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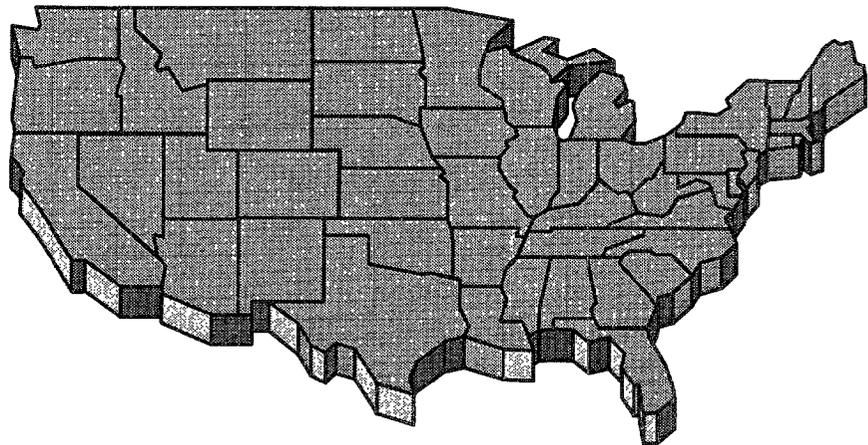
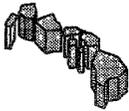
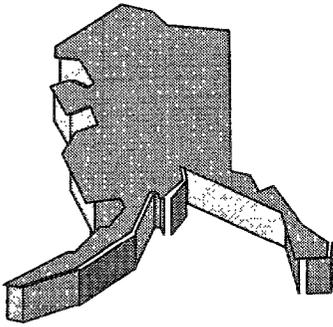
Northeastern Forest  
Experiment Station

Resource Bulletin NE-134



# Private Forest-land Owners of the United States, 1994

Thomas W. Birch



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## Abstract

Information from a new study of forest-land owners has given us a new estimate of the number of ownerships and insight into the attitudes and actions of this important group of decisionmakers. Nearly half the private forest land is in ownerships with greater than 500 acres of forest. Nearly half of the owners have harvested timber from their holdings at some time in the past. Owners have a positive attitude toward timber cutting at a time when there is greater demand for products from the forest. Interest in harvesting the timber resource has created a situation in which watchful monitoring and good stewardship will be needed to maintain the productivity of ecosystems for future generations.

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## The Author

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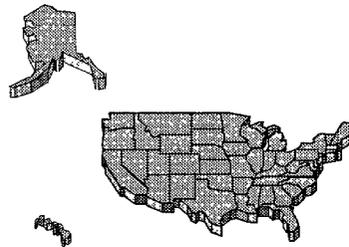
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## ***Highlights***

- ◆ There are an estimated 9.9 million private ownerships with more than 390 million acres of forest land in the United States.
- ◆ Nearly half (45%) of the private forest is in ownerships with greater than 500 acres of forest.
- ◆ Corporations, partnerships, clubs, and other ownerships with multiple owners have 40 percent of the acreage; while 'retired' owners have one-third of the remaining 60 percent.
- ◆ Forty percent of the ownerships first acquired forest land since 1978, and they have 23 percent of the private forest.
- ◆ Five percent of the private forest-land owners have a written management plan; they control 39 percent of the private forest and.

## Introduction

Our forest resources are vital to the social and economic well being of our society. Good forest management requires a thorough knowledge of the resource base and the factors affecting it. Forest owners are the essential link between the general public and the land. This publication reports results of the 1994 study of the forest-land owners of the United States. Included are estimates of the number of private forest-land ownerships in the United States. It describes ownership objectives, expected benefits, harvest experience, intention to harvest, and management planning. The previous nationwide ownership study for the United States was conducted in 1978 (Birch and others 1982). An additional objective of this paper is to review trends between the two surveys.

In this study an ownership unit refers to persons, combinations of persons or legal entities, such as corporations, partnerships, clubs, trusts, Indian Tribes, and Native corporations. One person may own several parcels or partial interest in several parcels. An ownership unit has the control of a parcel or group of parcels of land. Our sample is drawn from the land itself (parcel by parcel), and the owner of record (the apparent owner) is determined. Finally, an individual who has some control of an amount of land (not exclusively the parcel sampled) responds to the survey. Therefore, we are sampling ownership units and not owners.

Landowners have rights and responsibilities regarding their land. The rights include those to purchase more land or sell existing holdings, determine land use, and decide the type and level of investment. These rights all function within the limits allowed and imposed by society. Ownership of land fixes responsibility for decisionmaking, establishes a claim on income accruing to land, and determines how wealth in land is distributed (Lewis 1980, Boxley 1977, Wunderlich 1978).

## Data Collection

In 1992, the USDA Forest Service estimate of 736.7 million acres of forest is essentially unchanged from 1977, or 33 percent of the total land area (Powell and others 1993). Of this, private 'forest-land' (this term and others are defined in the appendix) owners have 423.8 million acres (58 percent). Two-thirds of the Nation's forests are classified as timberland (490 million acres); of this, 358 million acres are in private ownership. This study is based on an estimate of 393 million acres of private forest land, which includes essentially all of the private timberland plus samples of 'other forest' in Texas, Oklahoma, Oregon, and California. In addition, data obtained on Indian lands in Arizona, Colorado, Nevada, New Mexico, and Utah included 'other forest-land' area. Alaska has 6.2 million acres of private timberland that was covered by Forest Inventory and

Analysis sample locations. The remaining 23.6 million acres of Alaska's private forest did not have ground samples directly associated by ownership, but is owned primarily by the same Native corporations that own most of the state's private timberland. This study uses 9.9 million acres of private forest in Alaska for estimation purposes based on responses from Alaska owners.

In 1977, for comparison, 736.6 million acres of the United States were in forest; of this, 347 million acres were classified as privately owned timberland (USDA Forest Service 1982). The 1978 study of private forest-land owners of the United States used an estimate of 333 million acres developed by USDA Economic Research Service, Natural Resource Economics Division from the National Resources Inventory (NRI) of the USDA Soil Conservation Service. The difference of 14 million acres (4 percent) was attributed to differences in definitions (Birch and others 1982). It was felt that the proportions from the 1978 study could be applied to the timberland base for resource planning purposes.

The other national estimate of forest-land owners is from the Timber Resource Review of 1953 (USDA Forest Service 1958). The 1953 data did not have estimates of owners with fewer than 3 acres in the East or fewer than 10 acres in the West. Therefore direct comparison of numbers of owners should not be made. The comparison by broad size classes could be of some use if coupled with trend data by ownership group (Wall 1981). The state-level studies conducted by the Northeastern Forest Experiment Station and North Central Forest Experiment Station (Birch 1982, 1986, 1989, 1993; Birch and Dennis 1980; Birch and Kingsley 1978; Birch and Powell 1978; Carpenter and Hansen 1985; Carpenter and others 1986; Kingsley 1975, 1976; Kingsley and Birch 1977, 1980; Kingsley and Finley 1975; Widmann and Birch 1988) are comparable with the current study.

The 1978 data were gathered from 11,076 sample locations by the USDA Economic Research Service. The 1994 study was conducted by the Forest Inventory and Analysis Projects of the USDA Forest Service in cooperation with the National Association of State Foresters and the USDA Natural Resources Conservation Service, in support of the Forest Stewardship Program of the USDA Forest Service, State and Private Forestry. The questionnaires for the 1994 study were mailed to 23,334 owners of 28,194 privately owned forested sample plots. Sample plot locations were from National Resources Inventory (NRI) plots or Forest Inventory and Analysis (FIA) plots. Specifics of numbers of plots used by state are included in the appendix. Responses from 11,742 ownerships that own 15,697 of these sample plots have been included in this study. The procedure for estimating the number of private forest-land owners, by state, and the questionnaire used for this report are included in the appendix.

## Private Forest Owners

An estimated 9.9 million private forest-land ownership units hold 393 million acres of forest land in the United States. These owners are diverse in legal organization, economic circumstances, personal characteristics, ownership objectives, and management experience.

About 94 percent of the private ownerships are individuals, collectively holding 59 percent of the privately owned forest land. Corporations hold 27 percent; the remaining 14 percent is held by partnerships, undivided estates, clubs, associations, and Indian Tribes.

Since 1978, individual ownerships including joint husband and wife and family ownerships other than family corporations, increased in numbers and in the proportion of private forest land owned (Fig. 1, Table 1). Partnerships decreased both in number of ownership units and in the proportion of private forest land owned. The number of corporations that own forest land decreased, whereas the acreage of forest land owned increased slightly. 'Other' ownerships such as sport and recreation clubs, undivided estates, trusts, and Indian Tribes decreased in number since 1978 but the area owned increased.

Sport and recreation clubs are an important ownership component in such states as Pennsylvania, New York, and Michigan (Baumgartner and Rudolph 1974, Binkley and others 1980, Birch 1983, and Birch and Dennis 1980). Undivided estates are important in Maine, West Virginia, Kentucky, and other areas of Appalachia (Birch 1986, Birch and Kingsley 1978, Birch and Powell 1978). Indian Tribes, including Native corporations, are a particularly important ownership group in Alaska, Arizona, New Mexico, Colorado, and several other areas.

The data are presented in this report, by three major forest regions of the country (North, South, and West), and by states. The North is divided into four subregions: New England, Middle Atlantic, Lake, and Central States (Fig. 2, Table 2). The South is divided into two subregions: Southeast and Southern States. The West is divided into three subregions: Pacific, Rocky Mountain, and Plains States. Data tabulations for these regions, subregions, and states are presented at the end of this report. In table 2, data for subregions in the North are combined to show subtotals for New England and Middle Atlantic States (Northeast) and Lake States and Central States (North Central). Also, data for the South are further subdivided to show subtotals for Central Gulf and West Gulf sections of the Southern subregion and East Gulf and South Atlantic sections of the Southeast subregion.

In 1978, the North had an estimated 3.3 million private forest-land ownership units with 114 million acres of forest land. The 1994 estimate is 3.9 million ownerships with 130 million acres of forest land. Forest fragmentation is of particular importance in Southern New England (Connecticut, Massachusetts, and Rhode Island) and other areas of high urban population density.

The South had 3.9 million ownerships with 173 million acres of forest land in 1978. The current estimate is 4.9 million ownerships with 188 million acres of forest. This estimate includes nearly 250,000 ownerships with more than 10 million acres of 'other forest' areas in Texas and Oklahoma that were not included in the 1978 study.

The West in 1978 was estimated to have 618,000 owners with 46 million acres of private forest. The estimate did not include an estimate of private owners in Alaska and did not include Indian Tribal land including those for Native

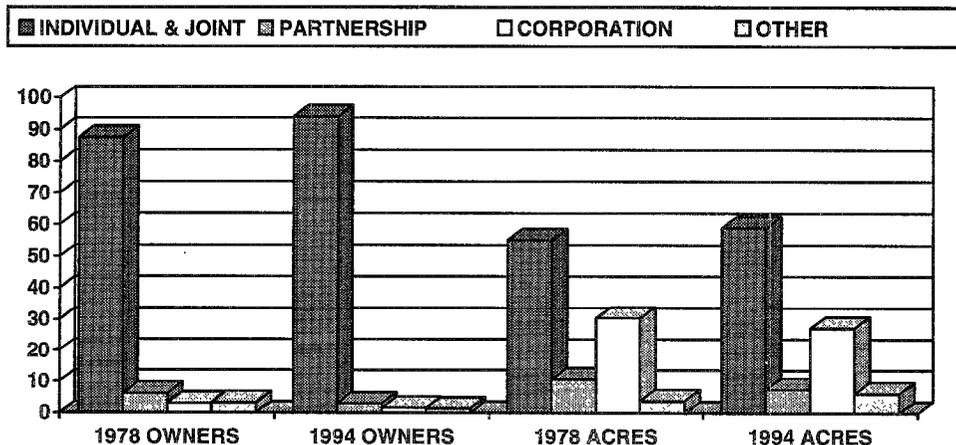


Figure 1. Distribution of private ownerships, by form of ownership, United States, 1978 and 1994.

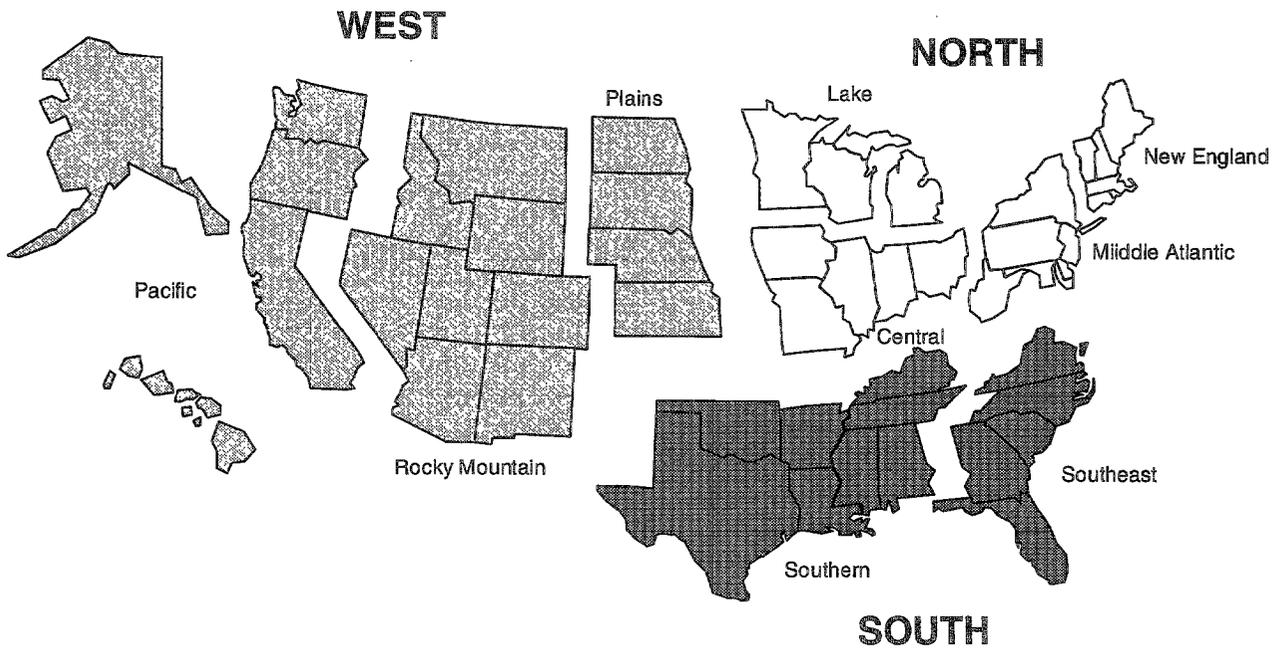


Figure 2. Regions and subregions of the country for private forest-land owners of the United States, 1994.

corporations. The 1994 study estimates 1.03 million owners with 76 million acres of private forests. The current study includes a sample of Pinion-Juniper land in Oregon and California. There was a particular increase in ownerships with fewer than 50 acres of forest land in the Rocky Mountain region. The inclusion of Indian land was responsible for the increase in forested acreage. If the additional acreage of private 'other forest' in Alaska were added, private acreage in the West would be nearly 95 million acres.

The distribution by size class of ownership has changed since 1978 (Fig. 3, Table 3). The number of private ownerships with fewer than 10 acres of forest land increased from 5.5 million (71 percent) to 5.8 million (59 percent) ownerships. The acreage in this class increased from 11 million acres to 16.6 million acres. The number of ownerships with 10 to 49 acres of forest increased from 1.2 million in 1978 to 2.8 million. The acreage in this class increased from 28 million acres in 1978 to 60 million acres. The number of owners with 50 to 99 acres of forest increased as well as the acreage owned by this class.

The area in ownerships of more than 100 acres supports effective timber management. The proportion of ownerships with written plans increases with size of ownership. If the approximately 627,200 owners with more than 100 acres of forest worked with professional foresters, nearly 70 percent of the nation's forest could be placed under management. However, working only with this group would preclude the development of a broad-based supportive constituency (Birch and Pywell 1986).

More than 90 percent of the private ownerships have fewer than 100 acres of forest land each, and they control 30

percent of the private forest land. It is this portion of the resource where concern about fragmentation and rapid turnover is concentrated. While many of these owners do not have timber harvesting as their primary reason for owning forest land, many have harvested and will harvest trees for sale to forest products companies.

The implications of changing ownership patterns are significant. The yearly transition to many new forest owners makes the communication of information about management and new programs such as stewardship difficult. The use of mass communication, especially the electronic media, is essential (Birch and Pywell 1986). More than 40 percent of the present owners acquired forest land for the first time since 1978. These owners control 24 percent of the private forest land (Fig. 4, Table 4). The group of owners with the largest decrease both in numbers of owners and acreage owned was the group of owners who had first acquired forest between 1970 and 1977.

The social and economic characteristics of private forest-land owners and their objectives must be considered when developing management programs. As owners age, for example, some may harvest because they need the money for retirement. By contrast, it is believed that "baby boomers" who are well known for their environmental concerns and high education levels might not harvest because they do not need current income (Marcin and Skog 1984). But the perception that these owners are adverse to cutting trees is not true according to this study.

In general, the "new" individual private forest-land owner is younger, better educated, and has a higher income than the owner of a decade ago. This study shows an increase in the proportion of retired and 'other' owners (Fig. 5, Table 5).

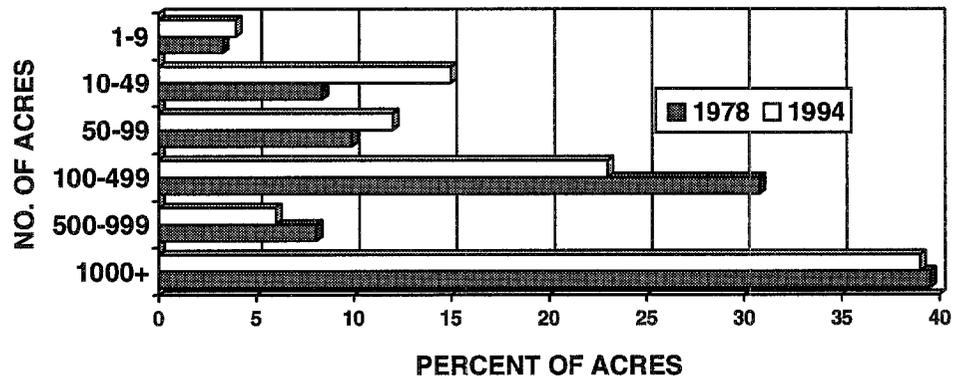
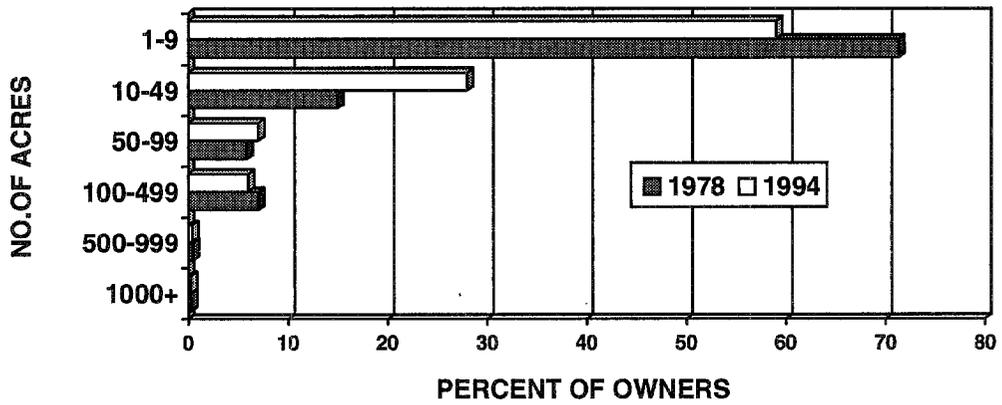


Figure 3. Distribution of private ownerships, by size class of ownership, United States, 1978 and 1994.

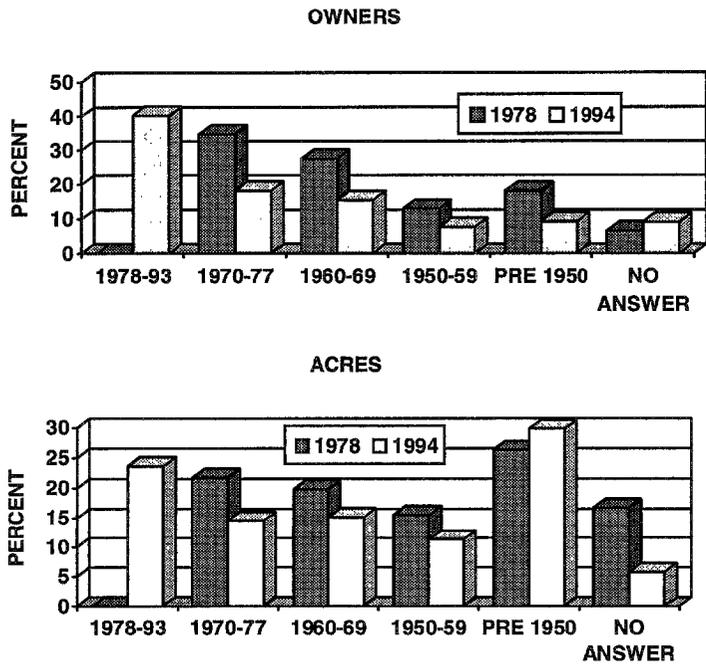


Figure 4. Distribution of private ownerships, by year owner first acquired forest land, United States, 1978 and 1994.

The 'other' category includes service workers, which coincides with the increase in service-related industries in the economy. There has been a big decrease in numbers of owners who are in 'blue collar' occupations and the acreage owned by 'blue collar' owners. Retired owners increased both in the proportion of owners and the proportion of acreage owned. This change may have taken place because owners who retired in the last decade came from occupation groups that had decreases rather than retired owners purchasing forest land. Also, people are retiring earlier and living longer.

## Owner Objectives

Forest lands produce many benefits for their owners, so it is not surprising that landowners express diverse reasons for owning forest land. Many potential benefits from owning forest land are not competitive with each other. Some benefits can be produced with little or no effect on others, and some benefits even increase when another benefit is produced.

Nearly 40 percent of the private forest-land owners believe the primary reason for owning forest land is that it is simply "part of the farm" or "residence" (Fig. 6, Table 6). In general, these ownerships hold smaller than average-sized tracts. Another 8 percent of the owners believe that farm or domestic use is the most important reason for owning forest land. Many of these owners consider their woodland as a source of fence posts, fuelwood, and similar products.

Recreation and esthetic enjoyment is the primary reason why 23 percent of the owners hold forest land. The area owned by people with these objectives represents 17 percent of the private forest land.

Land investment often is thought of as a hedge against inflation. Private landowners who list land investment as their primary reason for owning account for 9 percent of the owners, and 10 percent of private forest land.

Only 3 percent of the private forest-land owners hold their land primarily for timber production, but these owners control 29 percent of the private forest land. In addition, some owners own forest land for the minerals under the surface. Many of these owners are included under the "other" category. Also included in the 'other' category are the lands owned by Indian Tribes and Native corporations, for their cultural heritage.

Benefits expected in the next 10 years give another perspective on ownership objectives. Esthetic enjoyment predominates with 34 percent of the owners expecting it to be most important (Table 7). These owners control 16 percent of the private forest.

Land value increase is next in importance with 21 percent of the owners and 16 percent of the private forest. Only 5 percent of the owners have income from the sale of timber as their most important benefit, and they own 33 percent of the private forest. Firewood is most important to 4 percent of the owners and they have 3 percent of the private forest.

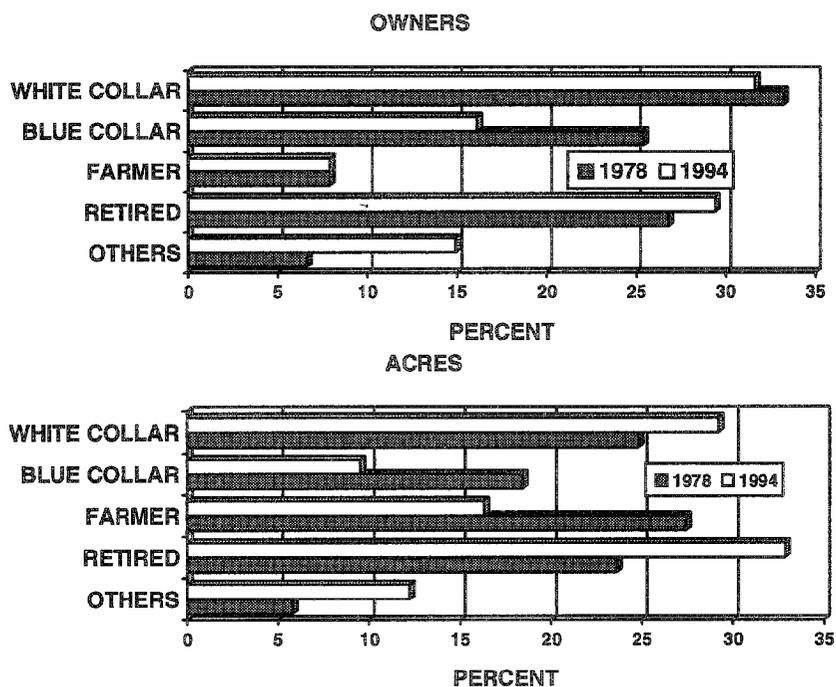


Figure 5. Distribution of individual ownerships, by owner occupation, United States, 1978 and 1994.

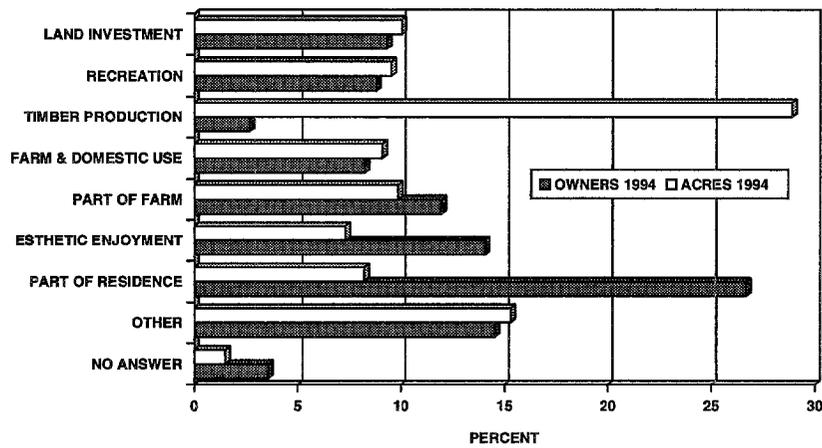


Figure 6. Distribution of private ownerships, by primary reason for owning forest land, United States, 1994.

### Timber Harvesting Behavior

There is a positive attitude toward and experience with timber harvesting. An estimated 46 percent of the private owners have harvesting experience and they control 78 percent of the private forest land (Fig. 7, Table 8).

Owners stating that they intend to harvest in the next 10 years are estimated to be 32 percent of the private

forest-land owners. Acreage owned by those intending to cut in the next decade is 63 percent. Conversely, 34 percent of the owners say they never intend to harvest and they own only 12 percent of the private acreage (Fig. 8, Table 9). The owners with indefinite harvest plans control 23 percent of the private forest land.

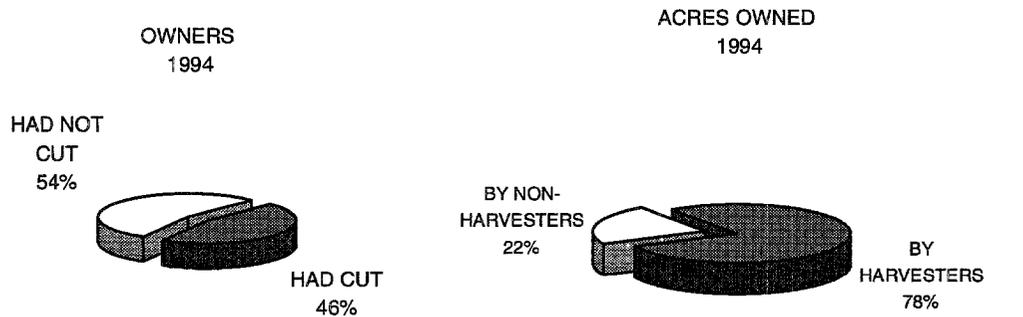


Figure 7. Harvest experience of private ownerships and acres of forest land, United States, 1994.

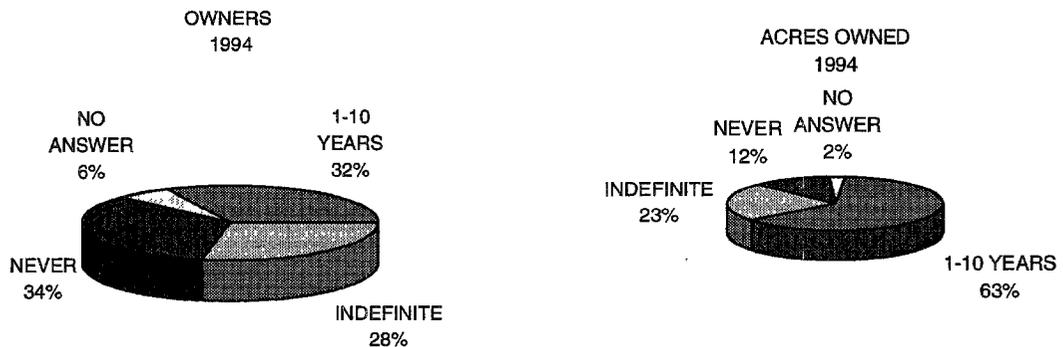


Figure 8. Harvest intentions of private ownerships and acres of forest land owned, United States, 1994.

## Management Planning

With the advent of the Forest Stewardship Program, there has been increased interest in written management plans. We estimate that 5 percent of the private forest-land owners have a written management plan for their forest land (Fig. 9, Table 10). These owners control 39 percent of the private forest land.

Forest industry owns 43 percent of the forest land owned by those with a written plan. The other 57 percent of the forest area is controlled by over one half million non-industrial private forest (NIPF) owners with some form of written plan.

Nearly 22 percent of the NIPF owners that have a plan stated that they prepared the plan themselves (Fig. 10, Table 11). These owners have 19 percent of the area covered by written plans. This includes some ownerships that employ foresters who prepare their plan. An estimated 11 percent of the NIPF plans were prepared by consultants accounting for 29 percent of the forest land covered by written plans. Industrial foresters prepared 4 percent of the plans for an estimated 10 percent of the area covered by written plans. State service foresters and wildlife biologists have been in the management plan business for a long time. They wrote

37 percent of the plans for NIPF owners and they cover 19 percent of the area covered. Others such as the USDI Bureau of Indian Affairs, USDA Extension Service and USDA Natural Resources Conservation Service prepared the remaining 27 percent of the plans that cover the remaining 33 percent of the forest covered. Totals equal more than 100 percent because owners listed more than one agency or person preparing the plans.

## Conclusion

The extent to which the private forest resources of the United States are needed, managed, and utilized in the future will depend on the complex set of interrelated factors that operated in the past. These factors include trends in the tastes and preferences of the owners of forest land; technological changes in the production, marketing, and utilization of wood products and their substitutes; strength of the American dollar, trade deficits, inflation, and other economic forces; attitudes of forest-land owners and other citizenry toward timber management and cutting; attractiveness of local business climates and living environments to developing industries. Only time will tell how all this interaction works out. But for now, watchful monitoring and good stewardship will be needed to maintain the productivity of forested ecosystems for future generations.

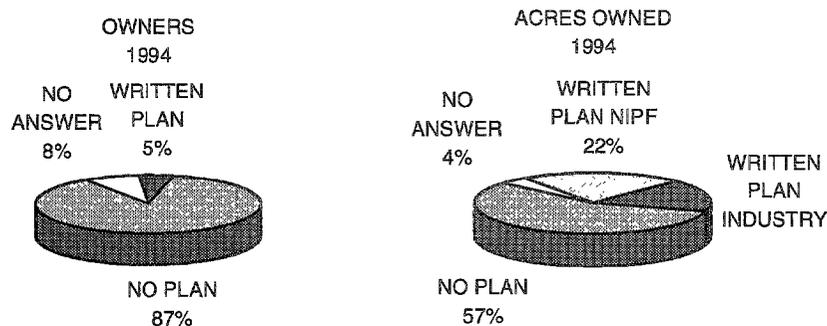


Figure 9. Distribution of private ownerships and acres of forest land owned, by whether a written management plan had been prepared, United States, 1994.

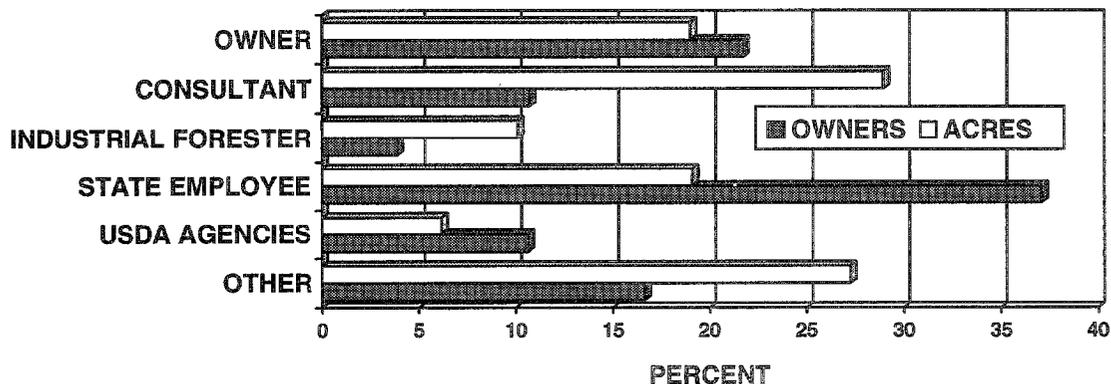


Figure 10. Distribution of nonindustrial private ownerships (NIPF) and acres of forest land owned, by who prepared the written plan, United States, 1994.

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**Table 1. Estimated number of private ownership units and acres of forest land owned, by type of ownership, United States, 1978 and 1994**

Form of ownership	1978		1994	
	Thousands	Percent	Thousands	Percent
OWNERS				
Individual	6,793	87.6	9,319	94.1
Partnership	484	6.2	289	2.9
Corporation	237	3.0	157	1.6
Other	246	3.2	136	1.4
<b>Total</b>	<b>7,757</b>	<b>100.0</b>	<b>9,902</b>	<b>100.0</b>

Form of ownership	1978		1994	
	Millions	Percent	Millions	Percent
ACRES				
Individual	183.5	55.1	232.3	59.0
Partnership	35.8	10.7	29.7	7.5
Corporation	101.1	30.4	107.1	27.2
Other	12.7	3.8	24.3	6.2
<b>Total</b>	<b>333.1</b>	<b>100.0</b>	<b>393.4</b>	<b>100.0</b>

**Table 2. Estimated number of private ownership units and acres of forest land owned, by state, subregion, and region, United States, 1978 and 1994**

Region, subregion, and state	1978		1994	
	Owners	Acres	Owners	Acres
	<i>Thousands</i>	<i>Millions</i>	<i>Thousands</i>	<i>Millions</i>
Connecticut	95.6	1.329	102.0	1.553
Maine	241.4	15.698	255.6	17.060
Massachusetts	143.6	2.835	212.8	2.529
New Hampshire	122.3	4.307	83.7	4.144
Rhode Island	12.9	.123	26.7	.338
Vermont	53.3	3.926	80.5	3.993
<b>New England</b>	<b>669.1</b>	<b>28.218</b>	<b>761.3</b>	<b>29.617</b>
Delaware	9.5	.318	17.3	.346
Maryland	42.2	1.886	130.6	2.272
New Jersey	108.0	1.284	88.7	1.401
New York	824.8	10.406	475.4	14.367
Pennsylvania	492.8	10.677	513.9	12.508
West Virginia	248.4	9.779	260.4	10.745
<b>Middle Atlantic</b>	<b>1,725.7</b>	<b>34.349</b>	<b>1,486.3</b>	<b>41.640</b>
<b>Northeast</b>	<b>2,394.8</b>	<b>62.567</b>	<b>2,256.4</b>	<b>71.328</b>
Illinois	61.0	2.860	114.5	3.641
Indiana	48.1	3.740	151.3	3.771
Iowa	11.6	1.724	55.4	1.807
Missouri	80.7	10.630	307.2	11.630
Ohio	133.6	5.420	329.2	7.191
<b>Central</b>	<b>335.0</b>	<b>24.373</b>	<b>957.7</b>	<b>28.040</b>
Michigan	301.7	11.477	332.7	12.039
Minnesota	62.6	6.510	147.4	7.317
Wisconsin	195.4	9.127	245.8	10.898
<b>Lake</b>	<b>559.7</b>	<b>27.114</b>	<b>725.9</b>	<b>30.254</b>
<b>North Central</b>	<b>894.7</b>	<b>51.488</b>	<b>1,683.6</b>	<b>57.002</b>
<b>North Total</b>	<b>3,289.5</b>	<b>114.054</b>	<b>3,931.2</b>	<b>129.551</b>
Alabama	429.0	19.760	452.4	20.770
Kentucky	372.3	10.325	306.9	11.424
Mississippi	185.0	14.101	341.2	15.126
Tennessee	224.0	13.790	475.9	11.763
<b>Central Gulf</b>	<b>1,210.3</b>	<b>57.885</b>	<b>1,576.4</b>	<b>58.678</b>
Arkansas	308.0	14.650	296.1	14.510
Louisiana	215.0	11.870	148.9	12.544
Oklahoma	43.0	5.370	158.0	6.926
Texas	185.0	9.190	319.8	18.269
<b>West Gulf</b>	<b>751.0</b>	<b>41.080</b>	<b>922.8</b>	<b>52.249</b>
<b>Southern</b>	<b>1,961.3</b>	<b>98.965</b>	<b>2,499.2</b>	<b>111.332</b>

Continued

**Table 2.—Continued**

Region, subregion, and state	1978		1994	
	Owners	Acres	Owners	Acres
	<i>Thousands</i>	<i>Millions</i>	<i>Thousands</i>	<i>Millions</i>
Florida	232.1	11.898	320.8	13.112
Georgia	278.0	21.480	610.7	21.985
East Gulf	510.0	33.378	931.5	35.097
North Carolina	693.0	16.420	704.9	16.774
South Carolina	244.0	10.610	335.9	11.006
Virginia	442.0	13.760	468.8	13.442
South Atlantic	1,379.0	40.790	1,509.6	41.222
Southeast	1,889.1	74.168	2,441.1	76,319.0
South Total	3,850.4	173.133	4,940.2	187.651
Kansas	31.8	.751	39.3	1.291
Nebraska	2.3	.180	34.2	.626
North Dakota	1.9	.330	11.3	.411
South Dakota	13.8	.030	28.7	.609
Great Plains	49.8	1.291	113.5	2.937
Alaska	0	0	16.6	9.881
California	139.1	10.444	345.6	14.476
Hawaii	2.2	.697	24.8	1.155
Oregon	165.0	10.130	166.2	10.650
Washington	180.0	8.500	91.4	9.670
Pacific	486.3	29.771	644.6	45.833
Arizona	.01	.004	23.9	6.757
Colorado	53.3	2.407	55.6	3.286
Idaho	21.7	3.110	47.4	3.245
Montana	4.8	5.910	82.7	5.957
Nevada	.1	.074	14.8	.530
New Mexico	.1	1.489	24.6	4.129
Utah	1.7	1.179	14.6	1.537
Wyoming	.2	.671	8.5	1.997
Rocky Mountain	81.9	14.844	272.2	27.418
West Total	618.0	45.906	1,030.3	76.187
Nation Total	7,757.9	333.094	9,901.7	393.389

**Table 3. Estimated number of private ownership units and acres of forest land owned, by size class of ownership, United States, 1978 and 1994.**

Size class (acres)	1978		1994	
	Thousands	Percent	Thousands	Percent
OWNERS				
1-9	5,528	71.3	5,795	58.6
10-49	1,164	15.0	2,762	27.9
50-99	464	5.9	717	7.2
100-499	538	7.0	559	5.6
500-999	40	.5	41	.4
1000+	23	.3	27	.3
Total	7,757	100.0	9,902	100.0

Date of acquisition	1978		1994	
	Millions	Percent	Millions	Percent
ACRES				
1-9	11.0	3.3	16.6	4.3
10-49	28.1	8.4	60.4	15.5
50-99	32.9	9.9	47.2	11.9
100-499	102.6	30.8	91.6	23.3
500-999	26.9	8.1	24.5	6.3
1000+	131.6	39.5	153.0	38.8
Total	333.1	100.0	393.4	100.0

**Table 4. Estimated number of private ownership units and acres of forest land owned, by date of acquisition, United States, 1978 and 1994.**

Date of acquisition	1978		1994	
	Thousands	Percent	Thousands	Percent
OWNERS				
1978-1993	0	0	3,991	40.3
1970-1977	2,696	34.8	1,802	18.2
1960-1969	2,130	27.5	1,527	15.4
1950-1959	1,009	13.0	757	7.6
Prior to 1950	1,409	18.1	922	9.3
No answer	513	6.6	903	9.1
Total	7,757	100.0	9,902	100.0

Date of acquisition	1978		1994	
	Millions	Percent	Millions	Percent
ACRES				
1978-1993	0	0	92.7	23.6
1970-1977	72.4	21.7	57.2	14.5
1960-1969	66.0	19.8	59.5	15.1
1950-1959	51.5	15.5	44.3	11.3
Prior to 1950	87.7	26.3	117.2	29.8
No answer	55.5	16.7	22.5	5.7
Total	333.1	100.0	393.4	100.0

**Table 5. Estimated number of private ownership units and acres of forest land owned, by owner's occupation, United States, 1978 and 1994.**

Owner's occupation	1978		1994	
	Thousands	Percent	Thousands	Percent
<b>OWNERS</b>				
White collar	2,158	33.2	2,942	31.6
Blue collar	1,673	25.4	1,499	16.1
Farmer	520	7.9	738	7.9
Retired	1,765	26.8	2,747	29.4
Other	436	6.0	1,393	15.0
Total, individuals	6,579	100.0	9,319	100.0

Owner's occupation	1978		1994	
	Millions	Percent	Millions	Percent
<b>ACRES</b>				
White collar	49.1	24.8	67.5	29.2
Blue collar	36.4	18.4	22.1	9.5
Farmer	54.3	27.4	37.6	16.3
Retired	46.7	23.6	76.9	32.8
Other	11.5	5.8	28.2	12.2
Total, individuals	198.0	100.0	232.3	100.0

**Table 6. Estimated number of private ownership units and acres of forest land owned, by primary reason for owning forest land, United States, 1994.**

Reason for owning:	Owners		Acres	
	Thousands	Percent	Millions	Percent
Land investment	920.0	9.3	39.3	10.0
Recreation	874.5	8.8	37.9	9.5
Timber production	272.2	2.7	113.2	28.9
Farm & domestic use	816.4	8.3	35.8	9.1
Enjoyment of owning	1,392.4	14.1	28.7	7.3
Part of farm	1,189.8	12.0	38.6	9.8
Part of residence	2,641.5	26.7	32.6	8.2
Other	1,440.9	14.5	61.0	15.3
No answer	354.1	3.6	6.3	1.5
Total	9,901.7	100.0	393.4	100.0

**Table 7. Estimated number of ownership units and acres of forest land owned, by primary benefit expected in the next 10 years from owning forest land, United States, 1994.**

Expected benefit	Owners		Acres	
	Thousands	Percent	Millions	Percent
Land value increase	2,055.9	20.8	63.6	16.4
Recreation	959.4	9.8	42.8	11.0
Timber production	477.5	4.8	131.6	33.2
Farm & domestic use	1,505.4	15.2	42.9	11.0
Enjoyment of owning	3,356.2	33.9	63.3	16.0
Firewood	421.5	4.2	9.9	2.5
Other	478.9	4.8	27.3	6.6
No answer	646.9	6.5	12.0	2.8
Total	9,901.7	100.0	393.4	100.0

**Table 8. Estimated number of private ownership units and acres of forest land owned, by harvest experience, United States, 1994.**

Harvest experience	Owners		Acres	
	Thousands	Percent	Millions	Percent
Harvesters	4,596.9	46.3	306.1	77.5
Nonharvesters	5,304.8	53.7	87.3	22.5
Total	9,901.7	100.0	393.4	100.0

**Table 9. Estimated number of private ownership units and acres of forest land owned, by expected time of future harvest, United States, 1994.**

Harvest experience	Owners		Acres	
	Thousands	Percent	Millions	Percent
1-10 years	3,127.1	31.6	249.5	63.1
Indefinite	2,755.2	27.7	90.5	23.1
Never	3,441.2	34.9	45.0	11.5
No answer	578.2	5.8	8.4	2.3
Total	9,901.7	100.0	393.4	100.0

**Table 10. Estimated number of private ownership units and acres of forest land owned, by whether a written management plan had been prepared, United States, 1994.**

Management plan preparation	Owners		Acres	
	Thousands	Percent	Millions	Percent
Owners with written plans:	531.2	5.3	153.6	39.0
Forest Industry	2.4	.5	65.5	42.6
NIPF owners	528.8	99.5	88.1	57.4
Owners with no written plan	8,594.1	86.8	226.2	57.5
No answer	784.9	7.9	13.6	3.5
Total	9,901.7	100.0	393.4	100.0

**Table 11. Estimated number of private ownership units and acres of forest land owned, by who prepared the written management plan for NIPF owners, United States, 1994.**

Management plan preparation	Owners		Acres	
	Thousands	Percent	Millions	Percent
NIPF Owners with written plans:	528.8	100.0	88.1	100.0
Who prepared the plan:				
Owner	114.8	21.7	16.7	19.0
Consultant	56.5	10.7	25.5	28.9
Industrial forester	20.6	3.9	8.9	10.1
State employee	196.2	37.1	16.8	19.1
Extension	8.9	1.7	.9	1.0
NRCS (SCS)	47.3	9.0	4.6	5.2
Other	87.9	16.6	24.0	27.3
Total	532.2	100.7	97.4	110.6

Table totals more than 100 percent because more than one person helped to prepare plans.

## Appendix

### Study Method

The sampling scheme used in this study was derived from the sampling design used by the USDA Forest Service, Forest Inventory and Analysis Projects and that used by the Natural Resources Conservation Service (NRCS, formerly Soil Conservation Service), National Resources Inventory (NRI). Mailing addresses were obtained for the owners of forested land on which a sample location from one of the two inventory systems was located. These addresses were obtained by crews from the forest inventory projects or from cooperating state forestry agencies. The names were obtained from a variety of sources—tax offices, other government agencies, neighbors, or the owner. Usable addresses were obtained for more than 95 percent of the sample locations. Of the 30,870 locations chosen, 2,602 were found to be in some form of public ownership. Many large ownerships were identified that had multiple sample locations. Efforts were made to send only one questionnaire per state to these large owners. A total of 23,330 questionnaires was sent to owners of forest land; 11,745 (50 percent) were eventually returned with useable information.

The questionnaire was derived from several earlier ownership studies and has been revised as work has progressed over 20 years in the Northeastern States. A copy of the questionnaire is included in the appendix. The mailing consisted of a questionnaire and cover letter explaining the purpose of the study. Approximately 3 weeks after the first mailing, a second questionnaire was mailed to those who had not responded with a second letter urging their cooperation. Approximately 1 month after the final followup mailing a field followup of non-respondents was conducted to obtain additional questionnaires and to determine if a significant difference existed between those who returned a questionnaire and those who did not. Questionnaires obtained by mail and followup were used in the same way for estimation. For 12 southern states, the followup was conducted by phone interviews through the Social Science Research Center, Survey Research Unit, Mississippi State University. Many state forestry organizations had local service foresters contact nonrespondents. If state organizations were unable to assist with followups, Forest Service personnel and volunteers made the contacts.

### Estimation Procedure

The probability that a forest-land owner will be sampled depends on the rate of sampling and the acreage of forest land owned. Each state and often areas within states have different rates of sampling and response rates differ affecting the probability that an owner will be included in the final tabulations. The total acreage of forest land in private ownership for a state or sampled area is obtained from the forest inventory. The area in large ownerships (ownerships with a probability of selection approaching 1) is subtracted and the large ownerships form a separate strata. The remaining forest land is divided by the number of 'small acreage' sample locations represented by the remaining valid questionnaires to determine the area represented by each sample plot.

Since the sampling scheme is essentially the one used for the forest inventory, there is a low probability of inclusion for owners of small parcels of forest land. To estimate the total number of persons or ownership units, it is necessary to weight the number of owners in the sample. This procedure can be stated as:

$$N = \frac{T_p}{n_r} \sum \frac{1}{A_i}$$

$N$  = estimated number of private owners in the sampling strata.

$T_p$  = acres of forest land in the sampling strata.

$n_r$  = number of respondents in the sampling strata.

$A_i$  = acres owned by individual respondents

The summation estimate equals the estimated number of ownership units in the state, region, or nation. This is an unbiased estimate of the total number of ownership units that own forest land. The data were edited, processed, and compiled using FINSYS-2, a generalized computer system (Barnard 1978). The survey units within states were combined to state level statistics. States were summed to regions, and finally to national summaries to increase the accuracy and precision of the estimates. The following tabulation shows the pertinent data for each state, region, and the nation.

Region, subregion, and state	Number of private plots	Number of questionnaires sent	Number of respondents	Plots owned by respondents	Average acreage per plot
Connecticut	88	82	55	56	27,732
Maine	819	541	308	550	31,018
Massachusetts	82	80	42	43	58,813
New Hampshire	104	98	69	76	54,526
Rhode Island	92	90	43	43	7,860
Vermont	96	91	68	72	55,458
New England	1,281	972	585	840	35,258
Delaware	121	100	57	71	4,873
Maryland	570	517	228	265	8,574
New Jersey	187	178	84	87	16,103
New York	2,765	2,491	972	1,165	12,332
Pennsylvania	2,252	2,013	1,143	1,336	9,332
West Virginia	2,401	1,975	1,114	1,462	7,350
Middle Atlantic	8,296	7,274	3,598	4,386	9,493
Northeast	9,577	8,246	4,184	5,226	13,649
Illinois	473	440	208	212	17,175
Indiana	481	554	193	195	19,338
Iowa	162	160	94	95	19,021
Missouri	519	514	228	232	50,129
Ohio	1,573	1,467	704	785	9,161
Central	3,297	3,135	1,427	1,519	18,460
Michigan	2,184	2,184	886	886	13,588
Minnesota	251	226	85	102	71,735
Wisconsin	591	514	228	232	46,974
Lake	3,026	2,924	1,199	1,220	24,798
North Central	6,323	6,059	2,626	2,739	20,811
North Total	15,900	14,305	6,810	7,965	16,265
Alabama	955	741	436	637	32,606
Kentucky	424	412	208	216	52,889
Mississippi	643	514	291	412	36,714
Tennessee	456	417	260	294	40,010
Central Gulf	2,478	2,084	1,195	1,559	37,638
Arkansas	687	483	277	475	30,547
Louisiana	585	384	205	393	31,919
Oklahoma	283	240	136	179	38,693
Texas	499	354	174	312	58,554
West Gulf	2,054	1,461	792	1,359	38,447
Southern	4,532	3,545	1,987	2,918	38,154
Florida	686	423	213	452	29,009
Georgia	1088	872	467	676	32,522
East Gulf	1,774	1,295	680	1,128	31,114
North Carolina	684	593	338	409	41,012
South Carolina	565	454	282	395	27,863
Virginia	561	512	313	357	37,653
South Atlantic	1,810	1,559	933	1,161	35,506
Southeast	3,584	2,854	1,613	2,289	33,342
South Total	8,116	6,399	3,600	5,207	36,038

Continued

Region, subregion, and state	Number of private plots	Number of questionnaires sent	Number of respondents	Plots owned by respondents	Average acreage per plot
Kansas	164	146	38	38	33,974
Nebraska	141	137	27	27	23,185
North Dakota	119	117	30	30	13,700
South Dakota	88	80	17	18	33,833
Great Plains	512	480	112	113	25,991
Alaska	380	78	35	226	43,721
California	737	629	355	438	33,050
Hawaii	49	28	16	27	42,778
Oregon	844	519	335	612	17,402
Washington	654	296	188	536	18,041
Pacific	2664	1550	928	1839	24,923
Arizona	93	21	11	72	93,847
Colorado	175	147	83	97	33,876
Idaho	67	41	31	58	55,948
Montana	226	148	81	156	38,186
Nevada	69	45	17	19	27,895
New Mexico	210	136	66	128	32,258
Utah	83	66	29	35	43,914
Wyoming	93	83	59	67	29,806
Rocky Mountain	1016	687	377	632	43,383
West total	4,192	2,717	1,417	2,584	29,484
Nation Total	28,207	23,330	11,745	15,700	25,057

### Data Accuracy and Reliability

It is important to know the variation associated with the estimates. Every acre and every owner are not sampled. When judging the effectiveness of the estimating procedure, we are concerned with two important criteria: first, how accurate is the estimate, and second, how precise is the estimate? Accuracy is the correspondence between the sample result and the result from a complete count or census using the same definitions and procedures. Reliability is the precision of the statistical estimates. We are chiefly interested in the accuracy of the sample but in most instances we can only measure reliability.

To check the accuracy of the data, we had this report reviewed by outside experts. The response level obtained in the study is also an attempt to assure accuracy by minimizing nonresponse bias. Beyond the search for accuracy, the reliability of the estimate is given by the calculated sampling errors. Sampling errors are calculated for the estimated number of forest-land ownership units and the acreage of forest land in each cell of the tables. Sampling errors appear in the tables for the most important categories. The sampling error for the number of acres of forest land in private ownership is calculated as part of the

forest inventory and is designed to achieve a national standard of plus or minus 3 percent at a million acres of forest land. Because this study has a much smaller sample size than the normal forest inventory, sampling errors rise rapidly for smaller areas of forest land. A similar standard does not exist for the estimates of forest-land ownership units.

Because the ownership survey was conducted using a land-area sample, the estimates of area have smaller sampling errors than the estimates of numbers of owners. Estimates for the nation as a whole are the most reliable (having the smallest sampling errors in percent), followed by regions, subregions, and finally states. The inclusion of small forest parcels (less than 10 acres) in the study population substantially increases the sampling error for the estimated number of owners. In discussions with representatives of the National Association of State Foresters and other users, most felt the level of precision achieved by the Northeastern Forest Experiment Station was sufficient. The accuracy of estimates at the state level from the previous national forest-land owner study was insufficient; therefore, increased sample sizes were allocated to areas of the country with high sampling errors to attempt to correct this problem.

The sampling errors (SE) (in percent) are:

Region, subregion, and state	Private forest land	Owners of private forest land	Owners holding 10 or more acres
Connecticut	1.4	38.9	17.0
Maine	0.5	25.0	13.4
Massachusetts	1.5	40.9	22.3
New Hampshire	0.9	26.2	17.5
Rhode Island	1.8	35.6	18.3
Vermont	0.8	41.0	20.4
New England	0.4	16.0	7.9
Delaware	2.9	43.3	18.0
Maryland	1.2	14.6	9.5
New Jersey	3.0	19.4	14.9
New York	0.4	7.8	4.0
Pennsylvania	1.1	7.4	4.1
West Virginia	0.6	11.4	4.2
Middle Atlantic	0.4	4.5	2.3
Illinois	2.5	11.3	8.3
Indiana	0.7	11.2	8.1
Iowa	0.7	19.4	10.5
Missouri	0.3	24.3	9.2
Ohio	1.4	6.4	4.1
Central	0.5	8.5	3.7
Michigan	2.8	8.2	4.3
Minnesota	0.2	17.2	10.3
Wisconsin	0.2	27.4	10.4
Lake States	1.1	10.6	4.7
North Total	0.3	4.5	2.1
Alabama	0.3	18.5	8.9
Arkansas	0.3	19.0	9.2
Kentucky	0.8	16.2	8.6
Louisiana	0.2	21.5	13.2
Mississippi	0.3	18.2	8.8
Oklahoma	0.3	25.8	16.1
Tennessee	0.3	17.6	8.5
Texas	0.1	23.7	12.6
Southern	0.1	7.2	3.7
Florida	0.2	22.1	13.2
Georgia	0.3	17.3	8.7
North Carolina	0.3	16.9	7.4
South Carolina	0.4	21.6	10.0
Virginia	0.3	16.8	8.1
Southeast	0.1	8.4	4.1
South Total	0.1	5.5	2.8

Continued

Region, subregion, and state	Private forest land	Owners of private forest land	Owners holding 10 or more acres
Kansas	0.4	35.0	17.3
Nebraska	0.6	67.1	26.2
North Dakota	1.0	40.6	22.6
South Dakota	0.4	46.3	42.2
Great Plains	0.3	26.6	13.2
Alaska	0.2	53.1	53.1
California	0.3	16.9	10.0
Hawaii	0.2	53.5	51.1
Oregon	1.5	18.7	9.7
Washington	1.2	27.0	10.4
Pacific Coast	0.4	11.2	6.8
Arizona	1.4	47.3	56.0
Colorado	0.4	30.1	24.5
Idaho	0.8	55.4	32.2
Montana	0.8	28.0	24.9
Nevada	0.5	64.1	42.9
New Mexico	0.3	31.7	31.6
Utah	0.3	52.4	41.8
Wyoming	0.4	28.1	28.1
Rocky Mountain	0.2	15.8	12.9
West Total	0.3	8.7	5.8
Nation Total	0.1	3.4	1.6

## Definition of Terms

**Farmer-owned lands.** Lands owned by farm operators, whether part of the farmstead or not.

**Forest industries.** Companies or individuals operating primary wood using plants.

**Forest industry lands.** Lands owned by companies of individuals operating wood using plants.

**Forest land.** Land that is at least 16.7 percent stocked (contains at least 7.5 square feet of basal area) with forest trees of any size, or that formerly had such tree cover and is not currently developed for nonforest use. (Forest trees are woody plants that have a well developed stem and usually are more than 12 feet in height at maturity.) The minimum area for classification of forest land is 1 acre.

**Ownership unit.** All types of legal entities having ownership interest in land, regardless of the number of people involved. It is the focus of decisionmaking for each parcel, whether an individual (sole proprietor), group of individuals (partnerships, or undivided estates), or legal person (corporation, trust, of tribe).

**Private timberland.** All timberland other than that owned by federal, state, or local governments or their agencies.

**Timberland.** Forest land that is producing or capable of producing crops of industrial wood (more than 20 cubic feet/acre/year) and that is not withdrawn from timber utilization.

**Other forest.** Forest land other than timberland including oak woodlands in western Texas and Oklahoma; Juniper woodlands in California and Oregon; Pinon Juniper land in the Rocky Mountains, and much of interior Alaska.

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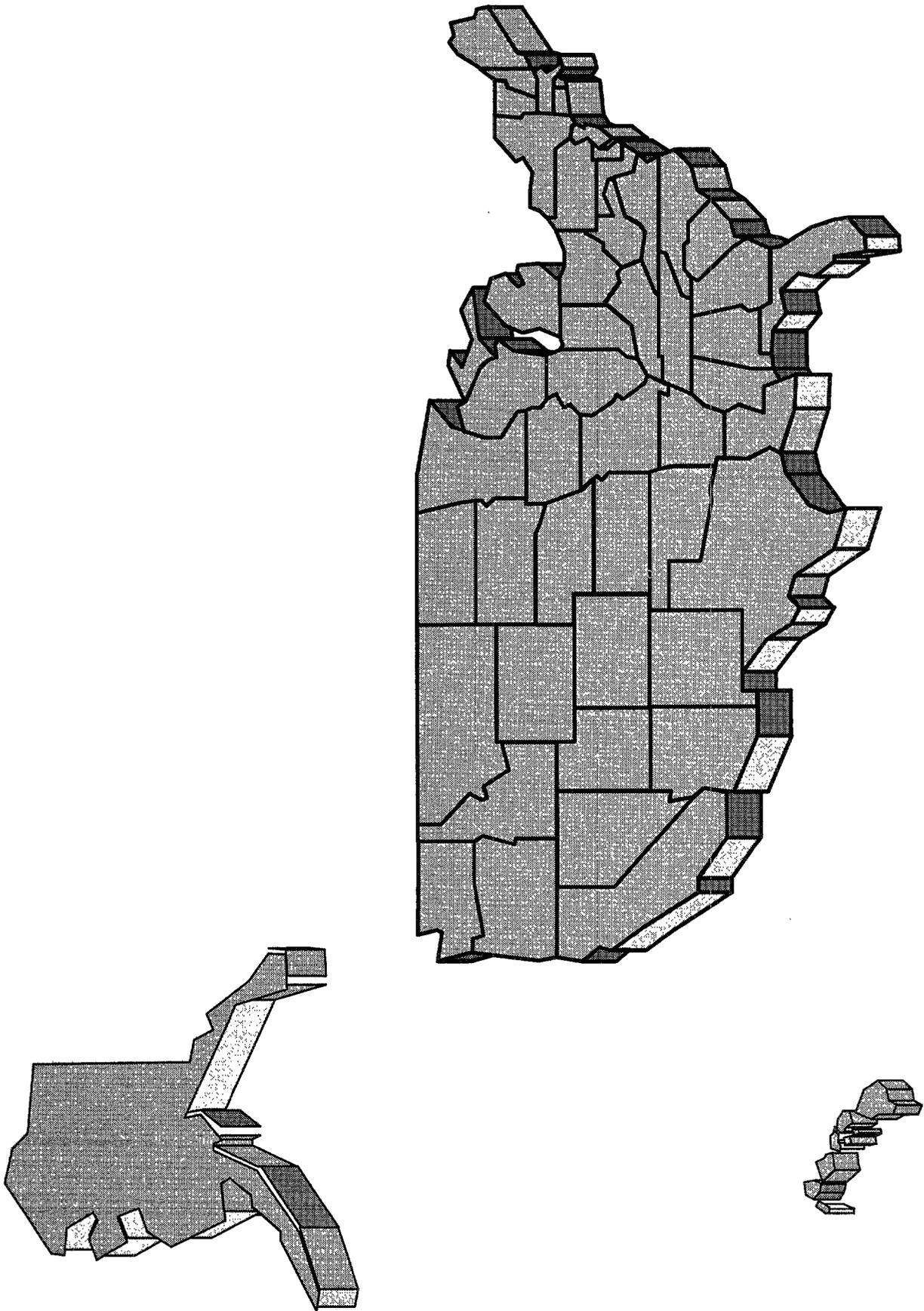
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# National Tables

Table 12. Estimated number of ownership units and acres of forest land, by size class and form of ownership, national total, 1993

Size class (acres)	Ownership class						Total	SE
	Individual	Percent	Corporation	Percent	Other	Percent		
	(In owners)							
1-9	5,583,100	60	39,600	25	172,600	41	5,795,300	5.8
10-19	1,169,500	13	23,300	15	57,700	13	1,250,500	4.7
20-49	1,396,200	15	32,000	20	83,400	20	1,511,600	2.9
50-99	646,800	7	21,100	13	49,300	11	717,200	3.1
100-199	325,600	3	16,200	10	29,300	7	371,100	3.3
200-499	153,700	2	13,200	8	20,900	5	187,800	6.6
500-999	28,900	W	5,600	3	6,800	1	41,300	5
1000-4999	12,300	W	3,900	2	4,400	1	20,600	5
5000+	3,300	W	2,200	1	800	W	6,300	33
Sub total over 10	3,736,300	40	117,500	75	252,600	59	4,106,500	1.6
Total	9,319,400	100	157,100	100	425,200	100	9,901,700	3.4
SE	3.6		13		13.4		3.4	
	(In thousands of acres)							
1-9	15,847	7	214	W	568	1	16,629	4.7
10-19	14,812	6	340	W	671	1	15,823	4.7
20-49	41,368	18	776	1	2,467	5	44,611	3
50-99	42,521	18	1,330	1	3,341	6	47,193	3.3
100-199	39,952	17	2,104	2	3,757	7	45,813	3.4
200-499	37,185	16	3,741	3	4,894	9	45,821	3
500-999	17,015	7	3,523	3	3,949	7	24,488	4.2
1000-4999	17,051	7	7,699	7	6,587	12	31,337	3.9
5000+	6,596	3	87,401	81	27,677	51	121,673	2.9
Subtotal over 10	216,502	93	106,915	100	53,343	99	376,760	0.2
Total	232,348	100	107,129	100	53,911	100	393,389	0.1
SE	1.4		3.4		4.2		0.1	

W- Fewer than 50 owners or less than 0.5 percent.

Table 13. Estimated number of ownership units and acres of forest land, by form of ownership and past harvest experience, national total, 1993

Form of ownership	Harvest experience				Total	SE
	Harvested	Percent	Did not harvest	Percent		
	(In owners)					
Individual + joint	4,281,100	93	5,038,300	95	9,319,400	3.6
Partnership	178,500	4	110,800	2	289,300	17.2
Corporation	53,400	1	103,700	2	157,100	13.1
Club/association	21,600	W	26,000	W	47,600	32.3
Other	62,300	1	26,000	W	88,300	26.7
<b>Total</b>	<b>4,596,900</b>	<b>100</b>	<b>5,304,800</b>	<b>100</b>	<b>9,901,700</b>	<b>3.4</b>
SE	4.4		5.3		3.4	
	(In thousands of acres)					
Individual + joint	161,373	53	70,975	81	232,348	1.4
Partnership	23,770	8	5,879	7	29,649	6.1
Corporation	99,109	32	8,020	9	107,129	3.4
Club/association	1,794	1	756	1	2,549	10.1
Other	20,054	7	1,659	2	21,713	7
<b>Total</b>	<b>306,100</b>	<b>100</b>	<b>87,289</b>	<b>100</b>	<b>393,389</b>	<b>0.1</b>
SE	0.6		2.1		0.1	

W-Fewer than 50 owners or less than 0.5 percent

Table 14. Estimated number of ownership units and acres of forest land, by incorporated and unincorporated businesses and past harvest experience, national total, 1993

Nature of business	Harvest				Total	SE
	Harvested	Percent	Did not harvest	Percent		
(In owners)						
Incorporated:						
Forest industry	2,800	W	200	W	3,000	15.9
Farm	12,100	W	14,400	W	26,500	16.6
Industrial business	5,400	W	4,300	W	9,700	20.1
Real estate	7,400	W	29,000	1	36,400	26.5
Non-industrial	6,700	W	15,200	W	21,900	49.2
Sport/ recreation club	5,400	W	6,200	W	11,600	26.9
Public utility	300	W	500	W	800	47.2
Other	3,800	W	33,700	1	47,200	28.8
<b>Total corporate</b>	<b>53,400</b>	<b>1</b>	<b>103,700</b>	<b>2</b>	<b>157,100</b>	<b>13.1</b>
Unincorporated:						
Forest industry	10,100	W	200	W	10,300	52.2
Farm	1,444,900	31	959,900	18	2,404,800	5.9
Misc. individual	2,823,600	61	3,941,400	75	6,765,000	4.5
Industrial business	4,400	W	16,600	W	21,000	40.5
Real estate	78,000	2	121,800	2	199,800	31.8
Nonindustrial business	17,400	W	35,300	1	52,700	28.6
Sport/ recreation club	54,700	1	49,900	1	104,600	22.7
Other	110,400	2	76,000	1	186,400	16.7
<b>Total noncorporate</b>	<b>4,543,500</b>	<b>99</b>	<b>5,201,100</b>	<b>98</b>	<b>9,744,600</b>	<b>3.5</b>
<b>Total</b>	<b>4,596,900</b>	<b>100</b>	<b>5,304,800</b>	<b>100</b>	<b>9,901,700</b>	<b>3.4</b>
SE	4.4		5.3		3.4	
(In thousands of acres)						
Incorporated:						
Forest industry	62,398	20	W	W	62,413	6
Farm	6,874	2	2,419	3	9,293	7.9
Industrial business	5,781	2	930	1	6,711	8.8
Real estate	5,951	2	1,409	2	7,360	9.4
Non-industrial	1,320	W	429	W	1,749	15.8
Sport/ recreation club	1,618	1	438	1	2,056	14.5
Public utility	2,157	1	91	W	2,248	16.1
Other	13,010	4	2,289	2	15,299	8.4
<b>Total corporate</b>	<b>99,109</b>	<b>32</b>	<b>8,020</b>	<b>9</b>	<b>107,129</b>	<b>3.4</b>
Unincorporated:						
Forest industry	17,233	6	69	W	17,302	13.1
Farm	77,124	25	25,032	29	102,157	1.9
Misc. individual	84,366	28	46,689	54	133,521	2
Industrial business	1,751	1	569	1	2,320	18.4
Real estate	6,802	2	1,786	2	8,588	9.2
Nonindustrial business	1,773	1	465	1	2,237	16
Sport/ recreation club	4,212	1	1,500	2	5,712	7.6
Other	13,730	4	3,159	2	14,423	9.1
<b>Total noncorporate</b>	<b>206,991</b>	<b>68</b>	<b>79,269</b>	<b>91</b>	<b>286,260</b>	<b>1.3</b>
<b>Total</b>	<b>306,100</b>	<b>100</b>	<b>87,289</b>	<b>100</b>	<b>393,389</b>	<b>0.1</b>
SE	0.6		2.1		0.1	

W- Fewer than 50 owners or less than 0.5 percent

Table 15. Estimated number of ownership units and acres of forest land, by occupation class and intention to harvest , national total, 1993

Occupation	Future harvest								Total	SE
	1-10 years	Percent	Indefinite	Percent	Never	Percent	No answer	Percent		
	(In owners)									
Professional	347,900	11	279,600	10	356,600	10	98,000	17	1,079,200	11.8
Managers	332,300	11	344,300	12	394,100	11	98,200	17	1,168,800	13.1
Other White collar	208,800	7	241,100	9	242,100	7	1,500	W	693,500	15.6
All white collar	889,000	28	865,000	31	989,800	29	197,700	34	2,941,500	7.7
Craftsmen	258,300	8	160,500	6	159,500	5	1,900	W	580,200	14.5
Blue collar	309,900	10	197,200	7	378,200	11	33,900	6	919,200	12.6
All blue collar	568,200	18	357,700	13	537,700	16	35,800	6	1,499,400	9.5
Farmers	322,800	10	275,600	10	129,600	4	9,900	2	737,900	8.3
Service workers	74,100	2	60,400	2	231,200	7	800	W	366,500	23.2
Homemaker	21,600	1	65,200	2	52,100	1	3,300	1	142,100	15.3
Retired	902,200	29	815,500	29	917,700	27	112,100	19	2,747,400	5.9
No answer	152,000	5	167,400	6	389,100	11	176,100	30	884,600	11.3
All other owners	197,300	6	148,400	5	194,100	6	42,500	7	582,300	10.4
<b>Total</b>	<b>3,127,100</b>	<b>100</b>	<b>2,755,200</b>	<b>100</b>	<b>3,441,200</b>	<b>100</b>	<b>578,200</b>	<b>100</b>	<b>9,901,700</b>	<b>3.4</b>
SE	5.2		6		6.8		19.6		3.4	
	(in thousands of acres)									
Professional	15,051	6	8,382	9	3,287	7	533	6	27,254	3.9
Managers	16,815	7	8,722	10	3,445	8	449	5	29,431	3.8
Other white collar	5,284	2	3,597	4	1,866	4	113	1	10,860	5.8
All white collar	37,150	15	20,701	23	8,598	19	1,096	13	67,545	2.5
Craftsmen	4,330	2	2,857	3	1,520	3	59	1	8,767	6.4
Blue collar	6,508	3	4,306	5	2,175	5	318	4	13,307	5.1
All blue collar	10,838	4	7,163	8	3,696	8	378	5	22,074	4
Farmers	23,023	9	10,868	12	3,285	7	466	5	37,641	3.4
Service workers	2,567	1	1,343	1	796	2	20	W	4,726	9.7
Homemaker	1,782	1	2,395	3	1,427	3	251	3	5,855	8.9
Retired	33,654	13	26,741	29	14,431	32	2,066	25	76,892	2.6
No answer	7,476	3	5,012	5	3,017	7	2,110	25	17,614	5.3
All other owners	132,993	53	16,293	18	9,775	22	1,979	24	161,040	2
<b>Total</b>	<b>249,483</b>	<b>100</b>	<b>90,516</b>	<b>100</b>	<b>45,024</b>	<b>100</b>	<b>8,366</b>	<b>100</b>	<b>393,389</b>	<b>0.1</b>
SE	1		2.3		3.1		7		0.1	

W-Fewer than 50 owners or less than 0.5 percent

Table 16. Estimated number of ownership units and acres of forest land, by age class and past harvest experience, national total, 1993

Age	Harvest experience				Total	SE
	Harvested	Percent	Did not harvest	Percent		
(In owners)						
Under 25	46,200	1	20,600	W	66,800	58.3
25-34	218,000	5	255,500	5	473,500	19.2
35-44	705,400	15	943,400	18	1,648,800	10.2
45-54	857,900	19	1,261,600	24	2,119,500	8.3
55-64	851,200	19	1,138,400	21	1,989,600	7.5
65 or over	1,470,200	32	1,073,800	20	2,544,000	5.3
No answer	132,100	3	345,000	7	477,100	20.4
All other owners	315,900	7	266,500	5	582,400	10.4
<b>Total</b>	<b>4,596,900</b>	<b>100</b>	<b>5,304,800</b>	<b>100</b>	<b>9,901,700</b>	<b>3.4</b>
<b>SE</b>	<b>4.4</b>		<b>5.3</b>		<b>3.4</b>	
(In thousands of acres)						
Under 25	406	W	179	W	585	24.1
25-34	3,195	1	2,968	3	6,163	8.3
35-44	16,037	5	9,737	11	25,774	3.9
45-54	29,080	9	16,251	19	45,332	3
55-64	37,171	12	17,005	19	54,176	2.7
65 or over	70,713	23	21,947	25	92,660	2.3
No answer	4,772	1	2,887	3	7,659	8.9
All other owners	144,726	47	16,314	19	161,040	2
<b>Total</b>	<b>306,100</b>	<b>100</b>	<b>87,289</b>	<b>100</b>	<b>393,389</b>	<b>0.1</b>
<b>SE</b>	<b>0.6</b>		<b>2.1</b>		<b>0.1</b>	

W-Fewer than 50 owners of less than 0.5 percent

Table 17. Estimated number of ownership units and acres of forest land, by date of acquisition and form of ownership, national total, 1993

Date of acquisition	Ownership class					Total	SE
	Forest industry	Farmer	Miscellaneous: Individual	Corporation	Other		
(In owners)							
1990-1994	700	129,800	848,100	9,500	29,400	1,017,500	13.5
1980-1989	2,500	370,100	2,041,600	55,300	60,100	2,529,600	7.2
1970-1979	1,000	515,300	1,608,200	14,500	107,100	2,246,100	6.8
1960-1969	1,100	528,800	935,100	14,900	46,700	1,526,600	9
1950-1959	700	329,000	405,200	7,800	14,400	757,100	10.2
1940-1949	400	224,100	298,900	6,600	9,500	539,500	11.5
1901-1939	5,900	125,900	153,600	7,600	22,400	315,500	15.8
Prior to 1900	200	10,700	47,200	1,300	7,200	66,600	47.3
No answer	800	197,600	671,300	9,900	23,600	903,200	14.1
<b>Total</b>	<b>13,300</b>	<b>2,431,400</b>	<b>7,009,100</b>	<b>127,600</b>	<b>320,500</b>	<b>9,901,700</b>	<b>3.4</b>
<b>SE</b>	<b>40.6</b>	<b>5.8</b>	<b>4.4</b>	<b>15.8</b>	<b>17</b>	<b>3.4</b>	
(In thousands of acres)							
1990-1994	600	4,900	9,200	1,300	1,600	17,600	5.5
1980-1989	2,700	16,400	29,900	7,700	4,500	61,100	3.4
1970-1979	2,400	22,100	33,800	9,100	4,100	71,500	3.2
1960-1969	6,700	22,600	24,400	3,000	2,800	59,500	3.1
1950-1959	6,200	17,500	16,100	2,100	2,400	44,300	4.4
1940-1949	6,700	11,800	10,200	1,400	1,100	31,200	5
1901-1939	18,900	7,700	5,300	5,400	3,600	41,000	6.5
Prior to 1900	30,400	2,600	1,800	3,200	6,800	44,700	6.9
No answer	5,000	5,900	7,800	2,300	1,400	22,500	6.8
<b>Total</b>	<b>79,700</b>	<b>111,400</b>	<b>138,500</b>	<b>35,400</b>	<b>28,300</b>	<b>393,400</b>	<b>0.1</b>
<b>SE</b>	<b>5</b>	<b>1.9</b>	<b>1.9</b>	<b>4.5</b>	<b>6.3</b>	<b>0.1</b>	

Table 18. Estimated number of ownership units and acres of forest land, by distance from tracts, national total, 1993

Distance	Tracts			Total
	1 tract	More than one tract		
		Nearest tract	Farthest tract	
		(In owners)		
Less than 1 mile	5,141,800	1,524,800	567,900	
2-5 miles	320,700	137,400	285,000	
6-15 miles	328,500	146,800	281,900	
16-25 miles	166,100	41,500	110,200	
26-50 miles	141,600	72,400	157,000	
51-100 miles	155,400	61,200	175,400	
More than 100 miles	802,900	135,400	519,600	
No answer	652,800	72,400	94,900	
<b>Total</b>	<b>7,709,800</b>	<b>2,191,900</b>	<b>2,191,900</b>	<b>9,901,700</b>
		(In thousands of acres)		
Less than 1 mile	73,929	122,177	27,277	
2-5 miles	7,409	31,006	22,495	
6-15 miles	9,761	31,021	26,569	
16-25 miles	5,288	8,681	15,879	
26-50 miles	7,469	14,819	22,732	
51-100 miles	6,838	7,456	33,416	
More than 100 miles	18,598	14,211	80,120	
No answer	8,597	26,129	27,012	
<b>Total</b>	<b>137,889</b>	<b>255,500</b>	<b>255,500</b>	<b>393,389</b>

Table 19. Estimated number of ownership units and acres of forest land, by primary and secondary reason for owning forest land , national total, 1993

Reason	Primary reason		Secondary reason	
	Number	Percent	Number	Percent
	(In owners)			
Land investment	920,000	9	496,000	5
Recreation	874,500	9	667,900	7
Timber production	272,200	3	258,700	3
Farm and domestic use	816,400	8	749,200	8
Esthetic enjoyment	1,392,400	14	1,467,500	15
Part of farm	1,189,800	12	464,800	5
Part of residence	2,641,500	27	1,060,500	11
Estate	992,000	10	1,143,800	12
Other	448,900	5	106,800	1
No secondary reason given	-	-	3,132,500	32
No answer	354,100	3	354,100	4
<b>Total</b>	<b>9,901,700</b>	<b>100</b>	<b>9,901,700</b>	<b>100</b>
	(In thousands of acres)			
Land investment	39,253	10	37,193	9
Recreation	37,868	10	40,949	10
Timber production	113,220	29	34,764	9
Farm and domestic use	35,778	9	27,565	7
Esthetic enjoyment	28,699	7	31,685	8
Part of farm	38,637	10	15,359	4
Part of residence	32,620	8	19,387	5
Estate	26,407	7	35,066	9
Other	34,572	9	11,932	3
No secondary reason given	-	-	132,975	34
No answer	6,334	2	6,334	2
<b>Total</b>	<b>393,389</b>	<b>100</b>	<b>393,389</b>	<b>100</b>

Table 20. Estimated number of ownership units and acres of forest land, by primary benefit expected in the next 10 years and past harvest experience, national total, 1993

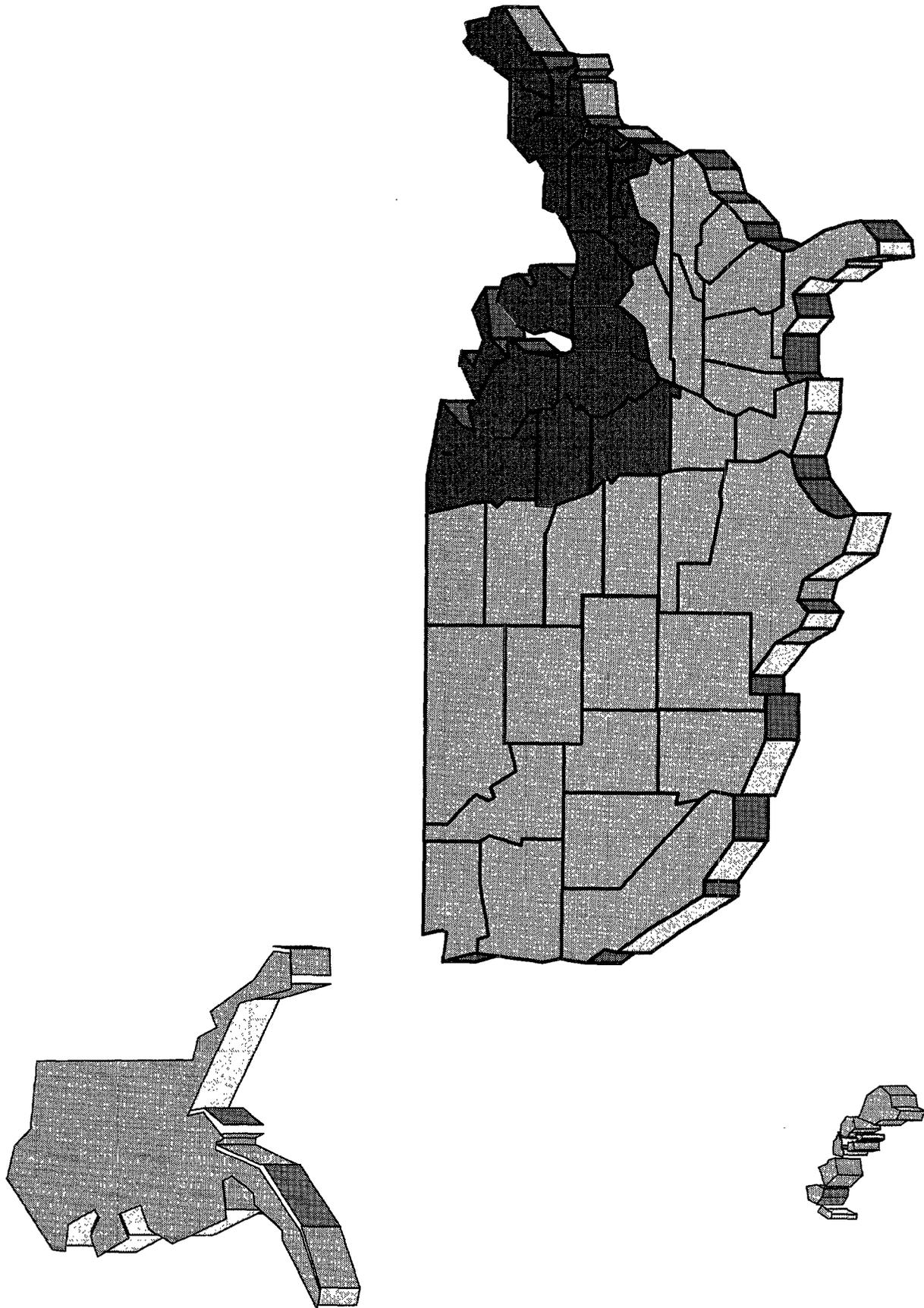
Benefits expected	Harvest Experience				Total	SE
	Harvested	Percent	Did not harvest	Percent		
(In owners)						
Land value increase	927,200	20	1,128,700	21	2,055,900	8.7
Recreation	505,400	11	454,000	9	959,400	8.2
Income from timber	315,300	7	162,200	3	477,500	14.6
Farm and domestic use	762,600	17	742,700	14	1,505,400	9
Esthetic enjoyment	1,431,100	31	1,925,200	36	3,356,200	6.2
Firewood	330,200	7	91,300	2	421,500	13.7
Other	165,000	3	313,900	6	478,900	12.5
No answer	160,100	3	486,800	9	646,900	16.1
<b>Total</b>	<b>4,596,900</b>	<b>100</b>	<b>5,304,800</b>	<b>100</b>	<b>9,901,700</b>	<b>3.4</b>
SE	4.4		5.3		3.4	
(in thousands of acres)						
Land value increase	44,463	15	19,152	22	63,615	3
Recreation	28,809	9	13,980	16	42,789	4.4
Income from timber	125,907	41	5,695	7	131,603	2.6
Farm and domestic use	32,512	11	10,416	12	42,928	5.5
Esthetic enjoyment	38,038	12	25,233	29	63,271	2.8
Firewood	8,650	3	1,259	1	9,909	5.9
Other	20,777	7	6,472	7	27,249	8.3
No answer	6,943	2	5,083	6	12,026	10.1
<b>Total</b>	<b>306,100</b>	<b>100</b>	<b>87,289</b>	<b>100</b>	<b>393,389</b>	<b>0.1</b>
SE	0.6		2.1		0.1	

Table 21. Estimated number of ownership units and acres of forest land, by size class and intention to harvest, national total, 1993

Size class (acres)	Future harvest								Total	SE
	1-10 years	Percent	Indefinite	Percent	Never	Percent	No answer	Percent		
	(In owners)									
1-9	1,391,200	44	1,384,600	50	2,557,900	74	461,600	80	5,795,300	5.8
10-19	456,800	15	379,500	14	374,200	11	40,100	7	1,250,500	4.7
20-49	653,600	21	502,100	18	316,700	9	39,200	7	1,511,600	2.9
50-99	302,600	10	268,500	10	123,700	3	22,400	4	717,200	3.1
100-199	182,300	6	134,200	5	45,200	1	9,400	2	371,100	3.3
200-499	97,600	3	68,600	2	17,600	1	4,100	1	187,800	6.6
500-999	24,200	1	12,200	W	3,900	W	900	W	41,300	5
1000-4999	13,500	W	4,700	W	1,800	W	500	W	20,600	5
5000+	5,400	W	800	W	200	W	W	W	6,300	33
Subtotal over 10	1,735,900	55	1,370,600	50	883,300	26	116,600	20	4,106,500	1.6
Total	3,127,100	100	2,755,200	100	3,341,200	100	578,200	100	9,901,700	3.4
SE	5.2		6		6.8		19.6		3.4	
	(In thousands of acres)									
1-9	4,301	2	4,439	5	6,737	15	1,151	14	16,629	4.7
10-19	5,904	2	4,813	5	4,586	10	520	6	15,823	4.7
20-49	19,333	8	15,097	17	8,976	20	1,204	14	44,611	3
50-99	20,182	8	17,674	19	7,811	17	1,526	18	47,193	3.3
100-199	22,648	9	16,396	18	5,641	13	1,128	13	45,813	3.4
200-499	25,475	10	14,827	16	4,437	10	1,081	13	45,821	3
500-999	15,268	6	6,447	7	2,161	5	611	7	24,488	4.2
1000-4999	20,202	8	7,306	8	3,159	7	669	8	31,337	3.9
5000+	116,168	47	3,517	4	1,514	3	475	6	121,673	2.9
Subtotal over 10	245,181	98	86,077	95	38,287	85	7,215	86	376,760	0.2
Total	249,483	100	90,516	100	45,024	100	8,366	100	393,389	0.1
SE	1		2.3		3.1		7		0.1	

W- Fewer than 50 owners or less than 0.5 percent.





# Northern Regional Tables

Table 22. Estimated number of ownership units and acres of forest land, by size class and form of ownership, Northern Region, 1993

Size class (acres)	Ownership class						Total	SE
	Individual	Percent	Corporation	Percent	Other	Percent		
	(In owners)							
1-9	1,985,000	54	9,100	12	42,400	27	2,036,500	8.8
10-19	572,400	15	18,400	25	25,600	17	616,500	5.6
20-49	624,900	17	22,400	30	41,100	27	688,400	3.7
50-99	303,600	8	7,500	10	21,800	14	332,900	3.6
100-199	145,200	4	6,300	9	11,400	7	162,900	4.5
200-499	63,800	2	5,300	7	9,800	6	78,900	13.3
500-999	6,700	W	2,700	4	1,200	1	10,500	8.7
1000-4999	1,600	W	1,200	1	1,200	1	3,900	10.7
5000+	100	W	700	1	100	W	900	7.9
Sub total over 10	1,718,200	46	64,400	88	112,200	73	1,894,700	2.1
Total	3,703,200	100	73,500	100	154,600	100	3,931,200	4.5
SE	4.8		13.8		11.9		4.5	
	(In thousands of acres)							
1-9	6,107	7	63	W	158	1	6,328	6
10-19	7,320	8	267	1	305	3	7,893	5.5
20-49	18,685	20	523	2	1,145	9	20,354	3.6
50-99	19,969	22	464	2	1,471	12	21,904	3.5
100-199	17,877	19	810	3	1,471	12	20,158	3.9
200-499	14,164	15	1,522	6	1,820	15	17,507	4.1
500-999	3,774	4	1,529	6	759	6	6,062	7.1
1000-4999	2,273	2	2,309	9	1,345	11	5,927	7.1
5000+	1,658	2	18,154	71	3,606	30	23,417	4.8
Subtotal over 10	85,721	93	25,579	100	11,923	99	123,223	0.4
Total	91,828	100	25,642	100	12,081	100	129,551	0.3
SE	1.3		4.9		6.8		0.3	

W- Fewer than 50 owners or less than 0.5 percent.

Table 23. Estimated number of ownership units and acres of forest land, by form of ownership and past harvest experience, Northern Region, 1993

Form of ownership	Harvest experience				Total	SE
	Harvested	Percent	Did not harvest	Percent		
	(In owners)					
Individual + joint	1,816,800	94	1,886,400	94	3,703,200	4.8
Partnership	56,200	3	47,300	2	103,400	13
Corporation	31,600	2	41,900	2	73,500	13.8
Club/association	6,200	W	14,200	1	20,400	27.9
Other	17,300	1	13,500	1	30,800	36.5
Total	1,928,100	100	2,003,200	100	3,931,200	4.5
SE	5.6		7.4		4.5	
	(In thousands of acres)					
Individual + joint	64,186	66	27,642	81	91,828	1.3
Partnership	6,179	6	1,966	7	8,145	9
Corporation	23,462	24	2,180	9	25,642	4.9
Club/association	1,203	1	404	1	1,606	11
Other	1,981	2	348	2	2,329	16.7
Total	97,011	100	32,540	100	129,551	0.3
SE	0.9		2.6		0.3	

W-Fewer than 50 owners or less than 0.5 percent

Table 24. Estimated number of ownership units and acres of forest land, by incorporated and unincorporated businesses and past harvest experience, Northern Region, 1993

Nature of business	Harvest				Total	SE
	Harvested	Percent	Did not harvest	Percent		
(In owners)						
Incorporated:						
Forest industry	1,000	W	200	W	1,200	21.9
Farm	6,200	W	5,800	W	12,000	28
Industrial business	3,400	W	2,200	W	5,700	28.9
Real estate	4,600	W	12,100	1	16,800	34.6
Non-industrial	3,200	W	3,500	W	6,700	43
Sport/ recreation club	2,600	W	4,600	W	7,100	36.3
Public utility	200	W	500	W	700	53.2
Other	10,300	1	13,000	1	23,300	27.8
Total corporate	31,600	2	41,900	2	73,500	13.8
Unincorporated:						
Forest industry	7,500	W	100	W	7,700	68.4
Farm	627,100	33	454,100	23	1,081,200	9.1
Misc. individual	1,180,300	61	1,375,900	69	2,556,300	5.9
Industrial business	1,500	W	8,800	W	10,200	65.7
Real estate	15,800	1	36,400	2	52,200	20.7
Nonindustrial business	10,200	1	14,500	1	24,800	35.9
Sport/ recreation club	22,900	1	30,800	1	53,700	27.7
Other	31,100	2	40,600	2	71,700	21.3
Total noncorporate	1,896,500	98	1,961,300	98	3,857,700	4.6
Total	1,928,100	100	2,003,200	100	3,931,200	4.5
SE	5.6		7.4		4.5	
(In thousands of acres)						
Incorporated:						
Forest industry	14,354	15	W	W	14,368	8.4
Farm	1,529	1	247	1	1,776	15
Industrial business	1,912	2	265	1	2,177	10.2
Real estate	1,243	1	527	2	1,770	17
Non-industrial	500	1	195	1	695	24.8
Sport/ recreation club	654	1	140	W	795	16.4
Public utility	1,208	1	W	W	1,298	18.6
Other	2,063	2	700	2	2,763	12.7
Total corporate	23,462	24	2,180	7	25,642	4.9
Unincorporated:						
Forest industry	2,059	2	44	W	2,093	24.4
Farm	29,721	31	7,823	24	37,544	2.4
Misc. individual	32,135	33	19,386	59	51,521	2.1
Industrial business	581	1	250	1	831	19.4
Real estate	2,783	3	665	2	3,449	17.8
Nonindustrial business	978	1	131	W	1,109	26.2
Sport/ recreation club	2,243	2	746	2	2,989	9.5
Other	3,049	3	1,323	4	4,374	9.8
Total noncorporate	73,549	76	30,360	93	13,909	1.2
Total	97,011	100	32,540	100	129,551	0.3
SE	0.9		2.6		0.3	

W- Fewer than 50 owners or less than 0.5 percent