



Forest Service - U.S. Department of Agriculture  
Southeastern Forest Experiment Station  
Asheville, North Carolina

## FOREWORD

This report highlights the principal findings of the fourth Forest Survey of the timber resource in Northwest Florida. The survey was started in July 1968 and completed in March 1969. Findings of the three previous surveys, completed in 1934, 1949, and 1959, provide the basis for measuring changes that have occurred and trends that have developed over the past 35 years. However, in this report, the primary emphasis is on the changes and trends that have taken place since the last survey.

Forest Survey, authorized by the McSweeney-McNary Forest Research Act of May 22, 1928, is a continuing nationwide undertaking by the regional experiment stations of the Forest Service, U.S.D.A. In Florida, Georgia, North Carolina, South Carolina, and Virginia, Forest Survey is an activity of the Southeastern Forest Experiment Station, with headquarters at Asheville, North Carolina. The general objective is to inventory periodically the forest lands, their extent, condition, and volume of timber, and to ascertain rates of forest growth and depletion. It is necessary to keep this basic information up to date to provide a sound basis for the formulation of forest policies and programs.

The 16-county area covered by this report is one of four Survey units in Florida. Comparable reports for the other three units will be issued as the Statewide survey progresses. When completed, this survey will provide updated statistics on the timber resource for all of Florida.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the Florida Forest Service in the collection of the field data.

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*Forest Statistics*  
*for*  
*Northwest Florida*  
**1969**

by  
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## HIGHLIGHTS

Since 1959 in Northwest Florida--

- no significant change has occurred in the total area of commercial forest land. Commercial forests still occupy 5.7 million acres, or about 79 percent, of the total land in this 16-county area. The reversion of some 320,000 acres of former agricultural land to forest just about offset the loss of commercial forests to other land uses. Forestry activity, however, has changed the timber scene over the past 10 years, as shown below.
- over one-half million acres have been artificially reforested. In fact, about one out of every six acres of commercial forest now shows evidence of artificial reforestation if all plantings are included regardless of age. Most of the planting has been slash pine. The slash pine forest type has increased by 34 percent, and is now the leading type with 1.7 million acres. Extensive areas formerly occupied by scrub oaks have been converted to pine. The scrub oak forest type has been reduced about 300,000 acres, or by over one-third.
- nonstocked forest land has been reduced by half, from 1.4 to 0.7 million acres. Average stand density of all live trees 5.0 inches d.b.h. and larger is now 41 square feet per acre, compared to 36 square feet in 1959 and 30 square feet in 1949. In spite of the buildup in average stand density, one out of every two acres is still either nonstocked or poorly stocked.
- little change has occurred in the forest ownership pattern except for a 9-percent reduction in the amount of farm woodland. Apparently, about 96,000 acres of farm woodland were either cleared or shifted into forest industry or other private ownership. About 4.5 million acres, or over 78 percent, of the commercial forest lands are privately owned, and forest industry owns about 2.0 million acres of this total. Practically all of the publicly owned forest land is in three holdings: Apalachicola National Forest, Eglin Air Force Base, and the Blackwater River State Forest.
- volume of softwood growing stock has increased by 470 million cubic feet, or almost 28 percent. This means that the rate of increase between the two previous surveys has been sustained. All of the softwood species showed gains in volume, but slash pine accounted for 56 percent of the softwood increase and is now almost equal to longleaf pine in terms of inventory volume. Cypress made the smallest gain. Volume of softwood sawtimber has increased by one-third, from 4.8 to almost 6.5 billion board feet.

--volume of hardwood growing stock has increased by 130 million cubic feet, or less than 10 percent. This was double the rate of increase between the two previous surveys. Tupelo and blackgum accounted for half of the hardwood increase. Hickory was the only hardwood species that showed a significant reduction in volume. Volume of hardwood sawtimber increased 13 percent, from 3.3 to 3.7 billion board feet.

In 1968--

--net growth of growing stock exceeded removals by an estimated 59 million cubic feet, or 56 percent. Over 70 percent of this growth over removals was pine. By ownership, 47 percent of the growth over removals was on public lands, 19 percent on forest-industry lands, and the remaining 34 percent on farmer-owned and other private lands.

--net growth of sawtimber exceeded removals by an estimated 214 million board feet, or 61 percent. Here again, over 70 percent of this growth over removals was pine. By ownership, 52 percent of the growth over removals was on public lands, 16 percent on forest industry lands, and the remaining 32 percent on farmer-owned and other private lands.

--removals of growing stock totaled 105 million cubic feet, which was roughly double the volume of removals in 1958. About 43 percent of all timber removals occurred on forest-industry lands, although these lands comprise only one-third of the commercial forests. Pulpwood is the leading product removed in terms of volume, and yearly reports also show that the annual pulpwood harvest has doubled in Northwest Florida over the past 10 years.

--mortality of growing stock totaled over 15 million cubic feet, which was well below the estimate of mortality in 1958. It was still enough mortality to reduce gross growth by about 8 percent. Windthrow, lightning, and scattered incidents of pine bark beetles were the leading identifiable causes of death; however, fire, disease, and suppression have also taken their toll.

## HOW THE FOREST SURVEY IS MADE

The method of survey is essentially a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented to permit adding any combination of counties together until the total is large enough to meet the desired degree of reliability. The basic steps of the survey procedure were as follows:

1. In 14 of the 16 counties, initial estimates of forest and nonforest areas were based on the classification of 23,680 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 2,318 of these 16-point clusters were ground checked, and a linear regression was fitted to the data to develop the relationship between the photo and ground classification of the subsample. This procedure provided a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassifications.
2. In 2 of the 16 counties, aerial photography available was considered to be outdated. Estimates of forest and nonforest areas were determined by direct aerial observation of 9,381 sample points from fixed-wing aircraft along flight lines 2 miles apart. An interval timer was used to determine the sample points.
3. Estimates of timber volume and forest classifications were based on measurements recorded at 1,713 ground sample locations systematically distributed within the commercial forest land. A 10-point cluster of plots systematically spaced on an acre were measured at each of these sample locations using a basal area factor of 37.5 square feet per acre. Trees less than 5.0 inches d.b.h. were tallied on fixed-radius plots around the point centers.
4. Equations prepared from detailed measurements collected on the trees tallied at 1 out of every 20 sample locations were used to compute the volumes of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on standing trees required to construct the volume equations. The same 5-percent subsample of plots used for the tree-volume study also served as a quality control of field measurements. Felled trees were measured at active cutting operations to provide utilization factors for product and species groups and to supplement the standing tree-volume study.
5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,268 permanent sample plots which were established in the third survey.

6. Ownership information was collected from local contacts, correspondence, and public records. In those counties where the sample missed a particular ownership class, temporary sample plots were added and measured to describe the forest conditions within the ownership class.
7. All field data were sent to Asheville for editing and were punched in cards and stored on magnetic tape for machine computing, sorting, and tabulation. Final estimates were based on statistical summaries of the data.

#### RELIABILITY OF THE DATA

Statistical analysis of these data indicates the following sampling errors:

	<u>Percent</u>
Per million acres of commercial forest land - - - - -	1.12
Per billion cubic feet of growing stock - - - - -	5.39
Per billion cubic feet of net annual growth - - - - -	1.06
Per billion cubic feet of annual removals - - - - -	2.66

Sampling errors for county and unit totals,<sup>1/</sup> in terms of one standard error

County	Commercial forest area	Cubic-foot volume of growing stock		
		Inventory	Growth	Removals
----- Sampling error <sup>2/</sup> -----				
Bay	1.65	14.42	13.11	28.75
Calhoun	1.32	12.68	13.36	32.69
Escambia	2.63	11.42	9.54	24.76
Franklin	2.29	15.11	12.85	35.31
Gadsden	2.75	11.01	10.34	38.75
Gulf	1.30	14.32	11.92	45.73
Holmes	3.15	14.05	12.65	36.57
Jackson	1.82	10.33	11.37	26.05
Jefferson	1.56	9.60	9.97	30.54
Leon	2.45	9.30	8.45	30.71
Liberty	0.64	8.69	8.07	25.30
Okaloosa	1.00	10.38	9.65	33.96
Santa Rosa	1.96	9.16	8.12	26.41
Wakulla	0.89	8.03	7.87	47.34
Walton	2.06	9.74	8.99	26.97
Washington	1.95	13.81	16.61	34.03
Unit total	0.47	2.83	2.62	8.22

<sup>1/</sup> Sampling error of breakdowns of county and unit totals may be computed with the following formula:

$$e = \frac{(SE) \sqrt{(\text{Specified volume or area})}}{\sqrt{(\text{Volume or area total in question})}}$$

Where: e = Sampling error of the volume or area total in question.

SE = Specified sampling error in table.

<sup>2/</sup> By random-sampling formula (in percent).

## DEFINITIONS OF TERMS

Acceptable trees.--Growing-stock trees of commercial species that meet specified standards of size and quality, but not qualifying as desirable trees.

Basal area.--The area in square feet of the cross section at breast height of a single tree or of all the trees in a stand, usually expressed as square feet of basal area per acre.

Commercial forest land.--Forest land producing or capable of producing crops of industrial wood and not withdrawn from timber utilization.

Commercial species.--Tree species presently or prospectively suitable for industrial wood products.

Cropland.--Land under cultivation within the past 24 months, including orchards and land in soil-improving crops, but excluding land cultivated in developing improved pasture. Also includes idle farmland.

Desirable trees.--Growing-stock trees of commercial species having no serious defects in quality limiting present or prospective use for timber products, of relatively high vigor, and containing no pathogens that may result in death or serious deterioration before rotation age.

Diameter class.--A classification of trees based on diameter outside bark, measured at breast height ( $4\frac{1}{2}$  feet above the ground). D.b.h. is the common abbreviation for "diameter at breast height." Two-inch diameter classes are commonly used in Forest Survey, with the even inch the approximate midpoint for a class. For example, the 6-inch class includes trees 5.0 through 6.9 inches d.b.h., inclusive.

Farm.--Either a place operated as a unit of 10 or more acres from which the sale of agricultural products totaled \$50 or more annually, or a place operated as a unit of less than 10 acres from which the sale of agricultural products for the year amounted to at least \$250.

Farm operator.--A person who operates a farm, either doing the work himself or directly supervising the work.

Farmer-owned lands.--Lands owned by farm operators.

Forest industry lands.--Lands owned by companies or individuals operating wood-using plants.

Forest land.--Land at least 16.7 percent stocked by forest trees of any size, or formerly having had such tree cover, and not currently developed for nonforest use.

Forest type.--A classification of forest land based upon the species forming a plurality of live-tree stocking.

Longleaf-slash pine.--Forests in which longleaf or slash pine, singly or in combination, comprises a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Loblolly-shortleaf pine.--Forests in which loblolly pine, shortleaf pine, or other southern yellow pines, except longleaf or slash pine, singly or in combination, comprises a plurality of the stocking. (Common associates include oak, hickory, and gum.)

Oak-pine.--Forests in which hardwoods (usually upland oaks) comprise a plurality of the stocking but in which pines comprise 25 to 50 percent of the stocking. (Common associates include gum, hickory, and yellow-poplar.)

Oak-hickory.--Forests in which upland oaks or hickory, singly or in combination, comprise a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include yellow-poplar, elm, maple, and black walnut.)

Oak-gum-cypress.--Bottomland forests in which tupelo, blackgum, sweetgum, oaks, or southern cypress, singly or in combination, comprises a plurality of the stocking, except where pines comprise 25 to 50 percent, in which case the stand would be classified oak-pine. (Common associates include cottonwood, willow, ash, elm, hackberry, and maple.)

Elm-ash-cottonwood.--Forests in which elm, ash, or cottonwood, singly or in combination, comprises a plurality of the stocking. (Common associates include willow, sycamore, beech, and maple.)

Gross growth.--Annual increase in net volume of trees in the absence of cutting and mortality.

Growing-stock trees.--Live trees of commercial species qualifying as desirable or acceptable trees.

Growing-stock volume.--Net volume in cubic feet of growing-stock trees 5.0 inches d.b.h. and over from a 1-foot stump to a minimum 4.0-inch top diameter outside bark of the central stem, or to the point where the central stem breaks into limbs. (Net volume in primary forks is included.)

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

Soft hardwoods.--Soft-textured hardwoods such as boxelder, red and silver maple, buckeye, hackberry, loblolly-bay, silverbell (in mts.), butternut, sweetgum, yellow-poplar, cucumbertree, magnolia, sweetbay, water tupelo, blackgum, sycamore, cottonwood, black cherry, willow, basswood, and elm.

Hard hardwoods.--Hard-textured hardwoods such as Florida and sugar maple, birch, hickory, dogwood, persimmon (forest grown), beech, ash, honeylocust, holly, black walnut, mulberry, all commercial oaks, and black locust.

Idle farmland.--Includes former croplands, orchards, improved pastures and farm sites not tended within the past two years, and presently less than 16.7 percent stocked with trees.

Improved pasture.--Land currently improved for grazing by cultivation, seeding, irrigation, or clearing of trees or brush.

Industrial wood.--All roundwood products except fuelwood.

Land area.--The area of dry land and land temporarily or partly covered by water such as marshes, swamps, and river flood plains (omitting tidal flats below mean high tide); streams, sloughs, estuaries, and canals less than 1/8 of a statute mile in width; and lakes, reservoirs, and ponds less than 40 acres in area.

Logging residues.--The unused portions of trees cut or killed by logging.

Miscellaneous Federal lands.--Federal lands other than National Forests, lands administered by the Bureau of Land Management, and Indian lands.

Miscellaneous private lands - corporate.--Lands owned by private corporations other than forest industry.

Miscellaneous private lands - individual.--Privately owned lands other than forest-industry, farmer-owned, or corporate lands.

Mortality.--Number or sound-wood volume of live trees dying from natural causes during a specified period.

National Forest land.--Federal lands which have been legally designated as National Forests or purchase units, and other lands under the administration of the Forest Service, including experimental areas and Bankhead-Jones Title III lands.

Net annual growth.--The increase in volume for a specific year.

Net volume.--Gross volume less deductions for rot, sweep, or other defect affecting use for timber products.

Noncommercial forest land.--(a) Unproductive forest land incapable of yielding crops of industrial wood because of adverse site conditions, and (b) productive-reserved forest land.

Noncommercial species.--Tree species of typically small size, poor form, or inferior quality which normally do not develop into trees suitable for industrial wood products.

Nonforest land.--Land that has never supported forests and lands formerly forested where timber management is precluded by development for other uses.

Nonstocked land.--Commercial forest land less than 16.7 percent stocked with growing-stock trees.

Other Federal lands.--Federal lands other than National Forests, including lands administered by the Bureau of Land Management, Bureau of Indian Affairs, and other Federal agencies.

Other public lands.--Publicly-owned lands other than National Forests.

Overstocked areas.--Areas where growth of trees is significantly reduced by excessive numbers of trees.

Poletimber trees.--Growing-stock trees of commercial species at least 5.0 inches in d.b.h. but smaller than sawtimber size.

Productive-reserved forest land.--Forest land sufficiently productive to qualify as commercial forest land, but withdrawn from timber utilization through statute or administrative designation.

Rangeland.--Land on which the natural plant cover is composed principally of native grasses, forbs, or shrubs valuable for forage.

Rotten trees.--Live trees of commercial species that do not contain at least one 12-foot saw log now or prospectively, primarily because of rot or missing sections, and with less than one-third of the gross tree volume in sound material.

Rough trees.--(a) Live trees of commercial species that do not contain at least one 12-foot saw log now or prospectively, primarily because of roughness, poor form, splits, and cracks, and with less than one-third of the gross tree volume in sound material, and (b) all live trees of non-commercial species.

Salvable dead trees.--Standing or down dead trees that are considered merchantable by Forest Survey standards.

Saplings.--Live trees 1.0 inch to 5.0 inches in diameter at breast height.

Saw log.--A log meeting minimum standards of diameter, length, and defect, including logs at least 8 feet long, sound and straight, and with a minimum diameter inside bark for softwoods of 6 inches (8 inches for hardwoods).

Saw-log portion.--That part of the bole of sawtimber trees between the stump and the saw-log top.

Saw-log top.--The point on the bole of sawtimber trees above which a saw log cannot be produced. The minimum saw-log top is 7.0 inches d.o.b. for softwoods and 9.0 inches d.o.b. for hardwoods.

Sawtimber trees.--Live trees of commercial species containing at least a 12-foot saw log and with at least one-third of the gross board-foot volume between the 1-foot stump and minimum saw-log top sound. Softwoods must be at least 9.0 inches and hardwoods at least 11.0 inches in diameter at breast height.

Sawtimber volume.--Net volume of the saw-log portion of live sawtimber in board-foot International 1/4-inch rule.

Seedlings.--Live trees less than 1.0 inch in diameter at breast height that are expected to survive and develop.

Site class.--A classification of forest land in terms of inherent capacity to grow crops of industrial wood based on fully stocked natural stands.

Class 1.--Sites capable of producing 165 or more cubic feet per acre annually.

Class 2.--Sites capable of producing 120 to 165 cubic feet per acre annually.

Class 3.--Sites capable of producing 85 to 120 cubic feet per acre annually.

Class 4.--Sites capable of producing 50 to 85 cubic feet per acre annually.

Class 5.--Sites incapable of producing 50 cubic feet per acre annually, but excluding unproductive sites.

Softwoods.--Coniferous trees, usually evergreen, having needles or scale-like leaves.

Pines.--Yellow pine species which include loblolly, longleaf, slash, shortleaf, pitch, Virginia, Table-Mt., sand, and spruce pine.

Other softwoods.--White pine, hemlock, cypress, eastern redcedar, whitecedar, spruce, and fir.

Stand-size class.--A classification of forest land based on the size class of growing-stock trees on the area.

Sawtimber stands.--Stands at least 16.7 percent stocked with growing-stock trees, with half or more of total stocking in sawtimber or poletimber trees, and with sawtimber stocking at least equal to poletimber stocking.

Poletimber stands.--Stands at least 16.7 percent stocked with growing-stock trees of which half or more of this stocking is in poletimber and sawtimber trees, and with poletimber stocking exceeding that of sawtimber.

Sapling-seedling stands.--Stands at least 16.7 percent stocked with growing-stock trees of which more than half of the stocking is saplings and seedlings.

State, county, and municipal lands.--Lands owned by States, counties, and local public agencies or municipalities, or lands leased to these governmental units for 50 years or more.

Stocking.--The degree of occupancy of land by trees, measured by basal area or the number of trees in a stand and spacing in the stand, compared to a minimum standard, depending on tree size, to fully utilize the growth potential of the land. (See page 12.)

Timber removals.--The net volume of growing-stock trees removed from the inventory by harvesting; cultural operations, such as stand improvement; land clearing, or changes in land use.

Unproductive forest land.--Forest land incapable of producing 20 cubic feet per acre of industrial wood under natural conditions, because of adverse site conditions.

Upper-stem portion.--That part of the main stem or fork of sawtimber trees above the saw-log top to a minimum top diameter of 4.0 inches outside bark or to the point where the main stem or fork breaks into limbs.

Urban and other areas.--Areas within the legal boundaries of cities and towns; suburban areas developed for residential, industrial, or recreational purposes; school yards; cemeteries; roads; railroads; airports; beaches; powerlines and other rights-of-way; or other nonforest land not included in any other specified land use class.

Stocking standard

D.b.h. class	Minimum number of trees per acre for full stocking	Minimum basal area per acre for full stocking	Percent stocking assigned each tally tree <sup>1/</sup>
Seedlings	600	--	5.0
2	560	--	5.4
4	460	--	6.5
6	340	67	5.8
8	240	84	4.8
10	155	85	4.3
12	115	90	4.0
14	90	96	3.8
16	72	101	3.7
18	60	106	3.5
20	51	111	3.5

<sup>1/</sup> Trees less than 5.0 inches d.b.h. were tallied on a 10-point cluster of circular, 1/300-acre plots at each sample location. Trees 5.0 inches d.b.h. and larger were tallied on a 10-point cluster of variable plots using a basal area factor of 37.5 at each sample location.

Overstocked--Over 130 percent  
 Fully stocked--100-130 percent  
 Medium stocked--60-99 percent  
 Poorly stocked--16.7-59 percent  
 Nonstocked--Less than 16.7 percent

Cubic feet of wood per average cord  
 (excluding bark)

D.b.h. class	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
6	61.2	61.0	68.2	60.0	60.0
8	68.8	68.1	76.0	68.4	68.4
10	73.7	73.0	81.4	73.4	73.4
12	77.1	76.6	85.3	76.4	76.4
14	79.9	79.4	88.2	78.4	78.4
16	81.5	81.6	90.4	79.8	79.8
18	83.0	83.3	92.3	80.8	80.8
20	83.3	84.7	93.8	81.6	81.6
22	83.5	86.0	95.1	82.1	82.1
24+	85.4	87.0	96.2	82.6	82.6
Average	73.8	72.1	82.8	74.3	74.7

### COUNTY TABLES

The county tables are intended for use in compiling forest resource estimates for groups of counties. Because the sampling procedure used by the Forest Survey in Northwest Florida was intended primarily to furnish inventory data for the Unit as a whole, individual county estimates have limited and variable accuracy. As county totals are broken down by various subdivisions, the possibility of error increases and is greatest for the smallest items. The order of this increase can be computed with the formula on page 5.

Table 1.--Area, by land class and county, 1969

County	All land <sup>1/</sup>	Forest land			Nonforest land <sup>2/</sup>
		Total	Commercial forest	Unproductive forest	
----- <u>Thousand acres</u> -----					
Bay	494.8	423.2	422.5	0.2	71.6
Calhoun	362.1	309.6	309.6	--	52.5
Escambia	417.4	281.7	279.5	1.7	135.7
Franklin	348.8	307.0	306.2	0.7	41.8
Gadsden	328.1	229.6	229.6	--	98.5
Gulf	363.2	334.2	332.4	1.3	29.0
Holmes	309.0	203.7	203.7	--	105.3
Jackson	601.1	340.5	338.9	--	260.6
Jefferson	384.4	275.2	275.2	--	109.2
Leon	430.5	319.0	318.4	--	111.5
Liberty	540.2	525.3	524.2	--	14.9
Okaloosa	586.8	471.3	470.7	--	115.5
Santa Rosa	649.8	531.5	531.5	--	118.3
Wakulla	395.8	349.0	348.6	--	46.8
Walton	686.9	544.5	537.5	6.9	142.4
Washington	387.1	306.9	306.7	--	80.2
<b>Total</b>	<b>7,286.0</b>	<b>5,752.2</b>	<b>5,735.2</b>	<b>10.8</b>	<b>1,533.8</b>

<sup>1/</sup> From U. S. Bureau of the Census, Land and Water Area of the United States, 1960.

<sup>2/</sup> Includes 62,400 acres of water according to Survey standards of area classification but defined by the Bureau of the Census as land.

<sup>3/</sup> Less than 50 acres.





Table 4.--Area of commercial forest land, by stand-size class and county, 1969

County	All stands	Stand-size class			Nonstocked areas
		Sawtimber	Poletimber	Sapling and seedling	
- - - - - Thousand acres - - - - -					
Bay	422.5	47.5	104.6	185.1	85.3
Calhoun	309.6	62.7	82.7	116.9	47.3
Escambia	279.5	110.4	58.7	97.6	12.8
Franklin	306.2	77.7	71.4	130.2	26.9
Gadsden	229.6	94.0	72.6	37.4	25.6
Gulf	332.4	77.9	77.0	132.9	44.6
Holmes	203.7	45.1	81.6	57.5	19.5
Jackson	338.9	75.3	105.9	119.9	37.8
Jefferson	275.2	137.3	63.5	66.6	7.8
Leon	318.4	133.0	99.9	64.8	20.7
Liberty	524.2	255.7	106.4	130.4	31.7
Okaloosa	470.7	160.7	80.0	110.9	119.1
Santa Rosa	531.5	150.4	146.0	173.7	61.4
Wakulla	348.6	139.4	117.7	71.2	20.3
Walton	537.5	126.7	149.6	173.2	88.0
Washington	306.7	87.2	56.0	96.8	66.7
Total	5,735.2	1,781.0	1,473.6	1,765.1	715.5

Table 5.--Area of commercial forest land, by site class and county, 1969

County	All classes	Site class				
		1	2	3	4	5
----- Thousand acres -----						
Bay	422.5	--	--	13.6	168.2	240.7
Calhoun	309.6	--	--	63.6	201.9	44.1
Escambia	279.5	--	--	22.7	213.1	43.7
Franklin	306.2	--	3.7	14.6	166.1	121.8
Gadsden	229.6	--	3.6	49.0	144.8	32.2
Gulf	332.4	--	--	11.8	149.0	171.6
Holmes	203.7	--	3.3	37.2	127.6	35.6
Jackson	338.9	--	9.5	48.0	233.0	48.4
Jefferson	275.2	--	20.5	65.1	181.8	7.8
Leon	318.4	--	13.3	82.7	180.0	42.4
Liberty	524.2	--	--	74.7	233.4	216.1
Okaloosa	470.7	--	3.0	44.6	195.1	228.0
Santa Rosa	531.5	--	2.8	52.9	325.9	149.9
Wakulla	348.6	--	7.3	45.6	209.6	86.1
Walton	537.5	3.8	3.6	73.4	289.6	167.1
Washington	306.7	--	3.1	32.9	174.7	96.0
Total	5,735.2	3.8	73.7	732.4	3,193.8	1,731.5

Table 6.--Area of commercial forest land, by stocking classes of growing-stock trees, by county, 1969

County	All classes	Stocking percentage <sup>1/</sup>				
		Over 130	100-130	60-99	16.7-59	Less than 16.7
----- Thousand acres -----						
Bay	422.5	--	17.2	143.7	176.3	85.3
Calhoun	309.6	--	24.4	124.3	113.6	47.3
Escambia	279.5	7.6	30.3	141.6	87.2	12.8
Franklin	306.2	--	48.5	107.3	123.5	26.9
Gadsden	229.6	3.6	27.1	122.7	50.6	25.6
Gulf	332.4	5.9	39.6	114.6	127.7	44.6
Holmes	203.7	--	25.6	82.5	76.1	19.5
Jackson	338.9	7.0	35.4	167.1	91.5	37.9
Jefferson	275.2	3.3	46.1	141.1	76.9	7.8
Leon	318.4	--	25.2	161.6	110.9	20.7
Liberty	524.2	6.4	81.0	222.4	182.7	31.7
Okaloosa	470.7	6.4	22.1	106.9	216.2	119.1
Santa Rosa	531.5	13.0	47.9	211.4	197.8	61.4
Wakulla	348.6	3.3	25.4	165.9	133.8	20.2
Walton	537.5	2.5	31.6	206.8	208.6	88.0
Washington	306.7	3.1	11.0	84.8	141.1	66.7
Total	5,735.2	62.1	538.4	2,304.7	2,114.5	715.5

<sup>1/</sup> See stocking standards on page 12.

Table 7.--Volume of sawtimber and growing stock on commercial forest land, by species group and county, 1969

County	Sawtimber				Growing stock							
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood		
	- Million board feet				- Million cubic feet <sup>1/</sup>							
✓ Bay	250.6	208.6	14.3	25.6	2.1	113.8	92.6	6.3	12.3	2.6		
✓ Calhoun	326.7	155.5	28.2	92.2	50.8	139.8	72.8	10.2	38.2	18.6		
Escambia	628.2	400.1	13.8	145.6	68.7	212.7	124.3	3.8	58.3	26.3		
Franklin	491.3	186.7	108.4	175.3	20.9	195.1	83.3	41.5	63.2	7.1		
Gadsden	607.2	280.3	3.1	211.3	112.5	199.3	72.1	0.7	80.8	45.7		
✓ Gulf	587.5	215.6	96.2	225.2	50.5	218.0	79.6	34.5	83.2	20.7		
✓ Holmes	277.9	137.1	11.9	91.4	37.5	121.8	56.3	5.0	44.9	15.6		
✓ Jackson	509.0	199.5	27.0	119.6	162.9	212.3	81.9	9.1	55.8	65.5		
Jefferson	708.4	321.0	61.0	166.2	160.2	255.8	103.0	25.1	77.2	50.5		
Leon	700.9	437.4	6.8	140.3	116.4	229.4	128.2	4.2	55.4	41.6		
Liberty	1,464.5	590.5	291.7	367.1	215.2	458.3	190.5	73.8	135.5	58.5		
✓ Okaloosa	705.4	536.6	49.6	53.5	65.7	232.9	160.0	16.1	33.6	23.2		
✓ Santa Rosa	1,060.3	762.8	107.3	141.1	49.1	362.9	231.5	33.0	77.8	20.6		
Wakulla	737.5	475.6	22.7	112.6	126.6	263.2	164.8	6.5	48.6	43.3		
✓ Walton	738.9	442.1	46.4	196.7	53.7	271.2	150.1	11.8	84.2	25.1		
✓ Washington	395.3	171.4	76.8	89.6	57.5	145.0	56.9	19.3	45.6	23.2		
Total	10,189.6	5,520.8	965.2	2,353.3	1,350.3	3,631.5	1,847.9	300.9	994.6	488.1		

<sup>1/</sup> Factors for converting to cords are shown on page 12.

Table 8.--Net annual growth of sawtimber and growing stock on commercial forest land,  
by species group and county, 1968

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Million board feet					Million cubic feet				
✓ Bay	24.9	23.5	0.5	0.8	0.1	7.6	6.9	0.1	0.4	0.2
✓ Calhoun	21.1	15.1	0.7	3.1	2.2	6.9	5.2	0.2	0.8	0.7
Escambia	34.2	27.2	0.2	4.4	2.4	10.9	8.7	0.1	1.2	0.9
Franklin	21.3	14.9	2.5	3.1	0.8	8.3	6.2	1.0	0.9	0.2
Gadsden	38.4	26.6	0.1	6.1	5.6	8.9	5.4	--	1.7	1.8
✓ Gulf	25.0	16.8	2.1	4.6	1.5	7.3	4.9	0.7	1.2	0.5
✓ Holmes	20.1	14.7	0.4	3.2	1.8	6.9	5.0	0.1	1.3	0.5
✓ Jackson	24.9	15.3	0.5	3.0	6.1	10.8	7.1	0.1	1.0	2.6
✓ Jefferson	32.3	21.1	0.8	5.3	5.1	10.3	6.6	0.3	1.7	1.7
Leon	38.9	29.8	0.3	3.9	4.9	9.6	6.9	0.1	1.2	1.4
Liberty	63.9	42.5	6.4	8.5	6.5	15.9	10.9	1.3	2.3	1.4
✓ Okaloosa	43.1	36.8	1.9	1.4	3.0	10.5	8.4	0.5	0.8	0.8
✓ Santa Rosa	62.2	52.4	3.0	4.5	2.3	17.7	14.2	0.8	2.0	0.7
Wakulla	43.0	34.2	0.5	3.1	5.2	11.7	9.1	0.1	1.0	1.5
✓ Walton	49.5	39.2	0.9	5.9	3.5	14.8	11.6	0.2	2.0	1.0
✓ Washington	20.5	14.4	1.1	2.9	2.1	6.0	3.9	0.3	0.8	1.0
Total	563.3	424.5	21.9	63.8	53.1	164.1	121.0	5.9	20.3	16.9

Table 9.--Annual removals of sawtimber and growing stock on commercial forest land,  
by species group and county, 1968

County	Sawtimber					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Million board feet	Million cubic feet								
✓ Bay	16.0	14.9	--	1.1	--	8.4	7.2	--	1.2	--
✓ Calhoun	12.6	7.8	--	1.1	3.7	3.7	2.5	--	0.2	1.0
Escambia	31.4	29.6	--	1.8	--	8.5	8.0	--	0.4	0.1
Franklin	10.2	8.9	--	--	1.3	3.3	2.4	0.3	0.3	0.3
Gadsden	19.8	11.7	--	3.0	5.1	5.1	3.0	--	0.9	1.2
✓ Gulf	7.4	3.5	--	1.6	2.3	2.3	1.2	--	0.5	0.6
✓ Holmes	15.7	8.9	--	0.4	6.4	5.4	3.3	--	0.1	2.0
✓ Jackson	26.4	11.7	--	6.3	8.4	8.5	4.9	--	1.5	2.1
✓ Jefferson	38.8	30.7	1.8	1.6	4.7	11.2	7.0	0.5	1.5	2.2
Leon	26.4	18.6	--	3.0	4.8	8.0	5.6	--	1.0	1.4
Liberty	17.7	8.3	2.2	4.2	3.0	6.1	3.6	0.4	1.2	0.9
✓ Okaloosa	19.3	18.8	--	0.5	--	6.0	4.8	--	1.2	--
✓ Santa Rosa	56.0	52.9	--	1.9	1.2	12.6	11.9	--	0.4	0.3
Wakulla	20.5	18.2	--	1.0	1.3	5.3	4.7	--	0.3	0.3
✓ Walton	12.9	10.9	--	0.7	1.3	5.0	3.9	--	0.5	0.6
✓ Washington	18.0	16.6	--	1.4	--	5.8	4.9	--	0.9	--
Total	349.1	272.0	4.0	29.6	43.5	105.2	78.9	1.2	12.1	13.0

Table 10.--Area of commercial forest land, by forest type and ownership class, 1969

Forest type	All ownerships	Ownership class				
		National Forest	Other public	Forest industry	Farmer	Misc. private
----- Thousand acres -----						
Softwood types:						
Longleaf pine	791.6	151.6	120.1	243.9	117.3	158.7
Slash pine	1,692.5	166.8	127.3	836.7	150.5	411.2
Loblolly pine	191.6	--	4.5	55.8	45.8	85.5
Shortleaf pine	34.5	--	--	6.8	10.3	17.4
Sand pine	99.3	--	40.5	13.8	3.3	41.7
Pond pine	100.9	54.1	--	24.2	8.4	14.2
Spruce pine	6.8	--	--	3.1	--	3.7
Total	2,917.2	372.5	292.4	1,184.3	335.6	732.4
Hardwood types:						
Oak pine	774.2	53.5	175.5	217.1	150.6	177.5
Oak-hickory	414.9	--	8.3	57.6	132.7	216.3
Southern scrub oak	519.8	6.3	145.0	96.0	64.2	208.3
Oak-gum-cypress	1,064.9	113.8	60.5	375.1	224.4	291.1
Elm-ash-cottonwood	44.2	--	--	22.7	13.9	7.6
Total	2,818.0	173.6	389.3	768.5	585.8	900.8
All types	5,735.2	546.1	681.7	1,952.8	921.4	1,633.2

Table 11.--Area of commercial forest land, by ownership and stocking classes of growing-stock trees, 1969

Ownership classes	All classes	Stocking percentage <sup>1/</sup>				
		Over 130	100-130	60-99	16.7-59	Less than 16.7
----- Thousand acres -----						
National Forest	546.1	3.3	66.7	214.5	230.9	30.7
Other public	681.7	12.2	36.0	198.3	288.8	146.4
Forest industry	1,952.8	18.1	226.5	831.0	690.0	187.2
Farmer	921.4	6.7	62.5	422.5	317.7	112.0
Misc. private	1,633.2	21.8	146.7	638.4	587.1	239.2
All ownerships	5,735.2	62.1	538.4	2,304.7	2,114.5	715.5

<sup>1/</sup> See stocking standards on page 12.

Table 12.--Volume of timber on commercial forest land,  
by class and species group, 1969

Class of timber	: All : species	: Pine	: Other : softwood	: Soft : hardwood	: Hard : hardwood
- - - - - <u>Million cubic feet</u> - - - - -					
Sawtimber trees:					
Saw-log portion	2,139.4	1,115.0	207.6	536.4	280.4
Upper-stem portion	232.0	97.9	14.5	80.0	39.6
Total	2,371.4	1,212.9	222.1	616.4	320.0
Poletimber trees	1,260.1	635.0	78.8	378.2	168.1
All growing-stock trees	3,631.5	1,847.9	300.9	994.6	488.1
Rough trees:					
Sawtimber-size trees	148.7	5.2	9.0	56.2	78.3
Poletimber-size trees	269.5	8.5	14.2	115.5	131.3
Total	418.2	13.7	23.2	171.7	209.6
Rotten trees:					
Sawtimber-size trees	110.0	0.8	16.9	62.3	30.0
Poletimber-size trees	18.9	0.8	3.0	11.0	4.1
Total	128.9	1.6	19.9	73.3	34.1
Salvable dead trees:					
Sawtimber-size trees	1.4	0.6	--	--	0.8
Poletimber-size trees	3.9	1.3	--	0.9	1.7
Total	5.3	1.9	--	0.9	2.5
Total, all timber	4,183.9	1,865.1	344.0	1,240.5	734.3

Table 13.--Number of growing-stock trees on commercial forest land, by species and diameter class, 1969

Species	Diameter class (inches at breast height)												29.0 and larger	
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger			
----- Thousand trees -----														
<b>Softwood:</b>														
Longleaf pine	94,201	34,619	25,949	18,366	10,939	3,251	766	263	36	12				
Slash pine	119,037	68,020	25,162	12,920	6,825	3,644	1,492	623	186	163				
Loblolly pine	23,049	8,298	5,380	3,562	2,344	1,590	1,018	467	227	160				
Shortleaf pine	3,642	1,755	782	472	309	163	66	39	47	9				
Pond pine	7,680	3,740	1,628	1,090	638	375	155	46	12	8				
Spruce pine	1,929	558	453	202	255	210	131	94	12	14				
Sand pine	6,325	2,690	1,971	816	528	227	72	16		5				
Baldcypress	6,296	2,674	986	698	466	637	319	305	76	114				
Pondcypress	22,897	8,332	6,646	3,432	2,140	1,279	596	303	78	86				
Atlantic white cedar	5,826	2,155	1,147	1,153	606	385	181	144	35	20				
Eastern redcedar	326	165	40	94	--	12	8	7	--	--				
Total softwoods	291,208	133,006	70,144	42,805	25,050	11,173	4,804	2,307	697	591				
<b>Hardwood:</b>														
Select white oaks <sup>1/</sup>	1,101	149	172	210	238	162	85	58	23	4				
Select red oaks <sup>2/</sup>	40	--	--	28	--	12	--	--	--	--				
Other white oaks	5,787	2,254	950	665	606	439	330	209	120	195				
Other red oaks	31,580	13,902	7,429	3,982	2,454	1,691	896	621	295	299				
Hickory	3,690	1,399	751	522	329	352	179	44	40	74				
Florida maple	454	80	123	88	83	35	38	7	--	--				
Soft maple	3,527	1,811	826	367	195	158	78	50	12	30				
Beech	271	70	--	40	48	26	18	23	6	37				
Sweetgum	12,805	5,409	2,881	1,718	1,237	747	393	206	89	120				
Tupelo and blackgum	45,541	15,017	10,057	7,334	4,987	3,220	2,159	1,332	731	651				
Ash	5,285	2,132	1,139	708	436	260	274	178	87	69				
Cottonwood	64	--	--	21	13	13	--	7	6	4				
Basswood	26	--	--	26	--	--	--	--	--	--				
Yellow-poplar	2,612	539	802	467	442	110	174	52	22	4				
Elm	1,838	768	452	321	110	113	39	21	12	--				
Sycamore	229	75	37	26	18	46	21	--	6	--				
Black cherry	359	234	45	44	19	--	9	8	--	--				
Sweetbay	25,321	10,738	5,478	4,048	2,708	1,161	695	307	107	75				
River birch	245	48	39	86	38	24	10	--	--	--				
Hackberry	546	51	176	94	61	46	81	22	11	4				
Other eastern hardwoods	4,475	2,105	860	499	373	348	157	72	29	25				
Total hardwoods	145,796	56,781	32,217	21,294	14,395	8,963	5,636	3,224	1,596	1,591				
All species	437,004	189,787	102,361	64,099	39,445	20,736	10,440	5,531	2,293	2,182				

<sup>1/</sup> Includes white and swamp chestnut oaks.  
<sup>2/</sup> Shumard oak.

Table 14.--Volume of all live trees on commercial forest land, by species and diameter class, 1969

Species	Diameter class (inches at breast height)											Million cubic feet
	All classes	5.0-6.9	7.0-8.9	9.0-10.9	11.0-12.9	13.0-14.9	15.0-16.9	17.0-18.9	19.0-20.9	21.0-28.9	29.0 and larger	
Softwood:												
Longleaf pine	758.1	89.5	165.7	212.9	182.4	73.2	22.0	9.7	2.0	0.7	--	--
Slash pine	720.2	145.4	144.9	140.7	112.3	87.1	47.3	25.5	9.2	7.6	0.2	0.2
Loblolly pine	232.4	18.3	30.5	36.6	37.6	36.8	32.6	20.0	12.2	7.4	0.1	0.1
Shortleaf pine	28.5	3.8	4.9	4.9	4.6	3.5	2.2	1.6	2.6	0.7	--	--
Pond pine	48.7	7.1	8.6	10.0	8.5	8.2	4.2	1.6	--	0.5	--	--
Spruce pine	29.2	1.4	3.3	2.4	4.9	6.1	5.1	4.6	0.7	0.7	--	--
Sand pine	46.1	8.6	12.3	8.9	8.6	5.3	1.9	0.4	--	0.1	--	--
Baldcypress	94.7	8.9	7.3	8.0	8.1	17.6	12.2	13.3	4.6	6.7	8.0	8.0
Pondcypress	185.4	26.8	38.2	33.4	28.4	23.6	14.8	10.5	3.8	4.1	1.8	1.8
Atlantic white cedar	61.6	6.4	8.1	13.7	10.0	8.9	5.9	5.7	1.8	1.1	--	--
Eastern redcedar	2.3	0.2	0.1	0.8	0.2	0.3	0.4	0.3	--	--	--	--
Total softwoods	2,207.2	316.4	423.9	472.3	405.6	270.6	148.6	93.2	36.9	29.6	10.1	10.1
Hardwood:												
Select white oaks <sup>1/</sup>	19.2	0.6	1.2	2.2	4.2	4.0	2.7	2.6	1.2	0.5	--	--
Select red oaks <sup>2/</sup>	0.5	--	--	0.2	--	0.3	--	--	--	--	--	--
Other white oaks	119.5	9.6	10.8	11.0	12.2	13.6	12.9	10.0	10.3	21.8	7.3	7.3
Other red oaks	310.6	38.6	46.9	41.0	41.3	37.5	26.3	27.8	18.4	28.4	4.4	4.4
Hickory	45.9	3.4	4.9	6.2	5.7	7.8	5.6	2.7	2.8	6.8	--	--
Florida maple	7.7	0.7	1.6	1.1	1.5	1.3	1.1	0.4	--	--	--	--
Soft maple	43.8	9.1	8.1	6.8	6.0	4.2	2.7	2.4	1.6	2.9	--	--
Beech	11.8	0.2	--	0.4	0.8	0.8	0.5	1.4	0.2	5.7	1.8	1.8
Sweetgum	142.9	14.3	20.5	20.2	23.8	20.3	14.2	10.8	5.9	10.9	2.0	2.0
Tupelo and blackgum	667.1	68.0	85.0	95.1	99.1	79.8	70.5	62.6	41.1	55.6	10.3	10.3
Ash	91.4	11.4	12.6	10.6	13.0	8.3	10.3	10.3	5.7	7.9	1.3	1.3
Cottonwood	1.8	--	--	0.2	0.4	0.3	--	0.3	0.2	0.4	--	--
Basswood	0.5	--	--	0.2	0.3	--	--	--	--	--	--	--
Yellow-poplar	29.8	1.6	4.8	4.5	7.3	2.4	5.2	2.4	1.2	0.4	--	--
Elm	20.8	3.2	3.8	3.9	2.3	2.7	1.2	1.7	1.0	0.5	0.5	0.5
Sycamore	4.0	0.3	0.3	0.7	0.3	1.4	0.6	--	0.4	--	--	--
Black cherry	2.8	0.3	0.2	0.8	0.3	--	0.6	0.3	--	0.3	--	--
Sweetbay	275.8	40.6	45.8	51.2	51.7	30.0	24.8	14.3	8.0	7.6	1.8	1.8
River birch	3.3	0.5	0.2	1.1	0.5	0.7	0.3	--	--	--	--	--
Hackberry	12.1	0.4	1.2	1.0	1.8	1.8	3.2	1.2	1.0	0.5	--	--
Other eastern hardwoods	160.1	41.6	35.4	22.1	14.2	12.4	9.4	6.8	5.4	10.2	2.6	2.6
Total hardwoods	1,971.4	244.4	283.3	280.5	286.7	229.6	192.1	158.0	104.4	160.4	32.0	32.0
All species	4,178.6	560.8	707.2	752.8	692.3	500.2	340.7	251.2	141.3	190.0	42.1	42.1

<sup>1/</sup> Includes white and swamp chestnut oaks.  
<sup>2/</sup> Shumard oak.



Table 16.--Volume of sawtimber on commercial forest land, by species and diameter class, 1969

Species	All classes	Diameter class (inches at breast height)										19.0- : 21.0- : 29.0 and larger
		9.0- : 10.9	11.0- : 12.9	13.0- : 14.9	15.0- : 16.9	17.0- : 18.9	19.0- : 20.9	21.0- : 28.9				
----- Million board feet -----												
<b>Softwood:</b>												
Longleaf pine	2,239.2	844.6	374.9	124.8	53.1	10.1	4.8					
Slash pine	1,955.7	496.7	438.6	265.8	141.7	57.1	56.9					
Loblolly pine	1,877.2	118.7	178.5	175.0	107.0	80.8	54.7					
Shortleaf pine	87.7	14.6	17.1	12.0	8.1	15.1	2.7					
Pond pine	135.6	33.0	39.5	21.6	7.6	--	3.1					
Spruce pine	118.2	8.7	30.2	27.0	23.9	4.2	4.5					
Sand pine	107.2	37.5	24.0	9.7	2.3	--	0.9					
Baldcypress	377.3	22.0	91.1	66.5	71.4	33.6	43.5					
Pondcypress	400.5	81.1	90.1	56.3	43.6	15.1	20.2					
Atlantic white cedar	180.8	37.7	37.2	24.2	24.5	7.6	6.0					
Eastern redcedar	187.4	--	0.6	2.2	1.6	--	--					
Total softwoods	6,486.0	1,678.7	1,770.8	1,321.8	785.1	484.8	223.6	197.3	23.9			
<b>Hardwood:</b>												
Select white oaks <sup>1/</sup>	63.7	14.3	16.0	13.4	13.7	5.1	1.2					
Select red oaks <sup>2/</sup>	1.1	--	1.1	--	--	--	--					
Other white oaks	227.8	26.8	32.7	36.8	30.3	27.8	60.3					
Other red oaks	692.3	124.3	144.8	116.0	123.0	76.9	97.8					
Hickory	121.3	15.2	29.8	26.2	9.5	13.2	27.4					
Florida maple	14.2	4.1	3.2	4.9	2.0	--	--					
Soft maple	51.6	10.4	12.2	7.8	8.4	2.9	9.9					
Beech	34.3	2.4	1.7	2.1	4.8	3.9	20.9					
Sweetgum	343.5	79.0	72.7	66.5	48.4	28.0	43.9					
Tupelo and blackgum	1,282.9	231.3	249.1	234.2	226.1	148.4	150.5					
Ash	184.6	22.5	25.9	43.0	41.9	25.0	25.1					
Cottonwood	6.4	0.5	1.8	--	1.8	0.6	1.7					
Basswood	--	--	--	--	--	--	--					
Yellow-poplar	80.8	26.1	9.4	25.4	12.0	6.5	1.4					
Elm	31.0	7.2	9.3	5.0	4.6	3.0	--					
Sycamore	11.6	0.6	5.7	3.6	--	1.7	--					
Black cherry	5.1	0.9	--	--	1.5	--	--					
Sweetbay	414.0	137.9	92.8	85.0	54.8	21.2	19.7					
River birch	4.2	1.8	1.3	1.1	--	--	--					
Hackberry	32.5	3.6	5.0	13.0	5.6	4.0	1.3					
Other eastern hardwoods	100.7	19.9	24.6	23.0	16.5	8.4	8.3					
Total hardwoods	3,703.6	728.8	739.1	729.7	604.9	373.6	469.4	58.1				
All species	10,189.6	1,678.7	2,499.6	2,060.9	1,514.8	1,089.7	597.2	666.7	82.0			

1/ Includes white and swamp chestnut oaks.  
2/ Shumard oak.

Table 17.--Net annual growth and removals of growing stock on commercial forest land, by species, 1968

Species	: Net annual growth :	: Annual timber removals
	- - - - <u>Million cubic feet</u> - - - -	
Softwood:		
Yellow pines	121.0	78.9
Cypress	3.8	0.9
Other eastern softwoods	2.1	0.3
Total softwoods	126.9	80.1
Hardwood:		
Select white and red oaks	0.7	0.4
Other white and red oaks	13.5	8.6
Hickory	1.1	2.8
Hard maple	--	--
Sweetgum	4.0	2.3
Ash, walnut, and black cherry	1.2	1.0
Yellow-poplar	1.1	1.0
Other hardwoods	15.6	9.0
Total hardwoods	37.2	25.1
All species	164.1	105.2

Table 18.--Net annual growth and removals of sawtimber on commercial forest land, by species, 1968

Species	: Net annual growth :	: Annual timber removals
	- - - - <u>Million board feet</u> - - - -	
Softwood:		
Yellow pines	424.5	272.0
Cypress	13.8	4.0
Other eastern softwoods	8.1	--
Total softwoods	446.4	276.0
Hardwood:		
Select white and red oaks	2.3	1.8
Other white and red oaks	40.0	26.8
Hickory	4.0	10.1
Hard maple	0.3	--
Sweetgum	13.1	7.6
Ash, walnut, and black cherry	4.8	4.2
Yellow-poplar	4.5	2.4
Other hardwoods	47.9	20.2
Total hardwoods	116.9	73.1
All species	563.3	349.1

Table 19.--Mortality of growing stock and sawtimber on commercial forest land, by species, 1968

Species	: Growing stock : : Million cubic feet	: Sawtimber : : Million board feet
Softwood:		
Yellow pines	5.8	17.4
Cypress	0.3	1.5
Other eastern softwoods	--	--
Total softwoods	6.1	18.9
Hardwood:		
Select white and red oaks	0.1	0.4
Other white and red oaks	3.2	11.0
Hickory	0.3	0.9
Hard maple	--	--
Sweetgum	0.4	0.5
Ash, walnut, and black cherry	0.8	2.3
Yellow-poplar	0.7	1.7
Other hardwoods	3.5	7.0
Total hardwoods	9.0	23.8
All species	15.1	42.7

Table 20.--Volume of all live trees and growing stock on commercial forest land, by ownership class and species group, 1969

Ownership class	All live trees					Growing stock				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Million cubic feet									
National Forest	483.8	285.5	71.1	102.2	25.0	434.8	284.5	55.9	80.0	14.4
Other public	481.2	319.6	31.2	80.3	50.1	424.1	316.4	29.7	59.0	19.0
Forest industry	1,498.5	612.4	155.5	481.5	249.1	1,291.9	607.9	139.0	381.9	163.1
Farmer	644.3	236.8	28.8	245.5	133.2	563.3	234.6	24.4	205.4	98.9
Miscellaneous private	1,070.8	408.9	57.4	330.1	274.4	917.4	404.5	51.9	268.3	192.7
All ownerships	4,178.6	1,863.2	344.0	1,239.6	731.8	3,631.5	1,847.9	300.9	994.6	488.1

Table 21.--Volume of sawtimber on commercial forest land, by ownership class and species group, 1969

Ownership class	Small sawtimber <sup>1/</sup>					Large sawtimber <sup>2/</sup>				
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood	Soft hardwood	Hard hardwood
	Million board feet									
National Forest	885.3	711.3	96.6	63.3	14.1	334.7	142.1	49.5	109.1	34.0
Other public	966.5	835.5	46.8	58.7	25.5	320.3	183.5	64.1	59.4	13.3
Forest industry	2,127.2	1,384.8	250.7	344.3	147.4	1,623.6	387.4	212.5	666.4	357.3
Farmer	893.1	513.9	45.8	233.0	100.4	583.5	211.0	18.9	210.2	143.4
Miscellaneous private	1,367.1	798.1	87.8	294.7	186.5	1,088.3	353.2	92.5	314.2	328.4
All ownerships	6,239.2	4,243.6	527.7	994.0	473.9	3,950.4	1,277.2	437.5	1,359.3	876.4

<sup>1/</sup> Volume of sawtimber trees less than 15.0 inches at d.b.h.

<sup>2/</sup> Volume of sawtimber trees 15.0 inches and larger at d.b.h.

Table 22.--Net annual growth and removals of growing stock on commercial forest land, by ownership class and species group, 1968

Ownership class	Net annual growth				Annual timber removals				Million cubic feet	
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood		Soft hardwood
National Forest	17.8	14.8	0.9	1.7	0.4	2.6	2.3	0.2	0.1	--
Other public	20.6	17.6	0.8	1.4	0.8	7.8	7.4	--	0.4	--
Forest industry	56.1	41.7	3.0	6.8	4.6	45.1	34.8	0.3	5.6	4.4
Farmer	26.6	17.4	0.4	4.8	4.0	18.3	13.9	0.2	0.3	3.9
Miscellaneous private	43.0	29.5	0.8	5.6	7.1	31.4	20.5	0.5	5.7	4.7
All ownerships	164.1	121.0	5.9	20.3	16.9	105.2	78.9	1.2	12.1	13.0

Table 23.--Net annual growth and removals of sawtimber on commercial forest land, by ownership class and species group, 1968

Ownership class	Net annual growth				Annual timber removals				Million board feet	
	All species	Pine	Other softwood	Soft hardwood	Hard hardwood	All species	Pine	Other softwood		Soft hardwood
National Forest	66.7	58.0	2.9	4.1	1.7	6.9	5.7	0.8	0.4	--
Other public	83.0	74.2	3.3	3.5	2.0	31.8	31.1	--	0.7	--
Forest industry	184.9	135.6	10.8	21.8	16.7	151.2	118.9	--	15.2	17.1
Farmer	84.5	57.1	1.7	13.2	12.5	60.8	45.9	1.4	1.1	12.4
Miscellaneous private	144.2	99.6	3.2	21.2	20.2	98.4	70.4	1.8	12.2	14.0
All ownerships	563.3	424.5	21.9	63.8	53.1	349.1	272.0	4.0	29.6	43.5

Table 24.--Average net volume per acre of sawtimber, growing stock, and other live timber<sup>1/</sup> on commercial forest land, by ownership class, major forest type, and species group, 1969

Forest type, species group, and class of material	Ownership class											
	: All ownerships		National Forest		Other public		Forest industry		Farmer		Misc. private	
	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet	Board feet	Cubic feet
Pine types:												
Growing stock:	1,357	487	1,772	632	2,258	725	1,123	409	1,431	512	1,079	421
Softwood	41	23	2	10	31	35	44	18	78	34	48	28
Hardwood												
Total	1,398	510	1,774	642	2,289	760	1,167	427	1,509	546	1,127	449
Other timber:												
Softwood	--	5	--	4	--	6	--	6	--	4	--	3
Hardwood	--	12	--	6	--	29	--	8	--	12	--	14
Total	--	17	--	10	--	35	--	14	--	16	--	17
Oak-pine type:												
Growing stock:	1,308	386	1,473	371	1,079	350	1,626	480	1,269	363	1,113	325
Softwood	309	164	457	193	168	67	240	152	457	259	381	197
Hardwood												
Total	1,617	550	1,930	564	1,247	417	1,866	632	1,726	622	1,494	522
Other timber:												
Softwood	--	8	--	4	--	2	--	17	--	7	--	6
Hardwood	--	73	--	74	--	63	--	65	--	79	--	90
Total	--	81	--	78	--	65	--	82	--	86	--	96
Upland hardwood types:												
Growing stock:	274	82	--	25	349	103	155	55	313	94	276	79
Softwood	621	258	--	--	14	11	567	218	919	381	756	320
Hardwood												
Total	895	340	--	25	363	114	722	273	1,232	475	1,032	399
Other timber:												
Softwood	--	3	--	--	--	7	--	1	--	2	--	2
Hardwood	--	92	--	83	--	54	--	111	--	108	--	93
Total	--	95	--	83	--	61	--	112	--	110	--	95
Bottomland hardwood types:												
Growing stock:	1,134	316	1,657	533	2,347	510	1,214	341	575	171	943	253
Softwood	2,507	951	1,550	636	1,769	819	3,209	1,107	1,971	860	2,490	962
Hardwood												
Total	3,641	1,267	3,207	1,169	4,116	1,329	4,423	1,448	2,546	1,031	3,433	1,215
Other timber:												
Softwood	--	32	--	115	--	19	--	25	--	19	--	20
Hardwood	--	282	--	206	--	352	--	351	--	182	--	279
Total	--	314	--	321	--	371	--	376	--	201	--	299
All types:												
Growing stock:	1,131	375	1,698	578	1,545	473	1,120	374	935	307	846	290
Softwood	646	259	374	160	214	107	759	273	813	360	714	293
Hardwood												
Total	1,777	634	2,072	738	1,759	580	1,879	647	1,748	667	1,560	583
Other timber:												
Softwood	--	10	--	27	--	6	--	11	--	8	--	6
Hardwood	--	85	--	56	--	72	--	93	--	88	--	91
Total	--	95	--	83	--	78	--	104	--	96	--	97
All timber	1,777	729	2,072	821	1,759	658	1,879	751	1,748	763	1,560	680

<sup>1/</sup> Rough and rotten trees.

Table 25.--Land area, by class, major forest type, and survey completion date, 1949, 1959, and 1969

Land use class	Survey completion date			Change 1959-1969
	1949	1959 <sup>2/</sup>	1969	
- - - - - <u>Thousand acres</u> - - - - -				
Forest land:				
Commercial forest land:				
Pine and oak-pine types	4,235.5	3,282.2	3,691.4	+409.2
Hardwood types	1,692.5	2,464.3	2,043.8	-420.5
Total	5,928.0	5,746.5	5,735.2	- 11.3
Noncommercial forest land:				
Productive-reserved	4.2	4.1	6.2	+ 2.1
Unproductive	127.9	17.0	10.8	- 6.2
Total	132.1	21.1	17.0	- 4.1
Nonforest land:				
Cropland	807.9	845.7	718.0	-127.7
Pasture and range	127.2	188.7	285.0	+ 96.3
Other	324.7	421.9	468.4	+ 46.5
Total	1,259.8	1,456.3	1,471.4	+ 15.1
All land <sup>1/</sup>	7,319.9	7,223.9	7,223.6	- 0.3

<sup>1/</sup> Excludes all water areas.

<sup>2/</sup> These figures differ slightly from reported figures because of revisions in the estimates of land area.

Table 26.--Volume<sup>1/</sup> of sawtimber, growing stock, and all live timber on commercial forest land, by species group, diameter class, and survey completion date

Species group	Year	All classes	Diameter class (inches at breast height)									
			5.0- 6.9	7.0- 8.9	9.0- 10.9	11.0- 12.9	13.0- 14.9	15.0- 16.9	17.0- 18.9	19.0- 20.9	21.0 and larger	
SAWTIMBER (in million board feet)												
Softwood	1949	3,559.0	--	--	1,172.6	958.8	633.7	325.7	228.6	86.3	153.3	
	1959	4,832.2	--	--	1,377.2	1,327.4	974.6	558.0	299.0	164.8	131.2	
	1969	6,486.0	--	--	1,678.7	1,770.8	1,321.8	785.1	484.8	223.6	221.2	
Hardwood	1949	3,299.6	--	--	--	603.7	653.8	611.4	524.9	381.0	524.8	
	1959	3,265.4	--	--	--	596.7	708.3	690.7	486.8	321.8	461.1	
	1969	3,703.6	--	--	--	728.8	739.1	729.7	604.9	373.6	527.5	
GROWING STOCK (in million cubic feet)												
Softwood	1949	1,268.6	192.4	268.8	322.4	217.2	128.5	60.5	43.3	13.7	21.8	
	1959	1,678.8	215.5	381.4	378.7	300.6	197.6	103.6	56.6	26.1	18.7	
	1969	2,148.8	303.6	410.2	461.5	401.1	268.0	145.8	91.8	35.4	31.4	
Hardwood	1949	1,291.9	128.9	154.8	177.0	189.3	171.9	138.3	115.5	82.5	133.7	
	1959	1,352.0	132.9	177.2	218.0	187.1	186.2	156.3	107.1	69.7	117.5	
	1969	1,482.7	144.9	188.9	212.5	228.5	194.4	165.0	133.1	80.9	134.5	
ALL LIVE TIMBER (in million cubic feet)												
Softwood	1949	1,304.8	200.4	277.6	329.9	219.7	129.7	61.7	43.9	14.3	27.6	
	1959	1,723.3	224.4	394.0	387.4	304.1	199.5	105.6	57.5	27.2	23.6	
	1969	2,207.2	316.4	423.9	472.3	405.6	270.6	148.6	93.2	36.9	39.7	
Hardwood	1949	1,719.8	217.9	232.0	233.5	237.4	203.1	161.0	137.1	106.5	191.3	
	1959	1,799.7	224.6	265.6	287.7	234.6	220.0	181.9	127.2	89.9	168.2	
	1969	1,971.4	244.4	283.3	280.5	286.7	229.6	192.1	158.0	104.4	192.4	

<sup>1/</sup> To provide a basis for valid comparisons, adjustments have been made to allow for differences in volume tables and sawtimber specifications used in previous surveys.