



Forest Statistics
for
Northwest
Florida, 1979

FOREWORD

This report highlights the principal findings of the fifth forest survey of Northwest Florida. Fieldwork began in September 1978 and was completed in June 1979. Four previous surveys, completed in 1934, 1949, 1959, and 1969, provide statistics for measuring changes and trends over the past 45 years. The primary emphasis in this report is on the changes and trends since 1969. Previously reported figures have been adjusted to provide the best estimate of change.

Renewable Resources Evaluation (formerly Forest Survey) is authorized by the Forest and Rangeland Renewable Resources Research Act of 1978. The survey is a continuing, nationwide undertaking by the regional experiment stations of the Forest Service, USDA. In Florida, Georgia, North Carolina, South Carolina, and Virginia, Renewable Resources Evaluation is administered through the Southeastern Forest Experiment Station, with headquarters in Asheville, North Carolina. The primary objective of the survey is to periodically inventory and evaluate forest and related resources. These inventories provide information on the extent and condition of forest lands, volume of timber, and rates of timber growth and removals. These data and evaluations help provide a basis for formulating forest policies and programs and for the orderly development and use of the resources.

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 forest resource for all of Florida.

The Southeastern Station gratefully acknowledges the cooperation and assistance provided by the Florida Forest Service in collecting the field data. Appreciation is also expressed for the excellent cooperation of other public agencies, forest industry, and private landowners in providing information and access to the sample locations. The Department of Defense provided special support for the survey of Eglin Air Force Base.



JOE P. McCLURE
Project Leader

April 1980

Southeastern Forest Experiment Station
Asheville, North Carolina

Forest Statistics
for
Northwest Florida,
1979

by

Raymond M. Sheffield, Resource Analyst
Asheville, North Carolina

CONTENTS

	<u>Page</u>
HIGHLIGHTS	1
HOW THE INVENTORY IS MADE.....	3
RELIABILITY OF THE DATA	4
DEFINITIONS OF TERMS	6
COUNTY TABLES	
1. Area, by land class	13
2. Area of commercial forest land, by ownership class	14
3. Area of commercial forest land, by forest-type group	15
4. Area of commercial forest land, by stand-size class.....	16
5. Area of commercial forest land, by site class.....	16
6. Area of commercial forest land, by stocking classes of growing-stock trees	17
7. Volume of sawtimber and growing stock on commercial forest land, by species group.....	18
8. Net annual growth of sawtimber and growing stock on commercial forest land, by species group	19
9. Annual removals of sawtimber and growing stock on commercial forest land, by species group	20
UNIT TABLES	
10. Area of commercial forest land, by forest type and ownership class.....	21
11. Area of commercial forest land, by ownership and stocking classes of growing-stock trees	21
12. Volume of timber on commercial forest land, by class and species group	22
13. Number of growing-stock trees on commercial forest land, by species and diameter class	23
14. Volume of all live trees on commercial forest land, by species and diameter class	24
15. Volume of growing stock on commercial forest land, by species and diameter class	25
16. Volume of sawtimber on commercial forest land, by species and diameter class	26
17. Net annual growth and removals of growing stock on commercial forest land, by species	27
18. Net annual growth and removals of sawtimber on commercial forest land, by species	27
19. Mortality of growing stock and sawtimber on commercial forest land, by species	28
20. Volume of all live trees and growing stock on commercial forest land, by ownership class and species group	29
21. Volume of sawtimber on commercial forest land, by ownership class and species group	29
22. Net annual growth and removals of growing stock on commercial forest land, by ownership class and species group	30
23. Net annual growth and removals of sawtimber on commercial forest land, by ownership class and species group	30
24. Average net volume per acre of sawtimber, growing stock, and other live timber on commercial forest land, by ownership class, major forest type, and species group.....	31
25. Land area, by class, major forest type, and survey completion date	32
26. Volume of sawtimber, growing stock, and all live timber on commercial forest land, by species group, diameter class, and survey completion date	33

HIGHLIGHTS

Since 1969 in Northwest Florida—

area of commercial forest land has declined by over 266,000 acres, or by nearly 5 percent. Some 326,000 acres of commercial forest land were diverted to other land uses, but only 60,000 acres were added from nonforest sources. Diversions to agricultural uses accounted for over one-half the total loss, while those to urban land uses accounted for over one-third. The remaining diversions were to noncommercial forest land. Commercial forests now occupy 5.5 million acres, or 75 percent of the land area in this 16-county region.

area of commercial forest land owned by farmers has declined by over one-quarter million acres, and now totals 650,000 acres. Forest-industry holdings (which have changed little in the past 10 years) comprise over 1.9 million acres. Publicly owned forest land covers over 1.2 million acres, or 22 percent of the commercial forest land—about the same area as in 1969. The acreage in the miscellaneous private ownership group, consisting of both miscellaneous private corporations and individuals, has increased by 3 percent. The present acreage in the corporate portion of this category—647,000 acres—is roughly double the comparable acreage in 1969. A direct comparison with the old reported estimate of miscellaneous private-corporate acreage is invalid because some landowners were reclassified in this latest inventory.

about 49 percent of the area now classed as commercial forest land has been treated or significantly disturbed. Altogether, over 915,000 acres have been harvested since the fourth inventory. Nearly 312,000 of these harvested acres now contain adequate numbers of trees that were artificially established. Only 89,000 acres were classed as having adequate natural regeneration of suitable species. The remaining 514,000 harvested acres were classed as having insufficient tree stocking. Another 196,000 acres of poorly stocked, nonstocked, and idle land were artificially regenerated during the period. Altogether, some one-half million acres were planted or seeded, with 77 percent of this activity taking place on lands owned or leased by forest industry. Stands with evidence of artificial seeding or planting now occupy over 1.2 million acres. Additional treatments included intermediate cutting on 330,000 acres, and other treatments—primarily prescribed burning—on 859,000 acres. Weather, disease, insects, and other natural destructive agents caused significant damage on 381,000 acres.

area of commercial forest land occupied by pine forest types has increased by 79,000 acres, or by 3 percent. This small net increase in pine types masks forest-type changes involving pine on over 1.0 million acres. Over 545,000 acres changed from an oak-pine or hardwood type to pine. About 60 percent of this acreage change to pine types was due to forestry practices such as harvesting, artificial regeneration, intermediate cutting, prescribed burning, and various other treatments; stands experiencing natural disturbances and undisturbed stands accounted for the remaining 40 percent. Over 291,000 acres changed from a pine type to either oak-pine or hardwood, mainly because of harvesting without subsequent planting efforts. Another 175,000 acres of pine type were lost due to land clearing. Slash, sand, and loblolly pine types made up most of the net increase in pine types. Acreages of the other major pine types declined, as did those of oak-pine and hardwood types. Scrub oak types declined by over 200,000 acres, accounting for almost all the hardwood-type reduction.

average basal area of all live trees 5.0 inches d.b.h. and larger has increased from 41 to 50 square feet per acre of commercial forest land. Acreage in stands fully stocked with growing-stock trees has more than doubled, while the area classed as poorly stocked or nonstocked has decreased by 716,000 acres, or by 25 percent. However, nearly 2 out of every 5 acres are still poorly stocked or nonstocked with growing-stock trees. The number of 2-inch softwoods decreased by 14 percent, but the number of 4-inch softwoods increased by 10 percent.

volume of softwood growing stock has increased from 2.3 to over 2.7 billion cubic feet, or by 21 percent. The increase occurred across the entire range of diameters, with the 12- and 14-inch-diameter classes accounting for over 41 percent of the gain. Increases in volume were recorded for all the major

softwood species. The volume increase for longleaf pine was less than 1 percent. Slash pine accounted for 69 percent of the gain in softwood volume, increasing by 43 percent. Slash pine has now surpassed longleaf pine as the region's predominant softwood species in terms of volume. The current inventory of softwood growing stock includes 9.3 billion board feet of sawtimber, up 26 percent since 1969.

volume of hardwood growing stock has increased from 1.6 to 1.8 billion cubic feet, or by 13 percent. Species in the red oak group accounted for 49 percent of the total hardwood gain; bay and magnolia, tupelo and blackgum, and sweetgum also made substantial gains. Volumes of hickory, ash, elm, and a group of miscellaneous eastern hardwoods declined. The hardwood-volume increase occurred across all diameter classes; however, more than 82 percent of the increase was in the 10-, 12-, 14-, and 20-inch and larger diameter classes. The current inventory of hardwood growing stock includes 5.3 billion board feet of sawtimber, up 16 percent since 1969.

In 1978—

net annual growth of growing stock totaled 236 million cubic feet, an average of 43 cubic feet per acre of commercial forest land. Softwood species made up 76 percent of this growth. Net growth exceeded removals by 34 percent for softwoods and by 84 percent for hardwoods. More than one-half of the excess of growth over removals occurred on public land. On farmer-owned commercial forest land, pine growing-stock removals exceeded net growth by almost 26 percent. Pine sawtimber removals on forest industry holdings exceeded net growth by 15 percent. The net annual growth of all species included 880 million board feet of sawtimber.

removals of growing stock totaled 165 million cubic feet and included 573 million board feet of sawtimber. Softwood species made up 81 percent of the removals. Private landowners supply a disproportionate share of growing-stock removals. Farmers own 12 percent of the commercial forests, but supply 17 percent of the removals; miscellaneous private owners control 31 percent of the commercial forests, but supply 34 percent of the removals; forest industries own 35 percent but supply 37 percent of the removals. Public holdings, however, make up 22 percent of all commercial forests, but supply only 12 percent of the growing-stock removals.

mortality of growing stock totaled 34 million cubic feet and included 111 million board feet of sawtimber. The leading identifiable causes of death were weather, insects, disease, and suppression. The mortality was equally divided between softwoods and hardwoods. Altogether, mortality reduced gross growth by 13 percent.

HOW THE INVENTORY IS MADE

The method of the inventory is a sampling procedure designed to provide reliable statistics primarily at the State and Survey Unit levels. Individual county statistics are presented so that any combination of counties may be added together until a total is large enough to meet the desired degree of reliability. Procedures were as follows:

1. Initial estimates of forest and nonforest areas were based on the classification of 20,680 sample clusters systematically spaced on the latest aerial photographs available. A subsample of 2,322 of the 16-point clusters was 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 provides a means for adjusting the initial estimates of area for change in land use since date of photography and for photo misclassifications.
2. Estimates of timber volume and forest classifications were based on measurements recorded at 1,606 ground sample locations systematically distributed within the commercial forest land. The plot design at each location was based on a cluster of 10 points. In most cases, variable plots, using a basal-area factor of 37.5 square feet per acre, were systematically spaced within a single forest condition at 5 of the 10 cluster points. Trees less than 5 inches d.b.h. were tallied on a fixed-radius plot around each point center.
3. Equations prepared from detailed measurements collected on standing trees in this Unit, and similar measurements taken throughout the Southeast, were used to compute the volume of individual tally trees. A mirror caliper and sectional aluminum poles were used to obtain the additional measurements on these standing trees required to construct volume equations.
4. Felled trees were measured at 35 active cutting operations. These data will be pooled with similar measurements taken in the State to supplement the standing-tree-volume data and to generate utilization factors for product and species groups that will be analyzed at the State level.
5. Estimates of growth, removals, and mortality were determined from the remeasurement of 1,702 permanent sample plots established in the fourth survey.
6. Ownership information was collected from correspondence, public records, and local contacts. In those counties where the sample missed a particular ownership class, temporary sample plots were added on these lands.
7. All field data were sent to Asheville for editing and were punched into cards and stored 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 in terms of one standard error (two times out of three):

	<i>Percent</i>
Per million acres of commercial forest land	1.15
Per billion cubic feet of growing stock	6.33
Per billion cubic feet of net annual growth	1.36
Per billion cubic feet of annual removals	2.59

SAMPLING ERRORS FOR COUNTY AND UNIT TOTALS,¹ IN TERMS OF ONE STANDARD ERROR

COUNTY	COMMERCIAL FOREST AREA	CUBIC-FOOT VOLUME OF GROWING STOCK		
		INVENTORY	GROWTH	REMOVALS
- - - - - SAMPLING ERROR ² - - - - -				
BAY	2.05	14.09	11.21	27.92
CALHOUN	1.57	11.55	11.70	32.92
ESCAMBIA	2.13	10.90	11.01	24.74
FRANKLIN	1.50	18.14	15.29	25.64
GADSDEN	2.30	13.10	14.46	24.06
GULF	2.40	16.46	12.98	33.97
HOLMES	2.10	13.55	15.03	21.62
JACKSON	2.30	10.93	11.01	20.31
JEFFERSON	2.18	9.76	9.88	26.99
LEON	3.47	9.61	8.83	22.19
LIBERTY	0.51	9.78	8.59	29.12
OKALOOSA	1.45	10.66	10.27	24.81
SANTA ROSA	1.44	8.65	8.28	22.00
WAKULLA	1.23	10.80	11.04	24.24
WALTON	1.83	9.26	8.36	21.01
WASHINGTON	2.00	14.86	16.48	28.55
UNIT TOTAL	0.49	2.97	2.78	6.36

¹ 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.

² 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, comprise 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 mountains), 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 2 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, or two noncontiguous saw logs, each 8 feet or longer, 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, or two noncontiguous saw logs, each 8 feet or longer, 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 noncommercial species.

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

Saplings.--Live trees 1.0 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, or two noncontiguous saw logs, each 8 feet or longer, and with at least one-third of the gross board-foot volume between the 1-foot stump and minimum saw-log top being 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-Mountain, sand, and spruce pine.

Other softwoods.--White pine, hemlock, cypress, eastern redcedar, white-cedar, 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.

Stocking-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 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.

TABLE 12. -- VOLUME OF TIMBER ON COMMERCIAL FOREST LAND, BY CLASS AND SPECIES GROUP, 1979

CLASS OF TIMBER	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD
----- THOUSAND CUBIC FEET -----					
SAWTIMBER TREES:					
SAW-LOG PORTION	2,832,895	1,533,450	255,594	658,773	385,078
UPPER-STEM PORTION	303,330	133,344	22,226	93,251	54,509
TOTAL	3,136,225	1,666,794	277,820	752,024	439,587
POLETIMBER TREES	1,406,741	729,996	74,422	398,970	203,353
ALL GROWING-STOCK TREES	4,542,966	2,396,790	352,242	1,150,994	642,940
ROUGH TREES:					
SAWTIMBER-SIZE TREES	226,936	7,411	11,516	92,981	115,028
POLETIMBER-SIZE TREES	288,096	12,062	9,216	126,257	140,561
TOTAL	515,032	19,473	20,732	219,238	255,589
ROTTEN TREES:					
SAWTIMBER-SIZE TREES	70,787	389	15,395	40,668	14,335
POLETIMBER-SIZE TREES	11,766	--	1,499	6,493	3,774
TOTAL	82,553	389	16,894	47,161	18,109
SALVABLE DEAD TREES:					
SAWTIMBER-SIZE TREES	1,355	1,245	110	--	--
POLETIMBER-SIZE TREES	761	729	32	--	--
TOTAL	2,116	1,974	142	--	--
TOTAL, ALL TIMBER	5,142,667	2,418,626	390,010	1,417,393	916,638

TABLE 13. -- NUMBER OF GROWING-STOCK TREES ON COMMERCIAL FOREST LAND, BY SPECIES AND DIAMETER CLASS, 1979

SPECIES	ALL CLASSES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)										19.0-20.9	21.0-28.9	29.0 AND LARGER
		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					
SOFTWOOD:														
LONGLEAF PINE	78,880	23,199	18,008	17,901	12,425	5,825	1,194	215	72	41				
SLASH PINE	169,863	92,338	42,148	17,224	8,944	4,365	2,351	884	404	266				
SHORTLEAF PINE	5,473	2,447	1,093	568	295	157	92	54	26	21				9
LOBLOLLY PINE	22,882	7,966	4,570	3,522	3,238	1,716	855	522	260	254				
POND PINE	7,381	3,154	1,792	1,084	752	351	157	31	51	9				
VIRGINIA PINE														
PITCH PINE														
TABLE-MOUNTAIN PINE														
SPRUCE PINE	1,812	478	159	438	306	21	173	161	47	29				
SAND PINE	17,034	9,801	3,932	1,946	788	386	165	16						
EASTERN WHITE PINE														
EASTERN HEMLOCK														
SPRUCE AND FIR														
BALDCCYPRESS	6,880	2,937	1,168	628	506	426	374	336	212	246				47
PONDCCYPRESS	24,085	8,929	5,856	3,801	2,632	1,466	756	281	206	150				8
CEDARS	5,825	1,404	1,101	1,101	669	509	283	116	24	27				
TOTAL SOFTWOODS	338,915	152,653	80,197	48,330	30,848	15,462	6,400	2,616	1,302	1,043				64
HARDWOOD:														
SELECT WHITE OAKS	1,592	483	246	171	202	253	151	17	61	8				
SELECT RED OAKS	11									11				
CHESTNUT OAK														
OTHER WHITE OAKS	6,220	2,474	736	877	569	591	335	287	147	183				21
OTHER RED OAKS	38,470	15,073	8,738	6,124	3,361	2,064	1,260	790	437	552				71
HICKORY	4,073	1,269	1,161	627	292	343	177	107	46	31				
YELLOW BIRCH														
HARD MAPLE	144													
SOFT MAPLE	4,184	2,070	716	545	75	22	19	28						
BEECH	222	69	69	63	352	251	153	63		34				
SWEETGUM	13,310	5,025	3,009	2,011	1,378	909	549	156	11	33				5
TUPELO AND BLACKGUM	54,645	22,140	10,761	6,943	6,051	3,493	2,001	1,373	162	106				5
ASH	4,702	1,491	994	6,950	3,493	2,71	2,202	1,35	839	963				81
COTTONWOOD	117													
BASSWOOD														
YELLOW-POPLAR	3,273	1,062	656	515	607	201	41	57	114	20				
BAY AND MAGNOLIA	32,292	13,546	7,624	4,555	3,251	1,671	807	423	263	138				14
BLACK CHERRY	405	264		59										
BLACK WALNUT														
SYCAMORE	179		69		36		18	29	12	15				
BLACK LOCUST														
ELM	1,719	859	301	283	105	118	17	29	11	21				
OTHER EASTERN HARDWOODS	2,962	1,642	404	320	253	179	92	59	13					
TOTAL HARDWOODS	168,520	67,523	35,484	23,980	17,072	10,393	5,822	3,538	2,280	2,227				201
ALL SPECIES	507,435	220,176	115,681	72,310	47,920	25,855	12,222	6,154	3,582	3,270				265

TABLE 14. -- VOLUME OF ALL LIVE TREES ON COMMERCIAL FOREST LAND, BY SPECIES AND DIAMETER CLASS, 1979

SPECIES	ALL CLASSES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)										29.0 AND LARGER
		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		
SOFTWOOD:												
LONGLEAF PINE	807,058	58,474	114,854	201,874	227,633	150,527	37,238	9,742	3,516	3,100		
SLASH PINE	1,091,006	204,599	241,617	185,441	164,709	115,396	86,239	41,596	25,228	24,794		1,388
SHORTLEAF PINE	54,000	7,000	6,858	6,666	11,593	12,390	3,937	2,480	1,736	1,429		
LOBLOLLY PINE	291,457	15,974	26,031	38,365	61,559	45,952	31,696	25,570	15,848	20,752		
POND PINE	58,119	7,680	9,443	10,141	12,513	8,676	5,096	1,306	2,545	2,719		
VIRGINIA PINE	--	--	--	--	--	--	--	--	--	--		
PITCH PINE	--	--	--	--	--	--	--	--	--	--		
TABLE-MOUNTAIN PINE	--	--	--	--	--	--	--	--	--	--		
SPRUCE PINE	34,023	1,188	1,610	4,685	5,839	459	6,859	8,529	2,738	2,116		
SAND PINE	90,900	24,154	22,576	19,165	11,167	8,565	4,683	--	--	--		
EASTERN WHITE PINE	--	--	--	--	--	--	--	--	--	--		
EASTERN HEMLOCK	--	--	--	--	--	--	--	--	--	--		
SPRUCE AND FIR	113,664	8,789	8,576	6,509	8,565	10,522	11,477	14,263	10,671	20,473		13,819
BALDCYPRESS	211,648	21,078	33,079	37,553	36,144	30,885	20,263	9,412	8,463	10,927		3,744
POND CYPRESS	64,556	5,036	8,519	11,701	10,479	12,933	8,913	4,577	1,530	1,648		
CEDARS	--	--	--	--	--	--	--	--	--	--		
TOTAL SOFTWOODS	2,806,520	354,032	473,163	522,100	550,211	395,565	216,500	117,765	72,275	85,958		18,951
HARDWOOD:												
SELECT WHITE OAKS	25,293	1,312	1,873	2,251	4,157	5,301	5,255	691	3,405	1,048		
SELECT RED OAKS	825	--	--	--	--	--	--	--	--	825		
CHESTNUT OAK	159,552	11,875	11,055	14,926	13,421	17,850	18,331	19,150	11,920	26,347		14,667
OTHER WHITE OAKS	442,916	42,514	54,194	64,473	61,463	50,699	40,855	37,030	25,824	50,730		15,114
OTHER RED OAKS	46,982	3,170	6,542	6,246	5,207	8,265	7,125	5,488	2,974	1,995		
HICKORY	--	--	--	--	--	--	--	--	--	--		
YELLOW BIRCH	6,697	232	407	1,235	1,459	863	818	1,683	--	--		
HARD MAPLE	55,352	10,520	8,536	8,298	6,334	6,948	6,817	2,707	--	--		3,192
SOFT MAPLE	11,319	--	492	1,430	1,330	1,237	2,264	1,803	703	4,267		1,123
BEECH	161,197	12,268	19,250	23,216	28,576	27,734	20,270	8,217	10,531	9,461		1,175
SWEETGUM	747,329	86,870	82,387	88,251	118,984	98,375	71,508	61,654	46,524	81,214		17,362
TUPELO AND BLACKGUM	89,023	10,639	10,586	12,084	8,035	10,514	9,034	6,947	9,503	10,884		717
ASH	1,356	394	--	--	320	--	--	--	642	--		
COTTONWOOD	--	--	--	--	--	--	--	--	--	--		
BASSWOOD	42,779	3,065	4,568	5,677	12,366	4,743	1,319	2,254	7,125	1,662		2,170
YELLOW-POPLAR	359,138	47,065	56,754	62,802	65,113	48,824	27,270	21,957	15,501	11,682		
BAY AND MAGNOLIA	3,539	1,086	586	436	982	--	--	--	--	449		
BLACK CHERRY	--	--	--	--	622	--	784	1,295	--	--		
BLACK WALNUT	5,555	--	686	--	--	--	--	--	--	624		
SYCAMORE	--	--	--	--	--	--	--	--	--	--		
BLACK LOCUST	19,092	2,499	1,890	4,411	3,937	3,472	583	--	689	1,614		995
ELM	156,087	42,954	29,517	25,316	13,907	11,701	10,952	6,393	5,845	5,262		4,240
OTHER EASTERN HARDWOODS	2,334,031	270,463	289,323	319,622	347,215	296,516	221,714	177,549	141,890	212,176		57,563
TOTAL HARDWOODS	5,140,551	624,495	762,486	841,722	897,426	692,081	438,214	295,314	214,165	298,134		76,514

TABLE 15. -- VOLUME OF GROWING STOCK ON COMMERCIAL FOREST LAND, BY SPECIES AND DIAMETER CLASS, 1979

SPECIES	ALL CLASSES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)												29.0 AND LARGER
		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				
SOFTWOOD:														
LONGLEAF PINE	804,084	58,247	112,834	201,536	227,633	150,138	37,338	9,742	3,516	23,100	3,100	23,672	1,388	
SLASH PINE	1,086,594	203,116	239,810	185,441	164,709	115,396	86,238	41,596	25,228	23,672	23,672	1,429		
SHORTLEAF PINE	52,812	7,000	6,858	6,666	11,092	12,390	3,161	2,480	1,736	1,429	1,429			
LORLOLEAF PINE	27,549	15,140	25,617	37,854	60,484	44,888	31,696	25,270	15,848	20,752	20,752			
POND PINE	55,895	7,070	8,704	9,834	11,945	8,676	5,096	1,306	2,545	719	719			
VIRGINIA PINE	--	--	--	--	--	--	--	--	--	--	--	--	--	
PITCH PINE	--	--	--	--	--	--	--	--	--	--	--	--	--	
TABLE-MOUNTAIN PINE	--	--	--	--	--	--	--	--	--	--	--	--	--	
SPRUCE PINE	33,009	1,188	1,042	4,239	5,839	459	6,859	8,529	2,738	2,116	2,116			
SAND PINE	86,847	21,407	21,963	18,868	11,167	8,565	4,287	590						
EASTERN WHITE PINE	--	--	--	--	--	--	--	--	--	--	--	--	--	
EASTERN HEMLOCK	--	--	--	--	--	--	--	--	--	--	--	--	--	
SPRUCE AND FIR	103,631	8,799	7,055	6,032	7,613	10,532	11,477	14,263	10,671	19,489	19,489	7,720		
RAIDCYPRESS	187,925	17,642	29,128	31,931	34,890	27,235	18,569	8,142	8,361	8,901	8,901	2,464		
POND CYPRESS	60,686	3,747	8,031	11,398	10,004	11,582	8,520	4,577	1,179	1,648	1,648			
CEDARS	--	--	--	--	--	--	--	--	--	--	--	--	--	
TOTAL SOFTWOODS	2,749,032	343,376	461,042	513,819	545,376	390,543	213,241	116,495	71,742	81,826	11,572			
HARDWOOD:														
SELECT WHITE OAKS	22,488	846	1,156	1,388	3,889	5,301	5,255	691	3,405	557	557			
SELECT RED OAKS	825	--	--	--	--	--	--	--	--	825	--			
CHESTNUT OAK	--	--	--	--	--	--	--	--	--	--	--			
OTHER WHITE OAKS	89,401	5,697	3,997	6,983	8,265	13,493	11,007	12,850	7,637	14,382	5,090			
OTHER RED OAKS	404,730	37,381	49,312	59,320	55,432	47,371	38,928	35,252	22,697	46,474	12,563			
HICKORY	42,425	2,583	5,921	5,749	4,756	8,265	5,474	4,714	2,974	1,995				
YELLOW BIRCH	--	--	--	--	--	--	--	--	--	--	--			
HARD MAPLE	4,504	--	--	--	1,140	853	819	1,683	--	--	--			
SOFT MAPLE	36,070	5,642	3,761	5,454	5,241	5,943	4,747	2,707	3,405	2,643				
BEECH	8,573	--	492	--	1,186	770	703	783	703	3,651	988			
SWEETGUM	152,080	10,722	17,587	21,790	28,055	26,272	19,650	7,817	10,531	8,892	764			
TUPELO AND BLACKGUM	592,309	54,018	59,190	68,527	101,174	82,551	60,450	53,916	40,469	62,536	9,478			
ASH	61,600	3,452	5,553	8,519	6,387	6,278	7,426	6,530	7,967	9,488				
COTTONWOOD	1,036	394	--	--	--	--	--	--	642	--	--			
BASSWOOD	--	--	--	--	--	--	--	--	--	--	--			
YELLOW-POPLAR	41,102	2,434	4,115	5,677	12,080	4,743	1,319	2,254	6,818	1,662				
BAY AND MAGNOLIA	286,948	35,797	44,878	48,802	54,335	38,016	24,142	17,833	13,681	9,294	2,170			
BLACK CHERRY	2,154	736	--	436	982	--	--	--	--	--	--			
BLACK WALNUT	--	--	--	--	--	--	--	--	--	--	--			
SYCAMORE	5,555	--	686	--	622	--	784	1,295	624	1,544	--			
BLACK LOCUST	--	--	--	--	--	--	--	--	--	--	--			
ELM	15,500	1,637	1,890	2,923	1,760	3,409	583	--	689	1,614	995			
OTHER EASTERN HARDWOODS	26,634	3,209	2,499	3,170	5,204	4,894	3,608	2,945	1,105	--	--			
TOTAL HARDWOODS	1,793,934	164,548	201,037	236,738	290,502	248,101	184,191	151,270	119,942	165,557	32,048			
ALL SPECIES	4,542,966	507,924	662,079	750,557	835,878	638,644	397,432	267,765	191,684	247,383	43,620			

TABLE 16. -- VOLUME OF SAWTIMBER ON COMMERCIAL FOREST LAND, BY SPECIES AND DIAMETER CLASS, 1979

SPECIES	ALL CLASSES	DIAMETER CLASS (INCHES AT BREAST HEIGHT)									
		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 BOARD FEET											
SOFTWOOD:											
LONGLEAF PINE	3,028,754	818,952	1,092,647	800,407	214,002	59,470	22,335	20,941			
SLASH PINE	3,119,164	691,607	757,697	681,369	490,107	250,754	159,141	158,315			10,174
SHORTLEAF PINE	189,080	24,655	63,040	17,581	14,820	10,663	9,133				
LOBLOLLY PINE	1,188,589	133,415	267,871	175,690	149,653	98,726	136,862				
POND PINE	1,189,673	36,122	54,023	44,483	27,508	7,450	15,481	4,606			
VIRGINIA PINE											
PITCH PINE											
TABLE-MOUNTAIN PINE											
SPRUCE PINE	151,339	18,486	27,202	2,259	34,303	43,634	14,240	11,215			
SAND PINE	193,446	70,397	51,265	44,442	23,836	3,506					
EASTERN WHITE PINE											
EASTERN HEMLOCK											
SPRUCE AND FIR											
BALDCYPRESS	441,962	16,387	28,144	46,127	55,080	73,730	57,680	114,495			
POND CYPRESS	605,313	98,267	136,103	124,743	90,148	42,346	45,191	51,731			50,319
CEDARS	238,425	44,412	45,440	58,661	46,215	26,472	6,976	10,249			16,784
TOTAL SOFTWOODS	9,345,745	1,952,700	2,509,580	2,011,903	1,174,470	671,835	430,433	517,547			77,277
HARDWOOD:											
SELECT WHITE OAKS	80,228		13,097	20,258	22,990	3,164	17,229	3,490			
SELECT RED OAKS	4,634							4,634			
CHESTNUT OAK											
OTHER WHITE OAKS	360,192		29,413	57,122	51,307	65,243	40,749	82,871			33,487
OTHER RED OAKS	1,242,785		206,642	294,396	183,026	179,970	121,789	268,011			78,951
HICKORY	123,944		16,513	33,421	24,436	23,155	15,538	10,881			
YELLOW BIRCH											
HARD MAPLE	18,933		4,115	3,609	3,592	7,617					
SOFT MAPLE	82,922		15,992	21,850	19,511	11,978		13,591			
BEECH	32,591		4,371	2,896		3,131	2,844	15,173			4,176
SWEETGUM	463,950		100,213	113,463	93,100	41,080	58,570	52,497			5,027
TUPELO AND BLACKGUM	1,789,640		321,708	316,453	263,456	259,321	208,518	357,568			62,616
ASH	197,384		21,257	24,293	32,368	30,362	38,919	50,185			
COTTONWOOD	3,273										
BASSWOOD											
YELLOW-POPULAR	131,286		44,526	20,168	6,319	11,982	38,287	10,004			
BAY AND MAGNOLIA	656,343		175,462	148,081	105,523	87,818	70,268	53,240			15,951
BLACK CHERRY	3,218		3,218								
BLACK WALNUT											
SYCAMORE	23,095		1,823		3,499	6,042	3,110	8,621			
BLACK LOCUST											
ELM	38,851		6,005	13,383	2,514		3,300	8,005			5,644
OTHER EASTERN HARDWOODS	66,175		16,320	17,199	14,655	12,883	5,118				
TOTAL HARDWOODS	5,319,444		980,675	996,592	826,296	743,746	627,512	938,771			205,852
ALL SPECIES	14,665,189	1,952,700	3,490,255	3,008,495	2,000,766	1,415,581	1,057,945	1,456,318			283,129

TABLE 17. --NET ANNUAL GROWTH AND REMOVALS OF GROWING STOCK ON COMMERCIAL FOREST LAND, BY SPECIES, 1978

SPECIES	NET ANNUAL GROWTH	ANNUAL TIMBER REMOVALS
- - THOUSAND CUBIC FEET - -		
SOFTWOOD:		
YELLOW PINES	170,553	133,038
EASTERN WHITE PINE	--	--
SPRUCE AND FIR	--	--
CYPRESS	6,472	799
OTHER EASTERN SOFTWOODS	2,423	321
TOTAL SOFTWOODS	179,448	134,158
HARDWOOD:		
SELECT WHITE AND RED OAKS	536	226
OTHER WHITE AND RED OAKS	21,915	11,581
HICKORY	1,410	2,099
YELLOW BIRCH	--	--
HARD MAPLE	130	238
SWEETGUM	5,300	4,433
ASH, WALNUT, AND BLACK CHERRY	1,668	2,257
YELLOW-POPLAR	1,771	1,139
TUPELO AND BLACKGUM	12,998	4,552
BAY AND MAGNOLIA	7,265	3,458
OTHER EASTERN HARDWOODS	3,977	985
TOTAL HARDWOODS	56,970	30,968
ALL SPECIES	236,418	165,126

TABLE 18. --NET ANNUAL GROWTH AND REMOVALS OF SAWTIMBER ON COMMERCIAL FOREST LAND, BY SPECIES, 1978

SPECIES	NET ANNUAL GROWTH	ANNUAL TIMBER REMOVALS
- - - THOUSAND BOARD FEET - - -		
SOFTWOOD:		
YELLOW PINES	633,581	461,385
EASTERN WHITE PINE	--	--
SPRUCE AND FIR	--	--
CYPRESS	29,519	3,319
OTHER EASTERN SOFTWOODS	11,833	1,189
TOTAL SOFTWOODS	674,933	465,893
HARDWOOD:		
SELECT WHITE AND RED OAKS	1,944	442
OTHER WHITE AND RED OAKS	81,923	35,872
HICKORY	6,277	9,190
YELLOW BIRCH	--	--
HARD MAPLE	435	954
SWEETGUM	18,974	11,854
ASH, WALNUT, AND BLACK CHERRY	8,338	10,469
YELLOW-POPLAR	8,921	5,073
TUPELO AND BLACKGUM	48,388	18,823
BAY AND MAGNOLIA	20,272	11,714
OTHER EASTERN HARDWOODS	9,597	3,191
TOTAL HARDWOODS	205,069	107,582
ALL SPECIES	880,002	573,475

TABLE 19. --MORTALITY OF GROWING STOCK AND SAWTIMBER ON COMMERCIAL FOREST LAND, BY SPECIES, 1978

SPECIES	GROWING STOCK	SAWTIMBER
	THOUSAND CUBIC FEET	THOUSAND BOARD FEET
SOFTWOOD:		
YELLOW PINES	15,921	50,217
EASTERN WHITE PINE	--	--
SPRUCE AND FIR	--	--
CYPRESS	456	2,016
OTHER EASTERN SOFTWOODS	693	2,669
TOTAL SOFTWOODS	17,070	54,902
HARDWOOD:		
SELECT WHITE AND RED OAKS	273	1,267
OTHER WHITE AND RED OAKS	6,330	20,312
HICKORY	371	1,155
YELLOW BIRCH	--	--
HARD MAPLE	--	--
SWEETGUM	1,852	6,976
ASH, WALNUT, AND BLACK CHERRY	490	1,117
YELLOW-POPLAR	169	1,019
TUPELO AND BLACKGUM	2,894	9,589
BAY AND MAGNOLIA	2,589	7,611
OTHER EASTERN HARDWOODS	2,059	6,659
TOTAL HARDWOODS	17,027	55,705
ALL SPECIES	34,097	110,607

TABLE 20. -- VOLUME OF ALL LIVE TREES AND GROWING STOCK ON COMMERCIAL FOREST LAND, BY OWNERSHIP CLASS AND SPECIES GROUP, 1979

OWNERSHIP CLASS	ALL LIVE TREES				GROWING STOCK				HARD HARDWOOD	
	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD	ALL SPECIES	PINE	OTHER SOFTWOOD		SOFT HARDWOOD
	-- THOUSAND CUBIC FEET --									
NATIONAL FOREST	581,603	353,725	81,485	116,925	29,468	535,005	352,425	66,337	95,188	21,055
OTHER PUBLIC	764,880	477,458	57,040	127,559	102,823	669,870	473,690	53,608	97,179	45,403
FOREST INDUSTRY	1,485,556	639,665	118,929	496,314	230,648	1,305,215	635,445	104,400	406,872	158,498
FARMER	1,725,859	253,102	34,134	227,847	210,776	623,427	248,246	32,658	180,153	162,370
MISCELLANEOUS PRIVATE	1,582,653	692,702	98,280	448,748	342,923	1,409,449	686,994	95,239	371,602	255,614
ALL OWNERSHIPS	5,140,551	2,416,652	389,868	1,417,393	916,638	4,542,966	2,396,790	352,242	1,150,994	642,940

TABLE 21. -- VOLUME OF SAWTIMBER ON COMMERCIAL FOREST LAND, BY OWNERSHIP CLASS AND SPECIES GROUP, 1979

OWNERSHIP CLASS	SMALL SAWTIMBER ¹				LARGE SAWTIMBER ²				HARD HARDWOOD	
	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD	ALL SPECIES	PINE	OTHER SOFTWOOD		SOFT HARDWOOD
	-- THOUSAND BOARD FEET --									
NATIONAL FOREST	1,193,721	989,124	122,440	67,848	14,309	570,216	268,357	77,767	165,312	58,780
OTHER PUBLIC	1,626,228	1,380,440	86,562	111,105	48,121	883,496	472,850	155,911	183,020	71,715
FOREST INDUSTRY	2,157,523	1,329,549	180,956	479,571	167,446	1,808,092	520,704	150,576	741,438	395,374
FARMER	1,064,016	565,800	61,849	233,477	181,893	925,873	409,090	60,939	184,553	271,391
MISCELLANEOUS PRIVATE	2,409,960	1,590,986	146,477	432,812	239,685	2,025,962	513,145	242,223	645,883	624,711
ALL OWNERSHIPS	8,451,450	5,875,899	598,284	1,325,813	651,454	6,213,739	2,184,146	687,416	1,920,206	1,421,971

¹ VOLUME OF SAWTIMBER TREES LESS THAN 15.0 INCHES AT D.B.H.

² 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, 1978

OWNERSHIP CLASS	NET ANNUAL GROWTH				ANNUAL TIMBER REMOVALS					
	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD
NATIONAL FOREST	25,705	20,425	1,211	3,346	723	8,385	8,321	64	--	--
OTHER PUBLIC FOREST	30,190	24,347	1,574	3,286	1,983	10,964	8,587	96	--	1,281
FOREST INDUSTRY	75,194	56,558	3,415	9,400	5,821	60,826	49,184	912	4,442	6,098
FARMER	28,917	15,318	664	5,316	7,619	28,034	19,231	48	5,560	3,215
MISCELLANEOUS PRIVATE	76,412	53,905	2,031	10,053	10,423	57,087	46,715	--	4,272	6,100
ALL OWNERSHIPS	236,418	170,553	8,895	30,401	26,569	165,126	133,038	1,120	14,274	16,694

TABLE 23. --NET ANNUAL GROWTH AND REMOVALS OF SAWTIMBER ON COMMERCIAL FOREST LAND, BY OWNERSHIP CLASS AND SPECIES GROUP, 1978

OWNERSHIP CLASS	NET ANNUAL GROWTH				ANNUAL TIMBER REMOVALS					
	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD	ALL SPECIES	PINE	OTHER SOFTWOOD	SOFT HARDWOOD	HARD HARDWOOD
NATIONAL FOREST	113,460	95,953	4,982	8,675	3,850	25,877	25,533	344	--	--
OTHER PUBLIC FOREST	144,939	120,470	11,108	7,369	5,992	41,180	36,960	449	--	3,771
FOREST INDUSTRY	219,399	144,133	10,727	38,639	25,900	210,486	166,358	3,715	14,818	25,605
FARMER	119,672	78,009	3,283	14,976	23,394	100,480	70,606	--	17,700	13,174
MISCELLANEOUS PRIVATE	282,532	195,016	11,242	36,003	40,271	195,442	161,928	--	16,813	16,701
ALL OWNERSHIPS	880,002	633,581	41,352	105,662	99,407	573,475	461,385	4,508	49,331	58,251

TABLE 24. --AVERAGE NET VOLUME PER ACRE OF SAWTIMBER, GROWING STOCK, AND OTHER LIVE TIMBER¹ ON COMMERCIAL FOREST LAND, BY OWNERSHIP CLASS, MAJOR FOREST TYPE, AND SPECIES GROUP, 1979

FOREST TYPE, AND SPECIES GROUP, AND CLASS OF MATERIAL	ALL OWNERSHIPS			OWNERSHIP CLASS					
	BOARD FEET	CUBIC FEET	FEET	NATIONAL FOREST	OTHER PUBLIC	FOREST INDUSTRY	FARMER	MISC. PRIVATE	
	BOARD FEET	CUBIC FEET	FEET	BOARD FEET	CUBIC FEET	BOARD FEET	CUBIC FEET	BOARD FEET	CUBIC FEET
PINE TYPES:									
GROWING STOCK:									
SOFTWOOD	2,090	662	811	2,827	897	1,245	456	861	2,014
HARDWOOD	61	33	32	74	58	26	18	81	40
TOTAL	2,151	695	843	2,901	955	1,271	474	942	2,054
OTHER TIMBER:									
SOFTWOOD	--	5	6	--	6	--	3	--	5
HARDWOOD	--	16	9	--	40	--	9	--	17
TOTAL	--	21	15	--	46	--	12	--	22
OAK-PINE TYPES:									
GROWING STOCK:									
SOFTWOOD	2,095	505	437	1,870	608	2,125	533	2,223	1,719
HARDWOOD	530	236	155	--	160	463	179	1,166	483
TOTAL	2,625	741	592	1,870	705	2,588	712	3,389	2,202
OTHER TIMBER:									
SOFTWOOD	--	12	--	--	19	--	22	--	6
HARDWOOD	--	101	19	--	82	--	61	--	127
TOTAL	--	113	19	--	101	--	83	--	133
UPLAND HARDWOOD TYPES:									
GROWING STOCK:									
SOFTWOOD	306	67	246	1,250	87	153	37	558	112
HARDWOOD	1,204	397	509	874	115	1,153	373	1,717	637
TOTAL	1,510	464	755	2,124	202	1,306	410	2,275	749
OTHER TIMBER:									
SOFTWOOD	--	2	--	--	--	--	--	--	4
HARDWOOD	--	114	43	--	89	--	90	--	146
TOTAL	--	116	43	--	92	--	90	--	150
BOTTOMLAND HARDWOOD TYPES:									
GROWING STOCK:									
SOFTWOOD	1,337	340	632	2,097	538	878	259	976	236
HARDWOOD	3,475	1,114	840	2,364	1,122	3,682	1,125	2,412	976
TOTAL	4,812	1,454	1,472	4,461	1,660	4,560	1,384	3,388	1,212
OTHER TIMBER:									
SOFTWOOD	--	29	124	--	22	--	30	--	8
HARDWOOD	--	307	225	--	609	--	314	--	303
TOTAL	--	336	349	--	631	--	344	--	311
ALL TYPES:									
GROWING STOCK:									
SOFTWOOD	1,696	499	752	2,618	685	1,142	387	1,758	442
HARDWOOD	965	325	209	550	185	934	296	1,372	539
TOTAL	2,661	824	961	3,168	870	2,076	683	3,130	981
OTHER TIMBER:									
SOFTWOOD	--	10	29	--	9	--	10	--	5
HARDWOOD	--	98	54	--	114	--	85	--	151
TOTAL	--	108	83	--	123	--	95	--	161
ALL TIMBER	2,661	932	1,044	3,168	993	2,076	778	3,130	1,142
¹ ROUGH AND ROTTEN TREES.									

TABLE 25. --LAND AREA, BY CLASS, MAJOR FOREST TYPE, AND SURVEY COMPLETION DATE, 1959, 1969, AND 1979

LAND USE CLASS	SURVEY COMPLETION DATE			CHANGE 1969-1979
	1959	1969	1979	
----- ACRES -----				
FOREST LAND:				
COMMERCIAL FOREST LAND:				
PINE AND OAK-PINE TYPES	3,282,200	3,690,344	3,639,018	- 51,326
HARDWOOD TYPES	2,464,300	2,087,979	1,873,043	-214,936
TOTAL	5,746,500	5,778,323	5,512,061	-266,262
NONCOMMERCIAL FOREST LAND:				
PRODUCTIVE-RESERVED	4,100	6,100	37,355	+ 31,255
UNPRODUCTIVE	17,000	10,966	15,966	+ 5,000
TOTAL	21,100	17,066	53,321	+ 36,255
NONFOREST LAND:				
CROPLAND	845,700	721,103	809,635	+ 88,532
PASTURE AND RANGE	188,700	286,642	331,956	+ 45,314
OTHER	421,900	473,007	569,168	+ 96,161
TOTAL	1,456,300	1,480,752	1,710,759	+230,007
ALL LAND ¹	7,223,900	7,276,141	7,276,141	--

¹ EXCLUDES ALL WATER AREAS.

TABLE 26. -- VOLUME 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 THOUSAND BOARD FEET)												
SOFTWOOD	1959	5,496,225	--	--	1,444,084	1,535,894	1,118,551	641,792	364,918	182,490	208,496	
	1969	7,418,586	--	--	1,759,723	2,048,810	1,516,775	903,136	591,423	247,290	351,429	
	1979	9,345,745	--	--	1,952,700	2,509,580	2,011,903	1,174,470	671,835	430,433	594,824	
HARDWOOD	1959	4,042,815	--	--	--	717,154	815,796	746,304	573,775	429,401	760,385	
	1969	4,596,753	--	--	--	876,258	851,178	788,177	713,172	498,212	869,756	
	1979	5,319,444	--	--	--	980,675	996,592	826,296	743,746	627,512	1,144,623	
GROWING STOCK (IN THOUSAND CUBIC FEET)												
SOFTWOOD	1959	1,767,825	214,598	379,402	380,022	333,745	217,110	116,520	63,277	30,415	32,736	
	1969	2,275,809	301,972	408,233	463,085	445,200	294,405	163,988	102,553	41,215	55,178	
	1979	2,749,032	343,376	461,042	513,819	545,376	390,543	213,241	116,495	71,742	93,398	
HARDWOOD	1959	1,446,821	133,963	186,254	214,682	212,427	203,086	166,363	116,692	82,072	131,282	
	1969	1,591,537	145,922	198,745	209,293	259,555	211,894	175,697	145,042	95,224	150,165	
	1979	1,793,934	164,548	201,037	236,738	290,502	248,101	184,191	151,270	119,942	197,605	
ALL LIVE TIMBER (IN THOUSAND CUBIC FEET)												
SOFTWOOD	1959	1,803,160	221,392	389,148	386,335	336,715	219,899	118,287	63,957	30,628	36,799	
	1969	2,322,041	311,531	418,715	470,786	449,163	298,194	166,431	103,683	41,544	61,594	
	1979	2,806,520	354,032	473,163	522,100	550,211	395,565	216,500	117,765	72,275	104,909	
HARDWOOD	1959	1,887,286	219,650	267,671	289,890	253,890	242,744	200,256	136,937	97,062	179,186	
	1969	2,070,309	239,261	285,620	282,610	310,217	253,278	211,491	170,210	112,650	204,972	
	1979	2,334,031	270,463	289,323	319,622	347,215	296,516	221,714	177,549	141,890	269,739	

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.