by class of material--including stumps, foliage, seedlings, saplings, and shrubs; and tree biomass per acre on forest land. Because most of the data were developed from the timber assessment volume data in the 1989 Resources Planning Act, the only species information is major species group (softwoods and hardwoods).

The statistics are reported in dry weight. Biomass is often reported in green weight, a unit desirable to the timber-using industry since it reflects the economic cost of removing wood from the forest. Dry weight is a more common base. It yields an easier solution to environmental questions, such as the carbon content of the world's standing timber, and is more consistent over time, avoiding seasonal variations that occur when measuring in green weight.

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Note: Values in the tables may not add due to rounding.

Table 1.--Softwood tree biomass on timberland in the United States, by State and section, and class of timber, 1987

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Connecticut	7.2	2.4	9.6	0.5	10.1
Maine	219.8	85.3	305.1	30.6	335.7
Massachusetts	28.5	9.3	37.9	2.2	40.1
New Hampshire	56.3	20.2	76.5	6.8	83.3
Rhode Island	0.8	0.3	1.1	(a)	1.1
Vermont	31.3	11.5	42.9	7.8	50.7
Total, New England	344.0	129.0	473.0	47.9	520.9
Delaware	2.5	0.9	3.4	(a)	3.4
Maryland	12.3	4.6	16.8	0.1	17.0
New Jersey	9.6	3.8	13.3	2.0	15.3
New York	101.5	33.2	134.7	10.1	144.8
Pennsylvania	32.2	10.0	42.2	0.4	42.6
West Virginia	16.2	5.8	22.0	1.8	23.8
Total, Middle Atlantic	174.3	58.2	232.5	14.5	246.9
Michigan	84.8	18.2	103.0	4.8	107.8
Minnesota	53.9	12.1	66.0	4.5	70.6
North Dakota	(a)	(a)	(a)	(a)	(a)
South Dakota	23.6	3.1	26.6	0.3	26.9
Wisconsin	55.1	10.4	65.5	2.7	68.1
Total, Lake States	217.4	43.8	261.1	12.3	273.4
Illinois	1.8	0.3	2.1	0.1	2.2
Indiana	3.0	0.7	3.6	0.4	4.1
Iowa	0.1	(a)	0.1	0.1	0.2
Kansas	0.1	(a)	0.1	(a)	0.1
Kentucky	13.2	6.2	19.4	1.3	20.7
Missouri	9.5	1.4	10.9	0.8	11.8
Nebraska	2.4	0.3	2.7	0.3	3.1
Ohio	4.8	2.4	7.2	0.2	7.4
Total, Central States	34.9	11.3	46.2	3.4	49.6
Total, North	770.5	242.3	1,012.8	78.0	1,090.8
North Carolina	219.0	24.4	243.4	1.9	245.3
South Carolina	175.0	18.6	193.6	2.4	196.0
Virginia	114.5	14.0	128.5	2.2	130.7
Total, South Atlantic	508.5	57.0	565.5	6.5	572.0
Florida	182.4	23.1	205.5	2.9	208.4
Georgia	307.8	34.7	342.5	1.9	344.4
Total, East Gulf	490.2	57.8	548.0	4.8	552.8

(continued)

Table 1.--Softwood tree biomass on timberland in the United States, by State and section, and class of timber, 1987, continued

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Alabama	214.5	41.6	256.1	17.6	273.7
Mississippi	168.4	31.0	199.4	8.6	208.0
Tennessee	50.8	9.4	60.2	4.4	64.6
Total, Central Gulf	433.7	82.0	515.7	30.6	546.3
Arkansas	137.6	23.9	161.5	5.9	167.4
Louisiana	193.4	34.3	227.7	9.3	237.0
Oklahoma	18.1	3.1	21.2	1.0	22.2
Texas	143.5	25.8	169.3	4.9	174.2
Total, West Gulf	492.6	87.1	579.7	21.1	600.8
Total, South	1,925.0	283.9	2,208.9	63.0	2,271.9
Idaho	400.8	100.2	501.0	51.2	552.2
Montana	349.8	116.6	466.4	153.4	619.8
Wyoming	75.8	26.6	102.5	11.1	113.6
Total, N. Rocky Mountain	826.5	243.5	1,069.9	215.7	1,285.6
Arizona	70.9	30.4	101.3	12.1	113.4
Colorado	181.1	57.2	238.3	30.8	269.1
Nevada	4.5	1.4	6.0	0.3	6.3
New Mexico	67.6	25.0	92.5	12.6	105.2
Utah	43.9	15.4	59.3	5.8	65.0
Total, S. Rocky Mountain	368.0	129.4	497.4	61.7	559.0
California	656.4	99.4	755.8	32.6	788.4
Oregon	882.8	150.7	1,033.5	12.8	1,046.3
Washington	799.1	150.3	949.4	5.2	954.6
Total, Pacific Coast	2,338.3	400.4	2,738.7	50.6	2,789.3
Coastal Alaska	414.8	75.6	490.4	23.4	513.8
Interior Alaska	108.6	36.0	144.6	1.3	145.9
Hawaii	0.1	(a)	0.1	(a)	0.1
Total, Alaska and Hawaii	523.5	111.6	635.1	24.7	659.8
Total, West	4,056.3	884.8	4,941.1	352.7	5,293.8
Total, all States	6,751.8	1,411.0	8,162.8	493.7	8,656.5

[a] Less than 50,000 dry tons.

Table 2.--Hardwood tree biomass on timberland in the United States, by State and section, and class of timber, 1987

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Connecticut	40.6	14.6	55.2	3.7	58.9
Maine	154.7	59.3	214.0	52.0	266.1
Massachusetts	57.8	21.5	79.3	11.6	90.9
New Hampshire	78.9	29.7	108.5	17.0	125.6
Rhode Island	7.2	2.7	9.9	0.9	10.8
Vermont	74.0	27.2	101.2	24.7	125.9
Total, New England	413.3	154.9	568.2	110.0	678.2
Delaware	9.2	3.2	12.5	0.8	13.3
Maryland	71.6	24.6	96.2	5.4	101.6
New Jersey	21.3	7.7	29.0	2.8	31.8
New York	317.0	102.7	419.7	45.0	464.7
Pennsylvania	407.8	120.6	528.4	10.6	538.9
West Virginia	277.3	96.0	373.3	46.1	419.4
Total, Middle Atlantic	1,104.2	354.8	1,459.0	110.8	1,569.8
Michigan	251.2	78.8	330.0	24.9	354.9
Minnesota	155.2	46.5	201.7	32.4	234.1
North Dakota	3.9	1.2	5.1	2.0	7.0
South Dakota	1.1	0.3	1.4	1.2	2.6
Wisconsin	214.0	67.5	281.5	38.5	320.0
Total, Lake States	625.4	194.2	819.6	98.9	918.6
Illinois	89.9	26.0	116.0	18.9	134.8
Indiana	93.5	26.8	120.3	28.3	148.6
Iowa	22.6	6.7	29.3	14.0	43.3
Kansas	14.9	4.3	19.2	9.1	28.3
Kentucky	188.7	45.4	234.1	36.3	270.5
Missouri	148.6	48.8	197.5	96.8	294.3
Nebraska	5.0	1.3	6.2	2.8	9.0
Ohio	91.5	28.1	119.6	13.8	133.5
Total, Central States	654.7	187.4	842.2	220.1	1,062.2
Total, North	2,797.6	891.3	3,689.0	539.8	4,228.8
North Carolina	376.8	54.8	431.6	48.6	480.2
South Carolina	180.0	26.8	206.8	34.1	240.9
Virginia	371.5	57.0	428.5	60.9	489.4
Total, South Atlantic	928.3	138.6	1,066.9	143.6	1,210.5
Florida	110.9	16.5	127.4	46.3	173.7
Georgia	308.6	46.7	355.3	46.2	401.5
Total, East Gulf	419.5	63.2	482.7	92.5	575.2

(continued)

Table 2.--Hardwood tree biomass on timberland in the United States, by State and section, and class of timber, 1987, continued

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Alabama	240.5	80.3	320.8	106.2	427.0
Mississippi	242.6	86.5	329.1	102.1	431.2
Tennessee	288.2	94.2	382.4	131.9	514.3
Total, Central Gulf	771.3	261.0	1,032.3	340.2	1,372.5
Arkansas	255.3	94.5	349.8	96.9	446.7
Louisiana	195.0	69.0	264.0	104.9	368.9
Oklahoma	30.9	11.8	42.7	36.4	79.1
Texas	110.7	39.8	150.5	70.4	220.9
Total, West Gulf	591.9	215.1	807.0	308.6	1,115.6
Total, South	2,711.0	677.9	3,388.9	884.9	4,273.8
Idaho	5.2	1.1	6.3	1.4	7.7
Montana	4.2	1.3	5.6	0.7	6.3
Wyoming	3.5	0.9	4.4	1.5	5.9
Total, N. Rocky Mountain	13.0	3.3	16.2	3.6	19.8
Arizona	3.5	0.8	4.3	3.6	7.8
Colorado	33.2	6.8	40.0	10.6	50.6
Nevada	0.3	0.1	0.4	(a)	0.4
New Mexico	5.1	1.0	6.2	0.9	7.0
Utah	9.1	2.0	11.1	0.8	11.9
Total, S. Rocky Mountain	51.1	10.7	61.8	15.9	77.7
California	165.2	37.4	202.6	27.4	230.0
Oregon	80.4	14.5	94.9	10.1	105.0
Washington	96.8	19.4	116.2	6.7	122.9
Total, Pacific Coast	342.5	71.3	413.8	44.2	458.0
Coastal Alaska	3.0	1.0	4.0	0.1	4.1
Interior Alaska	81.0	17.0	98.1	8.2	106.3
Hawaii	6.2	1.5	7.7	1.1	8.9
Total, Alaska and Hawaii	90.3	19.5	109.8	9.5	119.3
Total, West	496.8	104.8	601.7	73.1	674.8
Total, all States	6,005.4	1,674.1	7,679.5	1,497.9	9,177.4

[a] Less than 50,000 dry tons.

Table 3.--Total tree biomass on timberland in the United States, by State and section, and class of timber, 1987

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Connecticut	47.8	17.0	64.8	4.2	69.0
Maine	374.5	144.6	519.2	82.6	601.8
Massachusetts	86.3	30.8	117.2	13.8	130.9
New Hampshire	135.2	49.8	185.0	23.9	208.9
Rhode Island	8.0	3.0	11.0	0.9	12.0
Vermont	105.4	38.7	144.0	32.5	176.6
Total, New England	757.2	283.9	1,041.2	157.9	1,199.1
Delaware	11.8	4.2	15.9	0.8	16.7
Maryland	83.9	29.1	113.0	5.6	118.6
New Jersey	30.9	11.5	42.3	4.8	47.2
New York	418.4	135.9	554.4	55.1	609.5
Pennsylvania	440.0	130.6	570.6	11.0	581.5
West Virginia	293.5	101.8	395.3	48.0	443.2
Total, Middle Atlantic	1,278.5	413.0	1,691.5	125.2	1,816.7
Michigan	336.0	97.0	432.9	29.7	462.6
Minnesota	209.1	58.6	267.7	36.9	304.6
North Dakota	4.0	1.2	5.1	2.0	7.1
South Dakota	24.7	3.4	28.1	1.5	29.5
Wisconsin	269.1	77.9	347.0	41.1	388.1
Total, Lake States	842.8	238.0	1,080.8	111.2	1,192.0
Illinois	91.7	26.3	118.0	19.0	137.0
Indiana	96.5	27.4	123.9	28.8	152.7
Iowa	22.7	6.7	29.4	14.1	43.5
Kansas	15.0	4.3	19.3	9.1	28.5
Kentucky	201.9	51.6	253.5	37.7	291.2
Missouri	158.2	50.2	208.4	97.7	306.1
Nebraska	7.4	1.6	9.0	3.1	12.0
Ohio	96.3	30.6	126.8	14.0	140.8
Total, Central States	689.6	198.7	888.4	223.5	1,111.8
Total, North	3,568.2	1,133.6	4,701.8	617.8	5,319.6
North Carolina	595.8	79.2	675.0	50.5	725.5
South Carolina	355.0	45.4	400.4	36.5	436.9
Virginia	486.0	71.0	557.0	63.1	620.1
Total, South Atlantic	1,436.8	195.6	1,632.4	150.1	1,782.5
Florida	293.3	39.6	332.9	49.2	382.1
Georgia	616.4	81.4	697.8	48.1	745.9
Total, East Gulf	909.7	121.0	1,030.7	97.3	1,128.0

(continued)

Table 3.--Total tree biomass on timberland in the United States, by State and section, and class of timber, 1987, continued

State and section	Live sound trees			Cull trees	Total tree biomass
	Tree boles	Tree tops	Total		
	(Million dry tons)				
Alabama	455.0	121.9	576.9	123.8	700.7
Mississippi	411.0	117.5	528.5	110.7	639.2
Tennessee	339.0	103.6	442.6	136.3	578.9
Total, Central Gulf	1,205.0	343.0	1,548.0	370.8	1,918.8
Arkansas	392.9	118.4	511.3	102.8	614.1
Louisiana	388.4	103.3	491.7	114.2	605.9
Oklahoma	49.0	14.9	63.9	37.4	101.3
Texas	254.2	65.6	319.8	75.3	395.1
Total, West Gulf	1,084.5	302.2	1,386.7	329.7	1,716.4
Total, South	4,636.0	961.8	5,597.8	947.9	6,545.7
Idaho	406.0	101.3	507.3	52.6	559.9
Montana	354.1	118.0	472.0	154.1	626.1
Wyoming	79.3	27.5	106.9	12.6	119.4
Total, N. Rocky Mountain	839.4	246.7	1,086.1	219.3	1,305.5
Arizona	74.4	31.2	105.6	15.7	121.3
Colorado	214.3	64.0	278.2	41.4	319.7
Nevada	4.8	1.5	6.3	0.3	6.7
New Mexico	72.7	26.0	98.7	13.5	112.2
Utah	52.9	17.4	70.3	6.6	76.9
Total, S. Rocky Mountain	419.1	140.1	559.2	77.5	636.7
California	821.6	136.8	958.4	59.9	1,018.4
Oregon	963.2	165.2	1,128.4	22.9	1,151.3
Washington	896.0	169.7	1,065.6	12.0	1,077.6
Total, Pacific Coast	2,680.8	471.7	3,152.5	94.7	3,247.2
Coastal Alaska	417.9	76.5	494.4	23.5	518.0
Interior Alaska	189.7	53.0	242.7	9.5	252.2
Hawaii	6.3	1.5	7.8	1.1	9.0
Total, Alaska and Hawaii	613.8	131.1	744.9	34.2	779.1
Total, West	4,553.1	989.7	5,542.8	425.8	5,968.6
Total, all States	12,757.3	3,085.1	15,842.4	1,991.6	17,833.9

[a] Less than 50,000 dry tons.

Table 4.--Softwood tree biomass on timberland in the United States, by State and section, and ownership class, 1987

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Connecticut	0.0	1.4	1.4	0.0	8.7	8.7	10.1
Maine	0.9	11.1	12.0	162.0	161.7	323.7	335.7
Massachusetts	0.0	6.3	6.3	1.1	32.7	33.8	40.1
New Hampshire	8.8	4.9	13.7	11.5	58.1	69.6	83.3
Rhode Island	0.0	0.3	0.3	0.0	0.9	0.9	1.1
Vermont	2.9	4.7	7.6	4.0	39.1	43.1	50.7
Total, New England	12.5	28.6	41.2	178.5	301.2	479.7	520.9
Delaware	0.0	0.1	0.1	0.3	3.1	3.3	3.4
Maryland	0.0	1.9	1.9	0.9	14.1	15.1	17.0
New Jersey	0.0	4.3	4.3	0.0	11.0	11.0	15.3
New York	0.1	11.1	11.1	10.2	123.4	133.7	144.8
Pennsylvania	1.3	8.0	9.3	2.4	30.9	33.3	42.6
West Virginia	1.8	0.8	2.7	2.1	19.0	21.1	23.8
Total, Middle Atlantic	3.2	26.3	29.5	15.9	201.6	217.5	246.9
Michigan	15.4	23.8	39.2	12.2	56.4	68.6	107.8
Minnesota	8.7	29.2	37.8	4.1	28.6	32.7	70.6
North Dakota	0.0	(a)	(a)	0.0	(a)	(a)	(a)
South Dakota	17.0	2.4	19.4	0.4	7.1	7.5	26.9
Wisconsin	5.7	15.2	20.9	5.4	41.8	47.2	68.1
Total, Lake States	46.8	70.6	117.4	22.1	134.0	156.0	273.4
Illinois	0.1	0.1	0.2	(a)	1.9	1.9	2.2
Indiana	0.2	0.4	0.5	(a)	3.5	3.5	4.1
Iowa	0.0	(a)	(a)	0.0	0.2	0.2	0.2
Kansas	0.0	(a)	(a)	0.0	0.2	0.2	0.1
Kentucky	1.0	0.5	1.6	0.4	18.8	19.2	20.7
Missouri	1.3	0.3	1.6	0.2	9.9	10.1	11.8
Nebraska	0.2	0.2	0.4	0.0	2.7	2.7	3.1
Ohio	0.2	0.3	0.4	0.1	6.8	7.0	7.4
Total, Central States	2.9	1.8	4.7	0.7	44.2	44.9	49.6
Total, North	65.5	127.2	192.7	217.1	681.0	898.1	1,090.8
North Carolina	10.2	11.7	21.9	33.7	189.7	223.4	245.3
South Carolina	15.9	13.1	29.0	40.1	126.9	167.0	196.0
Virginia	6.4	7.3	13.7	24.3	92.7	117.0	130.7
Total, South Atlantic	32.5	32.1	64.6	98.1	409.3	507.4	572.0
Florida	19.4	26.2	45.6	61.0	101.8	162.8	208.4
Georgia	9.4	21.5	30.9	76.1	237.4	313.5	344.4
Total, East Gulf	28.8	47.7	76.5	137.1	339.2	476.3	552.8

(continued)

Table 4.--Softwood tree biomass on timberland in the United States, by State and section, and ownership class, 1987, continued

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Alabama	14.8	5.4	20.2	66.2	187.3	253.5	273.7
Mississippi	29.0	9.8	38.8	39.3	129.9	169.2	208.0
Tennessee	6.7	5.3	12.0	6.5	46.1	52.6	64.6
Total, Central Gulf	50.5	20.5	71.0	112.0	363.3	475.3	546.3
Arkansas	31.6	4.5	36.1	59.9	71.4	131.3	167.4
Louisiana	17.3	6.0	23.3	62.9	150.8	213.7	237.0
Oklahoma	3.5	1.3	4.8	7.7	9.7	17.4	22.2
Texas	25.4	2.8	28.2	50.3	95.7	146.0	174.2
Total, West Gulf	77.8	14.6	92.4	180.8	327.6	508.4	600.8
Total, South	189.6	114.9	304.5	528.0	1,439.4	1,967.4	2,271.9
Idaho	368.8	65.7	434.4	45.5	72.2	117.8	552.2
Montana	349.1	71.6	420.8	71.6	127.5	199.1	619.8
Wyoming	58.0	20.7	78.6	1.0	34.0	34.9	113.6
Total, N. Rocky Mountain	775.8	158.0	933.9	118.1	233.7	351.8	1,285.6
Arizona	74.0	38.2	112.2	0.0	1.3	1.3	113.4
Colorado	161.9	33.3	195.1	0.0	73.9	73.9	269.1
Nevada	2.8	0.3	3.1	0.0	3.2	3.2	6.3
New Mexico	58.1	14.7	72.8	0.1	32.3	32.4	105.2
Utah	44.5	8.5	53.0	0.0	12.0	12.0	65.0
Total, S. Rocky Mountain	341.3	94.9	436.2	0.1	122.7	122.8	559.0
California	412.4	24.3	436.7	130.0	221.6	351.7	788.4
Oregon	488.4	154.8	643.2	246.0	157.1	403.1	1,046.3
Washington	275.3	214.9	490.2	260.0	204.5	464.5	954.6
Total, Pacific Coast	1,176.1	394.0	1,570.1	636.0	583.2	1,219.2	2,789.3
Coastal Alaska	403.6	47.7	451.3	0.0	62.6	62.6	513.8
Interior Alaska	0.0	66.6	66.6	0.0	79.3	79.3	145.9
Hawaii	0.0	(a)	(a)	0.0	(a)	(a)	0.1
Total, Alaska and Hawaii	403.6	114.3	517.9	0.0	141.9	141.9	659.8
Total, West	2,696.8	761.2	3,458.0	754.3	1,081.4	1,835.7	5,293.8
Total, all States	2,951.9	1,003.4	3,955.3	1,499.5	3,201.8	4,701.3	8,656.5

[a] Less than 50,000 dry tons.

Table 5.--Hardwood tree biomass on timberland in the United States, by State and section, and ownership class, 1987

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Connecticut	0.0	8.2	8.2	0.0	50.7	50.7	58.9
Maine	0.7	8.8	9.5	128.4	128.2	256.6	266.1
Massachusetts	0.0	14.3	14.3	2.4	74.1	76.6	90.9
New Hampshire	13.2	7.4	20.6	17.3	87.7	105.0	125.6
Rhode Island	0.0	2.4	2.4	0.0	8.4	8.4	10.8
Vermont	7.1	11.6	18.8	10.0	97.1	107.1	125.9
Total, New England	21.1	52.7	73.8	158.2	446.3	604.4	678.2
Delaware	0.0	0.5	0.5	1.0	11.8	12.8	13.3
Maryland	0.0	11.5	11.5	5.5	84.6	90.1	101.6
New Jersey	0.0	8.9	8.9	0.0	23.0	23.0	31.8
New York	0.2	35.6	35.8	32.8	396.1	428.9	464.7
Pennsylvania	16.2	101.8	118.0	29.8	391.1	420.9	538.9
West Virginia	32.6	14.4	47.0	36.8	335.6	372.5	419.4
Total, Middle Atlantic	49.0	172.7	221.6	105.9	1,242.2	1,348.1	1,569.8
Michigan	50.6	78.4	129.0	40.2	185.7	225.9	354.9
Minnesota	28.8	96.7	125.5	13.6	95.0	108.6	234.1
North Dakota	0.0	1.4	1.4	0.0	5.7	5.7	7.0
South Dakota	1.7	0.2	1.9	(a)	0.7	0.7	2.6
Wisconsin	27.0	71.3	98.3	25.2	196.6	221.7	320.0
Total, Lake States	108.0	248.0	356.0	79.0	483.6	562.5	918.6
Illinois	7.6	5.5	13.0	0.4	121.4	121.8	134.8
Indiana	5.7	12.8	18.5	0.6	129.5	130.1	148.6
Iowa	0.0	3.0	3.0	0.0	40.2	40.2	43.3
Kansas	0.0	1.2	1.2	0.0	27.1	27.1	28.3
Kentucky	13.2	7.0	20.2	4.7	245.6	250.2	270.5
Missouri	32.0	8.7	40.7	5.7	248.0	253.7	294.3
Nebraska	0.5	0.6	1.1	0.0	7.9	7.9	9.0
Ohio	3.2	4.7	7.8	2.1	123.6	125.6	133.5
Total, Central States	62.2	43.3	105.5	13.4	943.3	956.8	1,062.2
Total, North	240.2	516.6	756.9	356.5	3,115.4	3,471.9	4,228.8
North Carolina	49.4	14.1	63.5	36.7	380.0	416.7	480.2
South Carolina	10.3	9.3	19.6	42.0	179.3	221.3	240.9
Virginia	52.1	20.8	72.9	29.9	386.6	416.5	489.4
Total, South Atlantic	111.8	44.2	156.0	108.6	945.9	1,054.5	1,210.5
Florida	6.2	24.2	30.4	41.2	102.1	143.3	173.7
Georgia	25.0	18.1	43.1	51.6	306.8	358.4	401.5
Total, East Gulf	31.2	42.3	73.5	92.8	408.9	501.7	575.2

(continued)

Table 5.--Hardwood tree biomass on timberland in the United States, by State and section, and ownership class, 1987, continued

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Alabama	13.0	13.9	26.9	69.5	330.6	400.1	427.0
Mississippi	29.0	24.9	53.9	52.9	324.4	377.3	431.2
Tennessee	26.8	31.7	58.5	41.4	414.4	455.8	514.3
Total, Central Gulf	68.8	70.5	139.3	163.8	1,069.4	1,233.2	1,372.5
Arkansas	62.0	35.2	97.2	77.0	272.5	349.5	446.7
Louisiana	12.1	28.8	40.9	68.8	259.2	328.0	368.9
Oklahoma	4.4	7.2	11.6	8.3	59.2	67.5	79.1
Texas	8.5	4.3	12.8	54.5	153.6	208.1	220.9
Total, West Gulf	87.0	75.5	162.5	208.6	744.5	953.1	1,115.6
Total, South	298.8	232.5	531.3	573.8	3,168.7	3,742.5	4,273.8
Idaho	5.1	0.9	6.1	0.6	1.0	1.6	7.7
Montana	3.5	0.7	4.2	0.7	1.3	2.0	6.3
Wyoming	3.0	1.1	4.1	(a)	1.8	1.8	5.9
Total, N. Rocky Mountain	11.7	2.7	14.4	1.4	4.0	5.4	19.8
Arizona	5.1	2.6	7.7	0.0	0.1	0.1	7.8
Colorado	30.4	6.3	36.7	0.0	13.9	13.9	50.6
Nevada	0.2	(a)	0.2	0.0	0.2	0.2	0.4
New Mexico	3.9	1.0	4.9	(a)	2.2	2.2	7.0
Utah	8.1	1.6	9.7	0.0	2.2	2.2	11.9
Total, S. Rocky Mountain	47.7	11.4	59.2	(a)	18.5	18.5	77.7
California	120.3	7.1	127.4	37.9	64.7	102.6	230.0
Oregon	49.0	15.5	64.6	24.7	15.8	40.5	105.0
Washington	35.5	27.7	63.1	33.5	26.3	59.8	122.9
Total, Pacific Coast	204.8	50.3	255.1	96.1	106.8	202.9	458.0
Coastal Alaska	3.2	0.4	3.6	0.0	0.5	0.5	4.1
Interior Alaska	0.0	48.5	48.5	0.0	57.8	57.8	106.3
Hawaii	0.0	4.3	4.3	0.0	4.6	4.6	8.9
Total, Alaska and Hawaii	3.2	53.2	56.4	0.0	62.9	62.9	119.3
Total, West	267.4	117.6	385.1	97.5	192.2	289.7	674.8
Total, all States	806.5	866.8	1,673.3	1,027.9	6,476.3	7,504.1	9,177.4

[a] Less than 50,000 dry tons.

Table 6.--Total tree biomass on timberland in the United States, by State and section, and ownership class, 1987

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Connecticut	0.0	9.6	9.6	0.0	59.4	59.4	69.0
Maine	1.6	19.9	21.5	290.3	290.0	580.3	601.8
Massachusetts	0.0	20.6	20.6	3.5	106.8	110.3	130.9
New Hampshire	22.0	12.3	34.3	28.8	145.8	174.6	208.9
Rhode Island	0.0	2.7	2.7	0.0	9.3	9.3	12.0
Vermont	10.0	16.3	26.3	14.1	136.2	150.3	176.6
Total, New England	33.6	81.3	114.9	336.7	747.4	1,084.1	1,199.1
Delaware	0.0	0.6	0.6	1.3	14.8	16.1	16.7
Maryland	0.0	13.5	13.5	6.4	98.7	105.1	118.6
New Jersey	0.0	13.1	13.1	0.0	34.0	34.0	47.2
New York	0.2	46.7	46.9	43.1	519.5	562.6	609.5
Pennsylvania	17.5	109.9	127.4	32.1	422.0	454.2	581.5
West Virginia	34.4	15.2	49.6	38.9	354.7	393.6	443.2
Total, Middle Atlantic	52.1	198.9	251.1	121.8	1,443.8	1,565.6	1,816.7
Michigan	65.9	102.2	168.1	52.4	242.1	294.5	462.6
Minnesota	37.5	125.9	163.3	17.7	123.6	141.3	304.6
North Dakota	0.0	1.4	1.4	0.0	5.7	5.7	7.1
South Dakota	18.7	2.7	21.3	0.4	7.8	8.2	29.5
Wisconsin	32.7	86.5	119.2	30.5	238.4	268.9	388.1
Total, Lake States	154.8	318.5	473.4	101.0	617.6	718.7	1,192.0
Illinois	7.7	5.5	13.2	0.4	123.3	123.8	137.0
Indiana	5.9	13.1	19.0	0.6	133.0	133.7	152.7
Iowa	0.0	3.0	3.0	0.0	40.5	40.5	43.5
Kansas	0.0	1.2	1.2	0.0	27.3	27.3	28.5
Kentucky	14.3	7.5	21.8	5.0	264.4	269.4	291.2
Missouri	33.2	9.0	42.3	5.9	257.9	263.8	306.1
Nebraska	0.7	0.8	1.4	0.0	10.6	10.6	12.0
Ohio	3.3	4.9	8.2	2.2	130.4	132.6	140.8
Total, Central States	65.1	45.1	110.2	14.2	987.5	1,001.7	1,111.8
Total, North	305.7	643.9	949.6	573.7	3,796.4	4,370.1	5,319.6
North Carolina	59.6	25.8	85.4	70.4	569.7	640.1	725.5
South Carolina	26.2	22.4	48.6	82.1	306.2	388.3	436.9
Virginia	58.5	28.1	86.6	54.2	479.3	533.5	620.1
Total, South Atlantic	144.3	76.3	220.6	206.7	1,355.2	1,561.9	1,782.5
Florida	25.6	50.4	76.0	102.2	203.9	306.1	382.1
Georgia	34.4	39.6	74.0	127.7	544.2	671.9	745.9
Total, East Gulf	60.0	90.0	150.0	229.9	748.1	978.0	1,128.0

(continued)

Table 6.--Total tree biomass on timberland in the United States, by State and section, and ownership class, 1987, continued

State and section	Public lands			Private lands			All ownerships
	National Forest	Other public	Total public	Forest industry	Other private	Total private	
	(Million dry tons)						
Alabama	27.8	19.3	47.1	135.7	517.9	653.6	700.7
Mississippi	58.0	34.7	92.7	92.2	454.3	546.5	639.2
Tennessee	33.5	37.0	70.5	47.9	460.5	508.4	578.9
Total, Central Gulf	119.3	91.0	210.3	275.8	1,432.7	1,708.5	1,918.8
Arkansas	93.6	39.7	133.3	136.9	343.9	480.8	614.1
Louisiana	29.4	34.8	64.2	131.7	410.0	541.7	605.9
Oklahoma	7.9	8.5	16.4	16.0	68.9	84.9	101.3
Texas	33.9	7.1	41.0	104.8	249.3	354.1	395.1
Total, West Gulf	164.8	90.1	254.9	389.4	1,072.1	1,461.5	1,716.4
Total, South	488.4	347.4	835.8	1,101.8	4,608.1	5,709.9	13,091.4
Idaho	373.9	66.6	440.5	46.2	73.2	119.4	559.9
Montana	352.7	72.4	425.0	72.4	128.7	201.1	626.1
Wyoming	61.0	21.8	82.7	1.0	35.7	36.7	119.4
Total, N. Rocky Mountain	787.5	160.7	948.2	119.5	237.7	357.2	1,305.5
Arizona	79.1	40.8	119.9	0.0	1.4	1.4	121.3
Colorado	192.3	39.5	231.8	0.0	87.8	87.8	319.7
Nevada	3.0	0.3	3.3	0.0	3.4	3.4	6.7
New Mexico	62.0	15.7	77.7	0.1	34.4	34.5	112.2
Utah	52.7	10.1	62.7	0.0	14.2	14.2	76.9
Total, S. Rocky Mountain	389.1	106.4	495.4	0.1	141.2	141.3	636.7
California	532.7	31.4	564.1	168.0	286.3	454.3	1,018.4
Oregon	537.4	170.3	707.7	270.7	172.8	443.6	1,151.3
Washington	310.8	242.5	553.3	293.4	230.8	524.3	1,077.6
Total, Pacific Coast	1,380.9	444.3	1,825.1	732.2	689.9	1,422.1	3,247.2
Coastal Alaska	406.8	48.1	454.9	0.0	63.1	63.1	518.0
Interior Alaska	0.0	115.2	115.2	0.0	137.1	137.1	252.2
Hawaii	0.0	4.3	4.3	0.0	4.6	4.6	9.0
Total, Alaska and Hawaii	406.8	167.6	574.4	0.0	204.8	204.8	779.1
Total, West	2,964.2	878.9	3,843.2	851.8	1,273.6	2,125.4	5,968.6
Total, all States	3,758.3	1,870.2	5,628.5	2,527.3	9,678.1	12,205.4	17,833.9

[a] Less than 50,000 dry tons.

Table 7.--Total forest biomass on timberland in the United States, by major species group, section, region, and class of material, 1987

Species group, section, and region	Biomass of live sound and cull trees	Other live tree biomass		Other forest biomass			Total biomass
		Stumps	Foliage	Seedlings	Saplings	Shrubs	
	(Million dry tons)						
Softwoods	520.9	8.1	(a)	(a)	78.5	(a)	607.5
Hardwoods	678.2	12.1	(a)	(a)	102.6	(a)	792.9
Total, New England	1,199.1	20.2	(a)	(a)	181.1	(a)	1,400.4
Softwoods	246.9	2.9	(a)	(a)	31.6	(a)	281.5
Hardwoods	1,569.8	21.6	(a)	(a)	225.0	(a)	1,816.4
Total, Middle Atlantic	1,816.7	24.5	(a)	(a)	256.6	(a)	2,097.9
Softwoods	273.5	20.3	43.8	2.1	105.6	(a)	445.1
Hardwoods	918.6	71.0	55.5	29.0	184.1	3.7	1,261.9
Total, Lake States	1,192.0	91.3	99.3	31.1	289.7	3.7	1,707.0
Softwoods	49.6	2.7	3.2	0.1	18.3	(a)	74.0
Hardwoods	1,062.2	78.5	30.3	10.8	266.2	2.1	1,450.1
Total, Central States	1,111.8	81.2	33.4	10.9	284.5	2.1	1,524.0
Softwoods	1,090.9	34.0	46.9	2.2	234.0	(a)	1,408.1
Hardwoods	4,228.8	183.2	85.8	39.8	777.9	5.8	5,321.2
Total, North	5,319.6	217.2	132.7	42.0	1,011.9	5.8	6,729.3

(continued)

Table 7.--Total forest biomass on timberland in the United States, by major species group, section, region, and class of material, 1987, continued

Species group, section, and region	Biomass of live sound and cull trees	Other live tree biomass		Other forest biomass			Total biomass
		Stumps	Foliage	Seedlings	Saplings	Shrubs	
	(Million dry tons)						
Softwoods	572.0	38.9	35.0	0.4	56.3	(a)	702.6
Hardwoods	1,210.5	94.7	68.7	0.6	241.8	(a)	1,616.3
Total, South Atlantic	1,782.5	133.6	103.7	1.0	298.1	(a)	2,318.9
Softwoods	552.8	41.3	32.1	0.5	65.0	(a)	691.7
Hardwoods	575.2	46.1	34.1	0.4	133.0	(a)	788.8
Total, East Gulf	1,128.0	87.4	66.2	0.9	198.0	(a)	1,480.5
Softwoods	546.3	27.2	18.7	(a)	55.2	(a)	647.4
Hardwoods	1,372.5	51.8	26.0	(a)	252.6	(a)	1,702.9
Total, Central Gulf	1,918.8	79.0	44.7	(a)	307.8	(a)	2,350.3
Softwoods	600.8	22.9	22.5	(a)	51.0	(a)	697.2
Hardwoods	1,115.6	53.0	34.4	(a)	190.7	(a)	1,393.7
Total, West Gulf	1,716.4	75.9	56.9	(a)	241.7	(a)	2,090.9
Softwoods	2,271.9	130.3	108.3	0.9	227.5	(a)	2,738.9
Hardwoods	4,273.8	245.6	163.2	1.0	818.1	(a)	5,501.7
Total, South	6,545.7	375.9	271.5	1.9	1,045.6	(a)	8,240.6

(continued)

Table 7.--Total forest biomass on timberland in the United States, by major species group, section, region, and class of material, 1987, continued

Species group, section, and region	Biomass of live sound and cull trees	Other live tree biomass		Other forest biomass			Total biomass
		Stumps	Foliage	Seedlings	Saplings	Shrubs	
	(Million dry tons)						
Softwoods	1,285.6	(a)	(a)	(a)	80.9	(a)	1,366.5
Hardwoods	19.8	(a)	(a)	(a)	1.4	(a)	21.2
Total, N. Rocky Mountain	1,305.5	(a)	(a)	(a)	82.3	(a)	1,387.8
Softwoods	559.0	(a)	(a)	(a)	24.6	(a)	583.6
Hardwoods	77.7	(a)	(a)	(a)	4.5	(a)	82.2
Total, S. Rocky Mountain	636.7	(a)	(a)	(a)	29.1	(a)	665.8
Softwoods	2,789.3	(a)	(a)	(a)	128.6	(a)	2,917.8
Hardwoods	458.0	(a)	(a)	(a)	56.6	(a)	514.5
Total, Pacific Coast	3,247.2	(a)	(a)	(a)	185.1	(a)	3,432.3
Softwoods	659.8	16.0	8.0	1.4	35.3	(a)	720.4
Hardwoods	119.3	2.1	1.0	0.3	51.9	75.9	250.6
Total, Alaska and Hawaii	779.1	18.0	9.0	1.7	87.3	75.9	971.0
Softwoods	5,293.8	16.0	8.0	1.4	269.4	(a)	5,588.4
Hardwoods	674.8	2.1	1.0	0.3	114.4	75.9	868.5
Total, West	5,968.6	18.0	9.0	1.7	383.8	75.9	6,457.0
Softwoods	8,656.5	180.3	163.2	4.5	730.9	(a)	9,735.4
Hardwoods	9,177.4	430.9	250.0	41.2	1,710.4	81.6	11,691.5
Total, all regions	17,833.9	611.2	413.2	45.6	2,441.3	81.6	21,426.9

[a] Data unavailable.

Table 8.--Tree biomass per acre on forest land in the United States, by major species group, section, region, and land class, 1987

Species group, section, and region	Timberland					Other forest land	Total forest land
	Live sound trees			Live cull trees	Total		
	Tree boles	Tree tops	Total				
	(Dry tons per acre)						
Softwoods	10.90	4.09	14.99	1.52	16.51	(a)	(a)
Hardwoods	13.10	4.91	18.01	3.49	21.49	(a)	(a)
Total, New England	24.00	9.00	32.99	5.00	38.00	(a)	(a)
Softwoods	3.59	1.20	4.79	0.30	5.09	(a)	(a)
Hardwoods	22.75	7.31	30.05	2.28	32.34	(a)	(a)
Total, Middle Atlantic	26.33	8.51	34.84	2.58	37.42	(a)	(a)
Softwoods	4.58	0.92	5.51	0.26	5.76	(a)	(a)
Hardwoods	13.18	4.09	17.28	2.09	19.36	(a)	(a)
Total, Lake States	17.77	5.02	22.78	2.34	25.13	(a)	(a)
Softwoods	0.82	0.27	1.08	0.08	1.16	(a)	(a)
Hardwoods	15.35	4.39	19.74	5.16	24.90	(a)	(a)
Total, Central States	16.17	4.66	20.82	5.24	26.06	(a)	(a)
Softwoods	4.53	1.42	5.95	0.46	6.41	(a)	(a)
Hardwoods	16.44	5.24	21.67	3.17	24.85	(a)	(a)
Total, North	20.96	6.66	27.62	3.63	31.25	(a)	(a)

(continued)

Table 8.--Tree biomass per acre on forest land in the United States, by major species group, section, region, and land class, 1987, continued

Species group, section, and region	Timberland					Other forest land	Total forest land
	Live sound trees			Live cull trees	Total		
	Tree boles	Tree tops	Total				
	(Dry tons per acre)						
Softwoods	11.06	1.24	12.30	0.14	12.44	0.60	12.15
Hardwoods	20.19	3.01	23.21	3.12	26.33	7.00	25.86
Total, South Atlantic	31.25	4.25	35.51	3.26	38.77	7.60	38.02
Softwoods	12.69	1.50	14.19	0.12	14.31	1.50	13.68
Hardwoods	10.86	1.64	12.50	2.40	14.89	1.80	14.25
Total, East Gulf	23.55	3.13	26.69	2.52	29.21	3.30	27.93
Softwoods	8.42	1.59	10.01	0.59	10.60	0.00	10.60
Hardwoods	14.95	5.06	20.01	6.59	26.60	0.00	26.60
Total, Central Gulf	23.39	6.66	30.05	7.20	37.24	0.00	37.24
Softwoods	10.41	1.84	12.25	0.45	12.70	1.60	12.60
Hardwoods	12.46	4.54	17.01	6.51	23.50	19.00	21.60
Total, West Gulf	22.86	6.37	29.24	6.95	36.19	20.60	35.01
Softwoods	10.49	1.55	12.03	0.34	12.38	1.41	11.97
Hardwoods	14.77	3.69	18.46	4.82	23.28	12.13	22.87
Total, South	25.26	5.24	30.50	5.16	35.66	13.54	34.85

(continued)

Table 8.--Tree biomass per acre on forest land in the United States, by major species group, section, region, and land class, 1987, continued

Species group, section, and region	Timberland					Other forest land	Total forest land
	Live sound trees			Live cull trees	Total		
	Tree boles	Tree tops	Total				
	(Dry tons per acre)						
Softwoods	24.60	7.25	31.84	6.42	38.26	(a)	(a)
Hardwoods	0.39	0.10	0.48	0.11	0.59	(a)	(a)
Total, N. Rocky Mountain	24.98	7.34	32.32	6.53	38.85	(a)	(a)
Softwoods	15.33	5.39	20.72	2.57	23.28	(a)	(a)
Hardwoods	2.13	0.45	2.58	0.66	3.24	(a)	(a)
Total, S. Rocky Mountain	17.46	5.84	23.29	3.23	26.52	(a)	(a)
Softwoods	42.28	7.24	49.52	0.91	50.43	(a)	(a)
Hardwoods	6.19	1.29	7.48	0.80	8.28	(a)	(a)
Total, Pacific Coast	48.47	8.53	57.00	1.71	58.71	(a)	(a)
Softwoods	31.80	6.78	38.58	1.50	40.08	(a)	(a)
Hardwoods	5.48	1.19	6.67	0.58	7.25	(a)	(a)
Total, Alaska and Hawaii	37.28	7.96	45.25	2.08	47.33	(a)	(a)
Softwoods	31.35	6.84	38.19	2.73	40.92	(a)	(a)
Hardwoods	3.84	0.81	4.65	0.57	5.22	(a)	(a)
Total, West	35.19	7.65	42.84	3.29	46.13	(a)	(a)
Softwoods	13.98	2.92	16.90	1.02	17.92	(a)	(a)
Hardwoods	12.43	3.47	15.90	3.10	19.00	(a)	(a)
Total, all regions	26.41	6.39	32.79	4.12	36.91	(a)	(a)

[a] Data unavailable.