CHAPTER IV

PRIVATE LANDS AND OUTDOOR RECREATION IN THE UNITED STATES

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Acknowledgments:
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INTRODUCTION

Outdoor recreation on private lands is influenced by myriad factors. To provide background and context on these factors, this chapter first overviews the private land situation in the United States and provides general information and discussion related to ownership and tenure, land-use patterns, legal restrictions, and economic conditions, including taxation issues. Implications of these factors with respect to use of private land for outdoor recreation are also discussed.

Overall, there is little extant information on recreational use and access to private land. To help fill this information gap, the National Private Landowners Survey (NPLOS) was recently conducted (1995-96). A major focus of NPLOS was to obtain data for estimating the amount of private land open for outdoor recreation in the United States and landowner practices and attitudes related to access to their lands for outdoor recreation.

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The NPLOS methodology, results, and the implications of these results are discussed after a brief review of recreation use of private land. This chapter ends by offering general conclusions about outdoor recreational use of private lands in the United States.

Outdoor Recreational Use of Private Lands

An important reason for increasing recreational pursuits on private lands has to do with the inability of public lands to meet all of the nation's recreational needs. In 1962, the Outdoor Recreation Resources Review Commission projected that by the year 2000 there would be a tripling of recreational land demand. However, that mark was surpassed in 1983. As a result, public park visitation resulted in "overuse and degradation of natural resources" in some areas (Wright & Kaiser, 1986). There will be increasing importance for private, rural land to be able to add to the supply of outdoor recreational opportunities (Wright & Fesenmaier, 1988; Wright, Cordell, & Brown, 1988; Cordell, English, & Randall, 1993).

The most comprehensive research program for collecting data on the supply of private, nonindustrial lands available is the National Private Landownership Survey (NPLOS), conducted every 10 years. The NPLOS collects information on the amount of land available for various uses, as well as access policies that different landowners stipulate for recreationists (Wright, Cordell, Brown, & Rowell, 1988).

Posting by private landowners is a means of restricting public access. Despite particular attitudes of owners, socioeconomic differences, or differences in rural versus urban settings, it has been "clearly shown that most landowner characteristics are poor predictors of posting behavior" (Brown, Decker, & Kelly, 1984). Rather, the most important factor in a landowner's decision to post is when a landowner has had "unpleasant experiences with recreationists" (Brown, Decker, & Kelly, 1984).

Of course, private land use brings with it the issue of liability. American law gives landowners some protection from liability. The "mere ownership of land and the fact that a visitor was injured on that land does not presume liability for the injury;" only when a landowner "fails to fulfill the legal duty to act" is the landowner liable for visitor's injuries (Kaiser & Wright, 1985).

Laws concerning liability vary from state to state (Wright & Kaiser, 1986). The increasing demand for outdoor recreation in America brings into play the question of liability. Recreational use statutes have reduced landowner liability through the creation of a category of entrant on private land. That type of entrant is known as a "constructive trespasser." Landowners cannot "maliciously injure a trespasser." This would preclude the setting of traps, such as "stringing barbed wire across known dirt bike trails." The law also allows for differences in liability between the individual who has "permission" to use land and an individual who enters into a business agreement with the landowner (Wright, 1986).

In a study by Wright, Kaiser, and Fletcher (1988), landowners were divided into five groups, depending on the strictness of access rules. Prohibitive land owners allowed no one access to their land and used it solely for their own benefit. Exclusionists limited hunting to themselves and family members. Restrictionists were much like exclusionists but also allowed friends and employees to use their land. Landowners who allowed public access to their properties were termed open landowners. It was found that exclusionists and prohibitionists expressed negative attitudes toward hunter behavior-related problems and liability, whereas restrictionists and open landowners were the most agreeable about access to public hunting. Wright and Fesenmaier (1990) state that landowners who were "anti-hunting" had that viewpoint due to their perception that hunting is "an anachronism" because it is no longer a necessity in order to survive. Perhaps more importantly, it was found that "an important aspect that distinguishes these landowners is their belief that by permitting access, they are better able to control the actions of hunters" (Wright & Fesenmaier, 1990).

Tindall (1990) notes the rise of a public land tenure category known as the "recreation estate." Due to increasing recreational demand for public land, as indicated both in national opinion polls and actual user visits to National Park Service facilities, the President's Commission on Americans Outdoors made important recommendations in 1988 (Geisler, 1993). The report recognized the role private land must play in satisfying both current and future demand for outdoor recreation opportunities. Furthermore, the commission called for new public-private partnerships and an approximate $1 billion per annum trust fund to aid in the attainment of recreational facility/opportunity goals (Madison, 1988). Though no law has materialized, there have been signs in the last quarter of this century of bipartisan support in the area of new tenure allocations and designations.

The role of private land in providing recreation opportunities is also influenced by occupational restructuring. Occupational restructuring creates a new definition of land-use needs and ethics. When service-sector employment grows at the expense of manufacturing and more basic extractive employment, the domestic importance of land-based occupations lessens, with a parallel decline in the "significance of land as a factor of production, social status, and basis of wealth." At this point, land assumes different importance as a recre-

ational and aesthetic good, reinforcing a service relationship between people and the land in lieu of an active, material-based, sustenance relationship (Geisler, 1993).

As population grows, the demand for leisure space and recreational opportunities will increase, causing the national per capita availability of public recreation land to shrink (Geisler, 1993). Perhaps more than any other factor, this shrinking public recreation land base will steadily increase demand and interest in the use of private lands for outdoor recreation. Due to the increasing importance of private land as a recreational resource, there is increasing interest in the outdoor recreational use of private land. Currently, however, available data describing recreational use of private land and landowner attitudes toward this use are relatively sparse. To help fill this gap, another National Private Landowners Survey (NPLOS) was recently conducted. The survey and its results are discussed in the next section.

THE NATIONAL PRIVATE LANDOWNERS SURVEY

NPLOS Background

The National Private Landowner Survey (NPLOS), initiated in early 1994, was a cooperative effort of the USDA National Resource Conservation Service (NRCS), formerly the Soil Conservation Service, the USDA Forest Service's Southern Research Station (USFS), and the University of Georgia's Department of Agricultural and Applied Economics (UGA).[2] The project originated from the NRCS and USFS. The NRCS needed information about landowners and their tracts to improve service to them. The USFS needed data for the Renewable Resources Planning Act Assessment of the supply of and demand for outdoor recreation, which is the basic purpose for this book.

Throughout the nation, outdoor recreation is widespread and growing. The 1994-95 National Survey on Recreation and the Environment (Cordell, McDonald, Briggs, Teasley, Biesterfeldt, Bergstrom, & Mou, 1997) estimates the types and quantities of activities occurring in the U.S., but it does not say where this recreation is taking place. Sources such as the CUSTOMER onsite visitor surveys conducted by the USFS in the late 1980s and early 1990s provide some data about recreation that occurs on national forests and other public lands. Some data are gathered by government agencies and some private businesses administering recreation sites around the nation. However, there is little information on the amount of recreation occurring on private land in the United States or on landowners' attitudes about it. The intent of the NPLOS was to help fill this void.

Sampling Plan and Survey Methods

The objective of NPLOS was to survey a representative national sample of owners of rural, private tracts of at least 10 acres. Sampling design was in two stages. The first or primary sampling units were U.S. counties (excluding Alaska and Hawaii) and the second, or secondary, sampling units were landowners within the counties.

It was believed that 12,500 completed questionnaires were needed to adequately describe the U.S. rural private landowner situation. Hence, assuming a questionnaire return rate of 50 percent based on the Dillman survey research method (Dillman, 1978) and allowing for about 1,000 unusable returns, a sample size of 26,000 private landowners was targeted.

Through the cooperation of NRCS District Conservationists, a sample was drawn from county landholding records throughout the nation. Tracts sampled were rural and primarily privately owned. Strict instructions were devised for the random selection of the sample and were communicated to the NRCS agents accordingly.

The number of sample counties (primary units) was determined by dividing 26,000 by the number of tracts to be sampled per county, 35, which yielded 743 counties nationwide. That number was rounded up to 750. To ensure that sampled tracts were not all of a similar size, four tract size strata were defined: 10-19 acres, 20-99 acres, 100-499 acres, and 500 or more acres. The first three strata had a sample of 10 tracts each per county. Given their relative scarcity, the 500+ acres stratum had a maximum of five tracts per county. In many counties, that number was smaller. Many counties had no tracts larger than 500 acres.

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[2] The University of Georgia, Department of Agricultural & Applied Economic and the U.S. Forest Service, Southern Research Experiment Station have a cooperative research group, the Environmental Resources Assessment Group, that forms the basis of their relationship.

Two criteria were used for selecting the 750 counties for the sample: low population density and level of private ownership. Counties that did not have the kinds of rural, private ownerships that NPLOS sought for the survey were removed from consideration. These counties were primarily urbanized, highly-developed counties or those dominated by public land. Using U.S. Census data, urban or metropolitan counties were identified as those with a population density of 400 or more persons per square mile. Counties were also excluded from sampling if the density was between 300 and 400 persons per square mile, *or* if the county's land base was 70 percent or more public land (federal or state) or urban "built up" land, *unless* the county had a sufficiently large amount of rural, private acres—140,000 in the eastern U.S. or 250,000 acres in the western United States.[3] These types of counties (220 out of 3,082) were excluded because they did not meet the objective of sampling counties with a high percentage of rural, private, and undeveloped tracts. A sample of 750 from 2,862 eligible counties yielded a probability of selection of about one in four (26.2 percent). A goal was to distribute the sample equally across the 48 contiguous states. A simple random sample might have caused some states to have a disproportionate number of counties selected, while other states had none selected at all. A similar concern was that some regions within states would be oversampled at the expense of other regions. Rather than divide each state into geographic quartiles, the decision was made to sample proportionally based upon ecoregions in each state (Bailey's Ecoregions of the United States, 1976). Therefore, strata were formed based on each ecoregion in every state. Roughly one-fourth of the eligible counties were then randomly selected from each ecoregion.

The initial questionnaire (over 30 pages) had 10 sections dealing with different aspects of private land use and ownership. After attempts to make it shorter, it was decided that two versions of the questionnaire were needed.[4] Each version contained identical core questions in each of its sections so that the two databases could be combined. Each version also concentrated on different areas in detail so that all questions from the original version could be included in either of the two questionnaires. To achieve random sampling, addresses were assigned alternately between the two versions. Due to obvious errors in the address database (such as no street address or box, no identifying name, etc.), there were approximately 23,000 valid addresses to be assigned a survey version.

The first section of the questionnaire covered general landowner and tract information. The second section covered changes in the land, such as additions or sales of acreage. Section three inquired about the owners' reasons for owning the land, ways in which they might use their land, and the types of land management practices they have applied to the land. The next section inquired about the accessibility of the land as well as posting practices and any problems the landowner had with other people's use of their land. Section five asked questions about the recreational use of the land by friends and family members. The sixth section inquired about any leasing that had occurred on the land. Section seven asked briefly about the use the land gets from the general population. The eighth section, also brief, inquired about parts of the land that might be closed to all outside use. The ninth section asked some theoretical questions about access for the general population in the future as well as plans the landowner might have to manage his or her tract. Section 10 was a general demographic section that asked for information on age, race, gender, income, employment, education, etc.

Questionnaire mailing began in early August, 1995. Because of the samples' size, groups of states were identified in order to break up the mailings. Large states with many counties represented a substantial block of the sample and were therefore grouped together with only one other state. Surveying began in states on the East Coast and progressed westward. Respondents were mailed one of the two versions of the questionnaire. If no reply had been received in approximately three weeks, respondents were mailed a postcard reminder. If respondents did not return the questionnaire within another three weeks, they were sent another complete survey package. The second survey marked the end of our attempts to get respondents to reply. The last mailings occurred in mid-July, 1996. The above procedure constitutes a modified Dillman method for mail surveys.

[3] The eastern and western acreage figures represented the 95th percentile of rural, private, undeveloped acres among counties in those regions.

[4] Actually three versions of the NPLOS questionnaire were developed and implemented. The third is a 'corporate version,' which will not be treated in this report.

Survey Results

The response rate for the NPLOS questionnaire for both versions was slightly above 30 percent. The results reported in this chapter are presented for the nation in the aggregate and for the four assessment regions (Table IV.1). Approximately 13,500 respondents in our sample did not reply with any type of information. Of these 13,500, a semi-random sample of 3,000 was drawn to attempt a very condensed phone questionnaire, which asked key questions designed to allow testing for non-response bias. The results of this phone questionnaire compared well to the questionnaire data, and it was decided that adjustments for non-response bias were not required.

Table IV.1: Regional Definitions used in NPLOS Analysis, 1995-96

Region	States Included in Region
North	Connecticut, Delaware, District of Columbia, Illinois, Indiana, Iowa, Maine, Maryland, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, Wisconsin
South	Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia
Rocky Mountains and Great Plains	Arizona, Colorado, Idaho, Kansas, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Utah, Wyoming
Pacific Coast	California, Oregon, Washington

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Tract size across the United States for the NPLOS varied from a low of 10 acres (which was set as a lower bound for the sampling) to a high of 39,000 acres. Tracts in the western U.S. had slightly higher mean tract sizes. Proportions of private tracts in the four acreage categories (10-19, 20-99, 100-499, and 500+ acres) across the four regions were fairly uniform, except that 15 percent of all private tracts in the Pacific Coast region were in the 500+ acre category (Table IV.2). The number of years the tract was owned was also fairly uniform across regions, with the exception of the Pacific Coast, where landowners seemed more likely to own their land for 10 years or less than landowners in other regions (Figure IV.1). Approximately 45 percent of landowners in the nation own more than one tract of land, while almost the same percentage (47 percent) have their primary residence located on the tract chosen for the survey (Table IV.). Landowners are more likely to live on the sampled tract in the North than anywhere else in the U.S. Of those who do not live on their land, the proportion of owners, by the distance they live from their land, is presented in Figure IV.2. Across all regions of the U.S., more than half of landowners who did not live on their land lived within 50 miles of the sampled tract (Figure IV.2). Mean driving distances in the Rocky Mountain region and the Northern region were noticeably higher than the other two regions.

Table IV.2: Proportion of Owners by Tract Size Category and Region, 1995-96

Tract size category		Region			
	U.S. overall	North	South	Pacific Coast	Rocky Mountains
10-19 acres	29.2	32.2	27.5	26.1	25.7
20-99 acres	34.4	34.2	33.8	36.4	35.5
100-499 acres	29.8	29.3	31.6	22.7	28.9
500 + acres	6.7	4.3	7.1	14.8	9.9

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.3: Percentage of Landowners by Owner Characteristic and Region, 1995-96

Owner Characteristic	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Own other tracts	44.7	40.3	45.9	63.2	48.6
Live on land	46.9	55.0	42.7	45.6	34.6

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Figure IV.1: Proportion of Landowners by the Number of Years They Have Owned Their Tracts and by Region, 1995-96

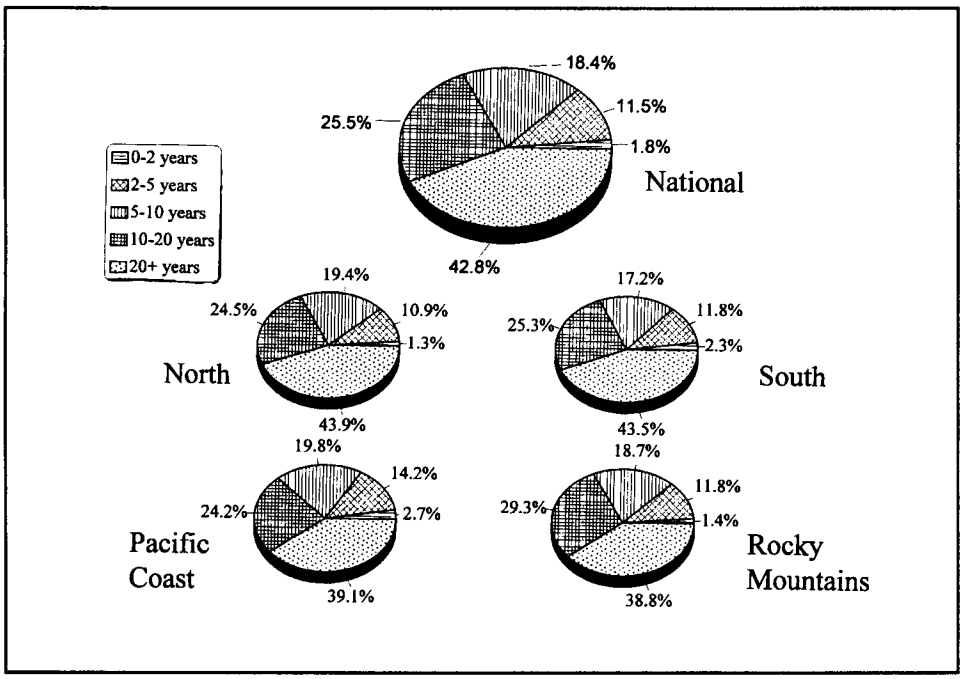
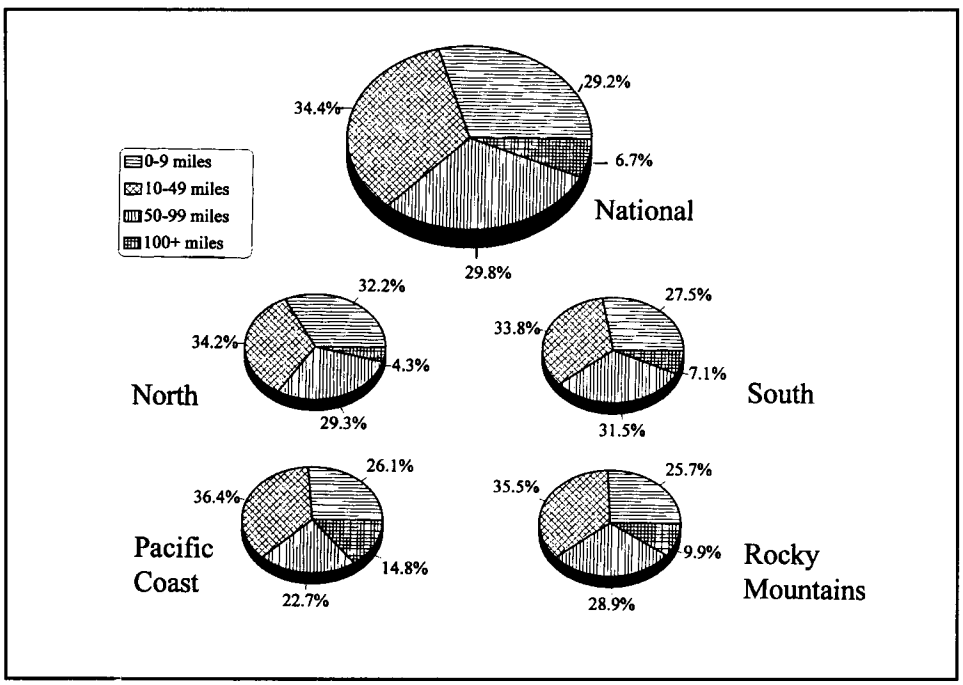


Figure IV.2: Proportion of Absentee Owners by Driving Distance to Tract from Residence and Region, 1995-96



Landowners were also asked about the land surrounding their tracts (Table IV.6), since in many instances this affects land use and management practices. A surprising proportion of owners (14 percent) listed their land as either sharing a border with or being surrounded by government land. With the exception of the Rocky Mountain region, well over 50 percent of landowners said their land was next to a paved public road. Tracts with streams or rivers running through them were more common in the East. Roughly 46 percent of tracts in the North and South had a stream or river running through the land.

Table IV.4: Percent of Responding Owners by Description of Land and Region, 1995-96

Description of Land	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Adjoins government or public land	13.8	12.9	11.7	25.6	18.8
Next to or within a short walk of a large river, lake, or reservoir	15.6	16.9	14.2	23.1	13.1
Land around mine is a state or federal designated wildlife management area	5.1	5.3	4.1	8.6	6.2
Next to or short walk to a residential subdivision	15.4	15.6	16.3	17.6	11.7
Next to a paved public road or highway	55.8	55.8	62.5	63.2	35.2
Land is more hilly and steep than flat	37.8	43.1	33.5	43.0	32.1
Has one or more streams or rivers running through it	42.7	45.9	45.9	34.3	26.8

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Many landowners reported changes in their land holding since they first purchased the sampled tracts (Table IV.5). A roughly equal number of landowners bought and sold land either adjoining or nearby the sample tracts. One point to note is the difference between averages of land bought and sold. The mean acreage added is substantially higher than that sold for the North and South, whereas the trend is reversed for the Rocky Mountain and Pacific Coast regions. Acreage bought and sold in the last five years differs somewhat from this trend. Only in the North and Rocky Mountain regions does the acreage bought exceed the acreage sold.

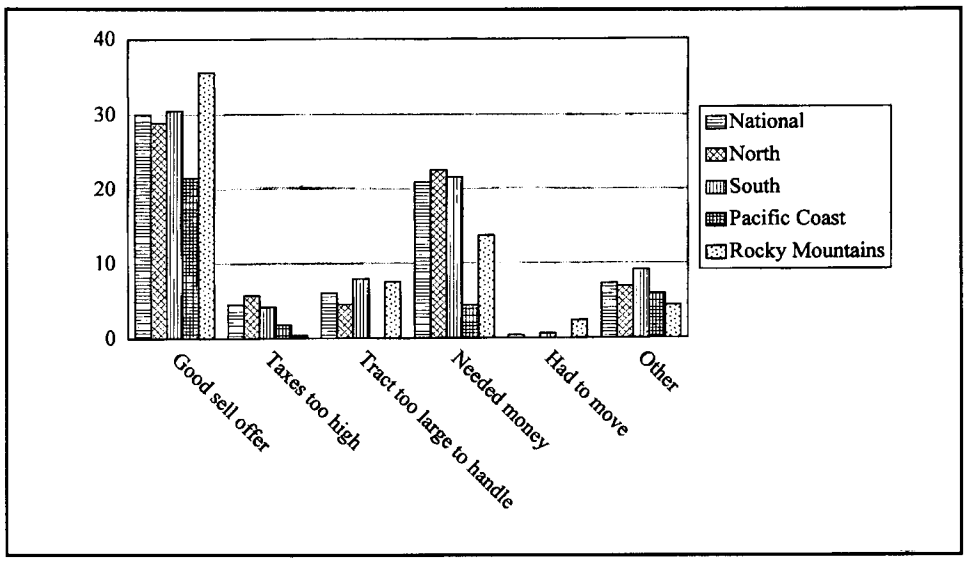
Table IV.5: Percentage of Private Tracts that Have Changed Status and Average Acreage by Type of Change and Region, 1995-96

Type of Change	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Added Acreage? (% Yes)	15.6	16.3	14.1	15.2	17.9
Average Acreage Added	159.16	89.1	313.7	170.5	368.4
Amount of Acreage Added in last five years	44.0	21.8	43.8	18.3	114.3
Sold Acreage? (% Yes)	13.9	15.2	14.5	12.2	9.3
Average Acreage Sold	113.87	37.2	127.3	211.2	453.2
Amount of Acreage Sold in last five years	52.9	8.5	106.7	209.3	25.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

The entire sample of landowners was asked about reasons they might consider selling some or all of their land. The most frequent reasons given were either they were "approached with a good offer" or that they "needed the money" (Figure IV..3). Again, landowners checked an average of just over one of the reasons provided.

Figure IV.3: Percent of Reasons Checked by Private Landowners as Reasons They Might Consider Selling All or a Part of Their Land, 1995-96



There was very little difference across regions for average miles of maintained roads and trails on private land and little difference in the amount of either that were open to outside use (Table 4.6). The amount of roads and trails open to outside use does not necessarily reflect roads and trails open for people who do not have permission to use the landowners' land.

Table IV.6: Average Mileage of Roads or Trails per Tract by Type of Road or Trail and Region, 1995-96

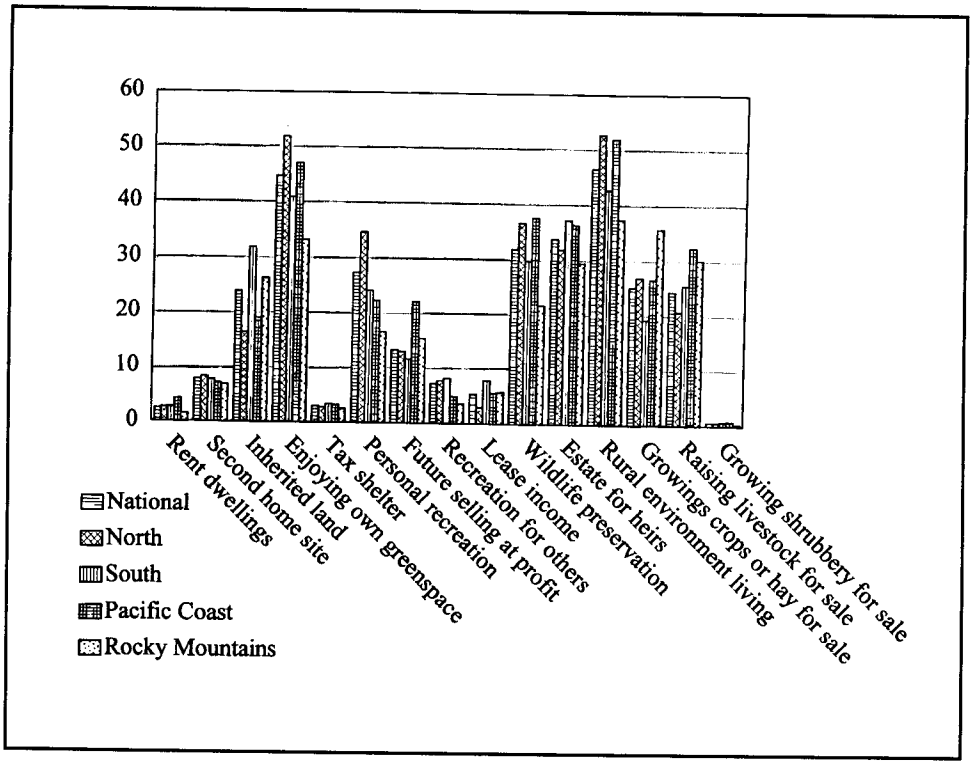
Type of Road or Trail	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Maintained road	.5	.4	.6	1.0	.6
Maintained open roads	.4	.4	.5	1.0	.3
Maintained trails	.4	.3	.4	.3	.3
Maintained open trails	.3	.3	.4	.3	.2

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Owning Rural Land

Of the many reasons why people own land, some are easily expressed and others are not. We were interested not only in the objective facts related to private land, but also in owners' subjective perceptions of rural land use issues. Figure IV.4 presents some of the reasons landowners expressed for owning rural land. Note that the three most frequently listed reasons were ones tied more to emotions than objective reasons: "enjoying my own green-space," "living in a rural environment," and "making an estate for heirs." On average, landowners checked more than four of the 17 reasons for owning land.

Figure IV.4: Percent Landowners by Reasons for Owning Land and Region, 1995-96



The questions leading to Figures IV.5-9 further delve into the way owners feel about their land and how their management actions might interact with the environment. The statements presented to them were worded such that we could distinguish between the environmental and utilitarian motives for using the land. It is interesting to note the differences between the different regions of the country in answering this question.

Figure IV.5: Percentage of Landowners Agreeing that People Must Rule Over Nature; Plants and Animals Are for Our Use by Region, 1995-96

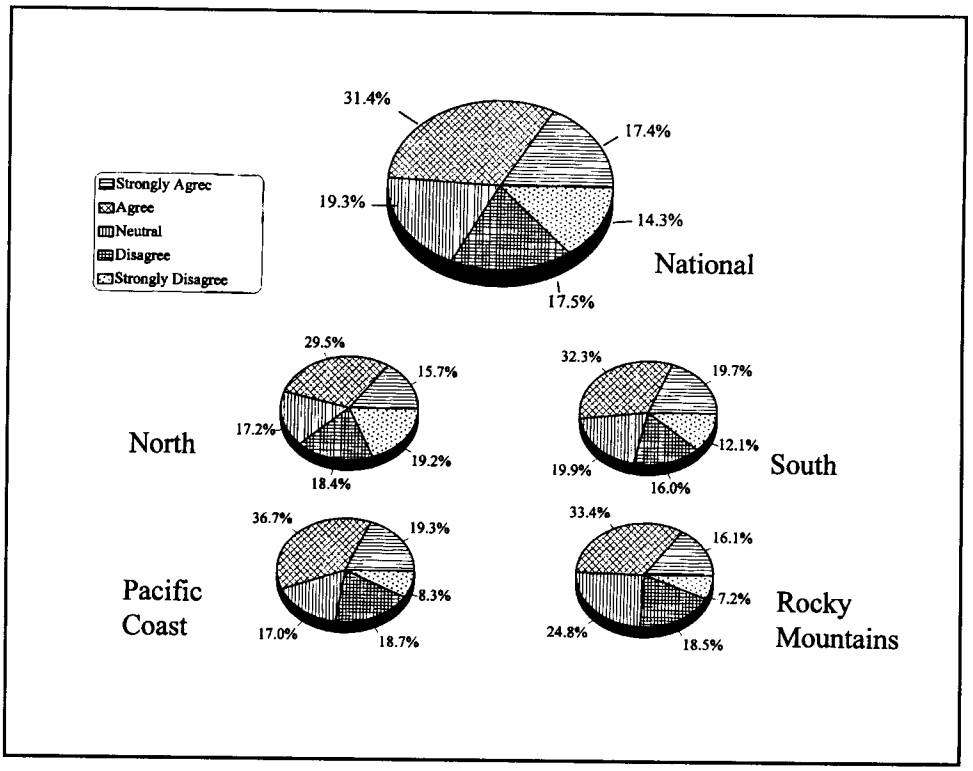


Figure IV.6: Percentage of Landowners Agreeing that the Balance of Nature Is Very Delicate, So We Must Try to Limit Economic Growth that Exploits Nature by Region, 1995-96

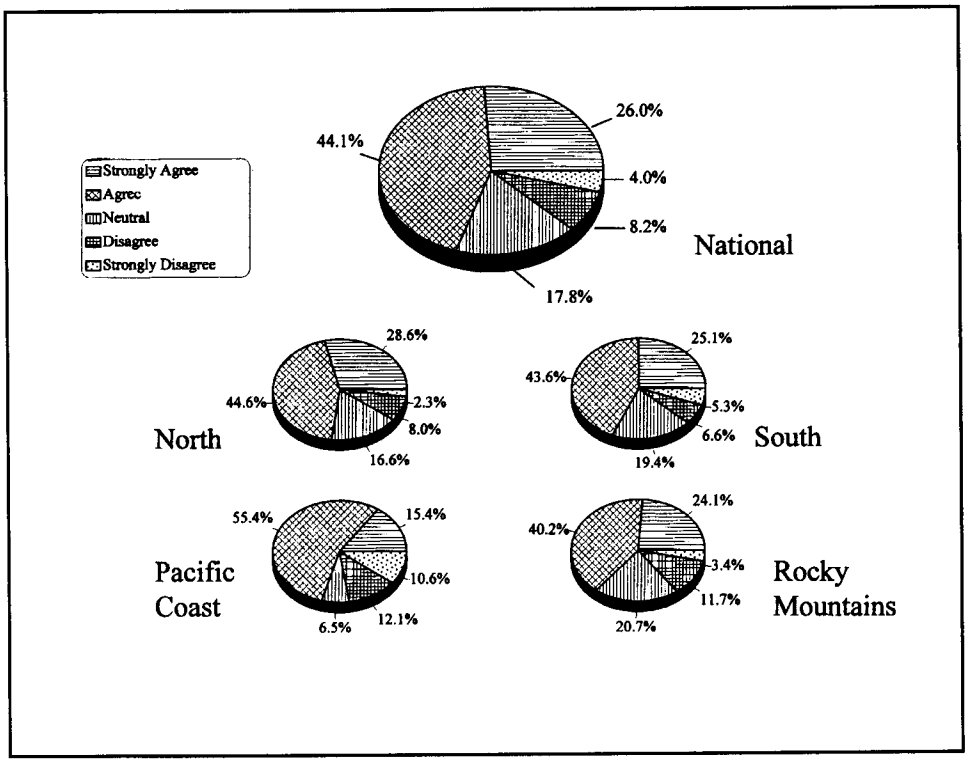


Figure IV.7: Percentage of Landowners Agreeing that Private Landowners Have the Right to Do as They Please with Their Lands Regardless of What It Does to the Environment by Region, 1995-96

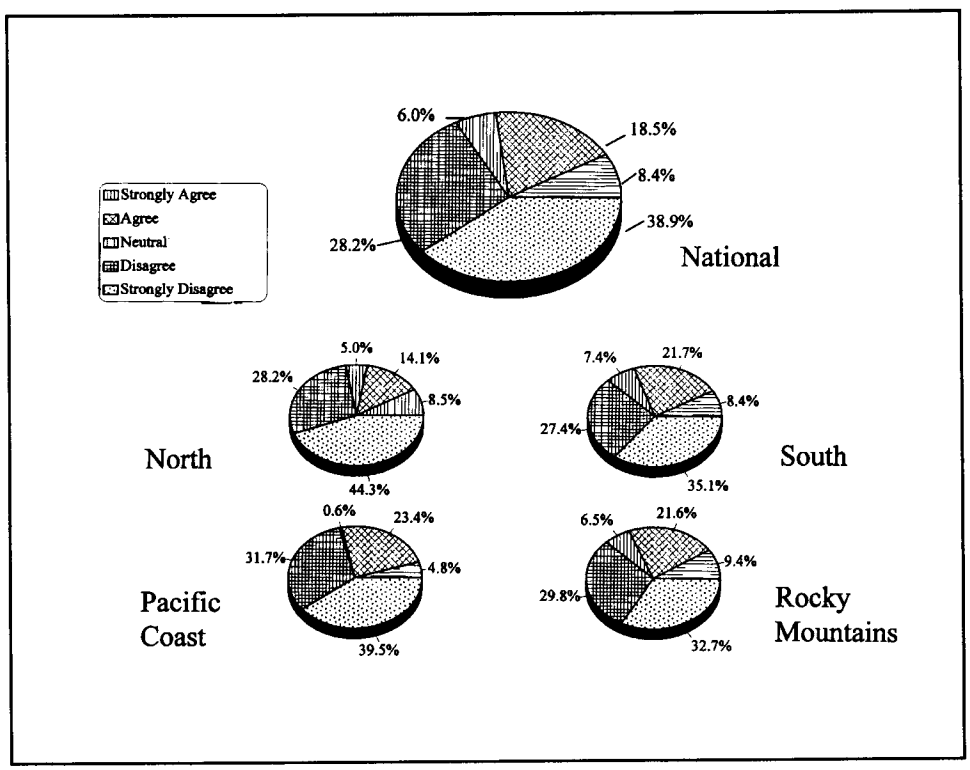


Figure IV.8: Percentage of Landowners Agreeing that Private Property Rights are Important, but Only if They Don't Hurt the Environment by Region, 1995-96

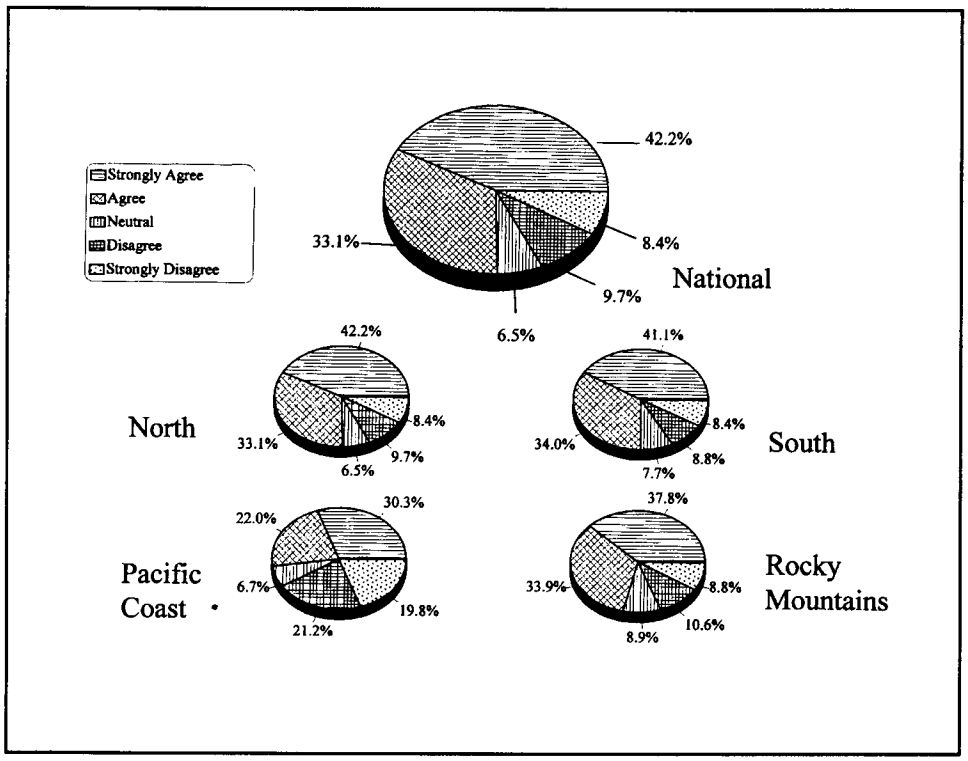
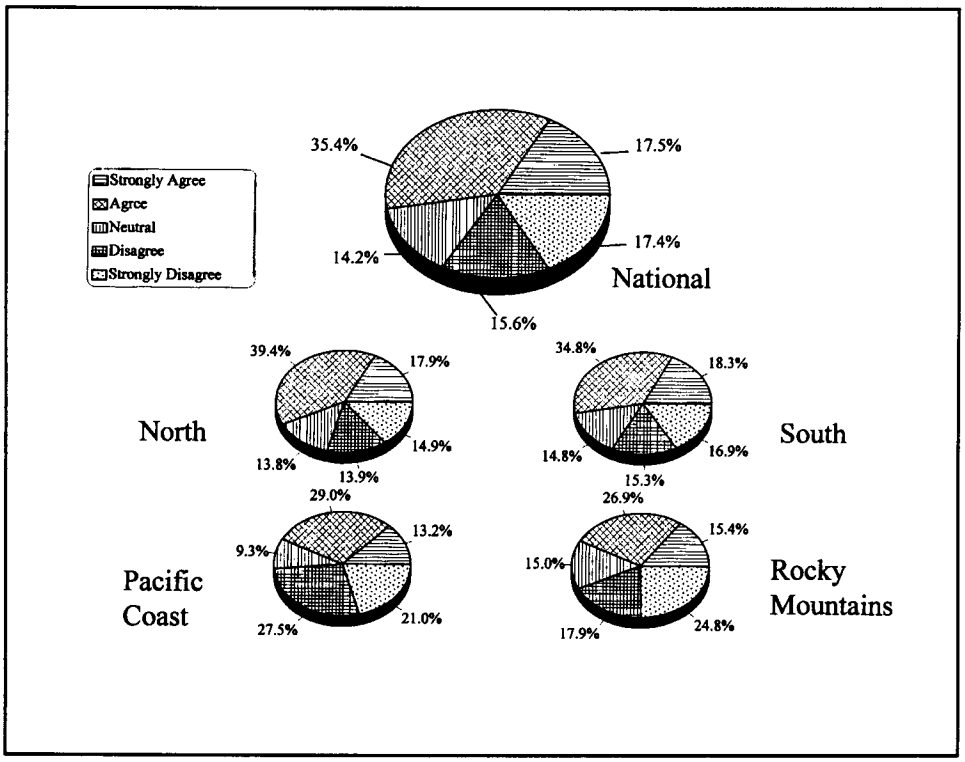


Figure IV.9: Percentage of Landowners Agreeing that Private Property Rights Should Be Limited, if Necessary, to Protect the Environment by Region, 1995-96



Landowners were also asked about their plans for making money from or for improving the natural aspects of their land. Although responses across regions varied some, in general they were very close. One exception is the Northern response to improving wildlife, water, aesthetics, or other natural components of land. Landowners in this region seemed less likely to use their land for making money. Most landowners fall into the middle, "cross-use," categories. A surprising number of respondents refused to answer this question—30 percent on average.

Table IV.7–Percentage of Owners Indicating Primary Emphasis for Managing Their Lands by Type of Management Emphasis and Region, 1995-96

Method of Management	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
I will emphasize improving wildlife, water, aesthetics, or other natural components and do not intend to grow timber, raise livestock, or similarly use my land to make money	14.8	21.4	10.3	10.6	8.8
I will emphasize improving the natural components of my land, but I also plan to use my land to make money	24.4	23.1	26.8	25.6	21.3
I will emphasize using my land to make money, but I will also put some effort into maintaining the natural components	22.3	20.2	21.8	29.5	27.5
I will mostly use my land just to make money	8.7	7.6	7.2	13.0	14.5
Don't know/not applicable	29.8	27.7	33.9	21.3	27.9

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Ways to Use Land and Perceptions

The possession of land represents many things in the lives of rural landowners. To many, owning land provides a means for garnering income. The following tables present some of the ways rural owners use their land to produce income and some of the future plans they hold for their land.

Rural owners have many plans for their land. Some plan to sell or buy additional acreage (Table IV.8). A large percentage across the regions have "other" plans for their land. Nationally, 9.7 percent of owners said they would sell because taxes are too high (Table IV.9).

Rural owners produce income from their land in a variety of ways. Nationally, the majority of ways are "grazing cattle and other livestock," "sharecropping with someone," and "harvesting timber or pulpwood" (Figure IV.10). There are, of course, regional variations among the activities. Most notable is the seemingly high "harvest of timber" in the South, "leasing to a business interest and renting a dwelling" on the Pacific Coast, and "sharecropping" in the Rocky Mountain region.

Table IV.8: Percentage of Owners Indicating Plans for the Land by Type of Plan and Region, 1995-96

Plans for land	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Sell all the land	15.1	15.0	12.9	21.9	19.3
Sell part of the land	6.0	7.3	5.0	7.3	4.7
Add adjoining acreage	12.0	12.7	11.9	9.9	11.1
Other	52.2	50.7	56.5	60.9	42.2

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.9: Percentage of Listed Reasons for Selling Land, by Reason and Region, 1995-96

Reasons for selling land	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Taxes are too high	9.7	12.7	6.5	14.4	7.8
Tract is too large to keep up	3.5	3.5	3.7	6.8	1.7
I need money	5.5	5.3	5.5	9.0	4.8
I will be moving	2.9	3.4	2.2	1.8	3.7
Land prices are high/ good time to sell	4.3	4.4	3.8	3.9	5.6
Other	12.1	11.5	11.6	17.1	13.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Figure IV.10: Percent of Different Ways that Landowners Earn Income from Their Land by Region, 1995-96

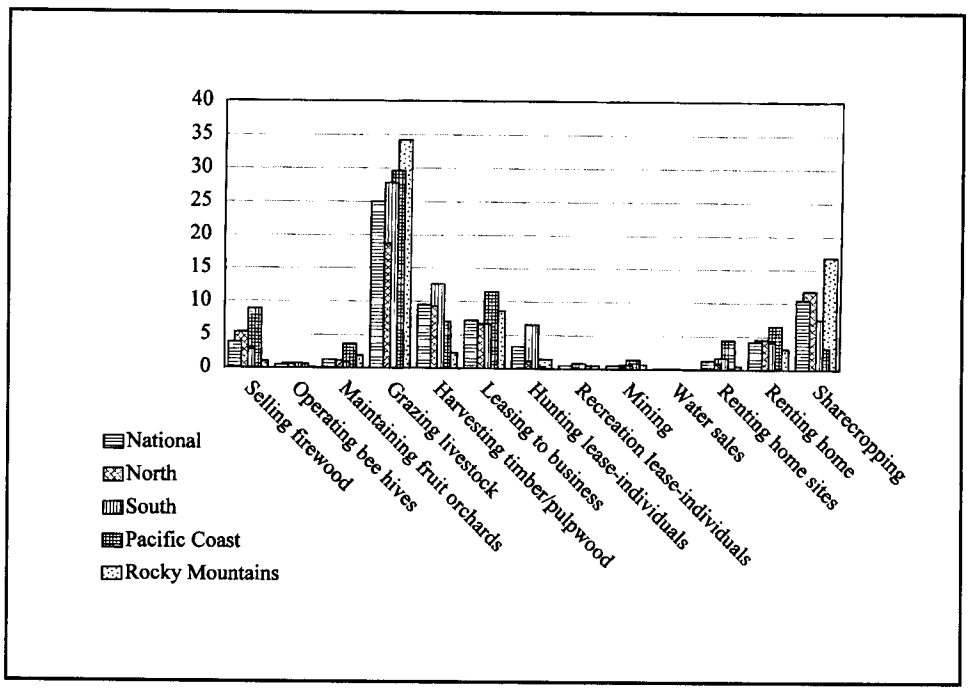


Table IV.10 breaks out the types of forestry products that were harvested from landowners' tracts. Across all owners, the number of products harvested off their land in the past year (bottom of Table IV.10) is fewer than one.

Table IV.10: Percentage of Owners Having Harvested Wood Products in Last Year by Type of Wood Product and Region, 1995-96

Type of Wood Product Harvested	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Firewood for your or others' personal use, but not for sale	26.6	32.4	25.0	24.5	14.5
Fence posts, lumber, or other products for own use, but not for sale	6.1	6.7	6.5	6.3	2.9
Firewood for sale	2.8	3.4	1.5	14.0	1.1
Posts, poles, or pilings for sale	0.6	0.8	0.3	3.1	0
Christmas trees for sale	0.4	0.9	0.2	0	0
Pinestraw, bark, or other mulch for sale	0.3	0.1	0.6	0	0
Other products	3.4	4.2	2.9	7.8	1.3
Don't know what was harvested	1.3	0.6	1.8	1.3	2.0
Mean number of products harvested	0.4	0.5	0.4	0.6	0.2

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Nationally, 9.7 percent of landowners use, or have used, some type of forestry incentive program (Table IV.11). For farm and forestry operations information, many sources were used. At the national level, an average of two of the listed sources were used to help provide the owner with useful information about practices carried out on their land. The Cooperative Extension Service and the Natural Resources Conservation Service were two of the main sources listed.

Table IV.11: Percentage of Rural Landowners Using Forestry Incentive Programs Information Sources for Farm and Forestry Practices, by Source and Region, 1995-96

Use of Forestry Incentive Program or Information Source	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Used forestry incentive program	9.7	9.3	12.7	9.1	3.0
Cooperative Extension Service	37.4	38.4	36.5	31.2	38.8
Natural Resources Conservation Service	29.3	30.5	27.0	20.3	34.6
State Forestry Commission	13.0	10.9	17.0	25.2	4.7
Farm or forestry suppliers	9.5	8.2	10.5	15.3	9.0
Farm, forestry, or other magazines or newsletters	21.8	21.5	20.1	44.0	20.2
Radio and/or television	14.7	13.1	14.1	18.0	19.6
Friends, neighbors, or colleagues	32.8	29.6	33.7	37.5	38.3
Other	9.1	9.3	9.0	16.7	6.7
Average number of items checked	1.7	1.6	1.7	2.1	1.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Protecting Land

For many rural owners, protection, conservation, and thoughtful use of their land are prime considerations. Three of the top management practices included planting trees, improving habitat for wildlife, and using controlled burns to help keep down undesirable vegetation (Table IV.12).

Table IV.12: Percentage of Landowners Using Management Practices by Type of Practice and Region, 1995-96

Type of Management Practice	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Cleared woodland or natural rangeland for crops, pasture or development	5.1	5.1	6.2	6.6	1.9
Harvested mature timber	8.4	10.3	8.5	5.9	2.8
Thinned trees for better timber growth	8.2	12.5	6.0	5.6	2.4
Planted trees	12.3	14.2	9.5	19.5	12.3
Improved habitat for wildlife	12.1	14.8	10.9	11.3	7.5
Provided habitat and/or protection for songbirds	7.7	10.2	6.0	5.9	5.5
Developed ponds or lakes	5.4	4.9	6.1	9.6	3.8
Stocked fish in streams, ponds, or lakes	5.0	2.4	4.0	6.3	1.9
Developed roads	3.1	0.6	1.6	1.1	1.4
Developed boat ramp, beach, or other access to a river or lake	4.8	6.4	4.6	1.9	1.4
Applied fertilizer to range or woodlands	0.5	0.5	0.6	0.6	0.1
Used fire to control undesirable vegetation	10.8	10.2	13.5	9.3	5.5
Controlled a wildfire that broke out	3.4	2.0	4.5	6..4	3.8
Other	1.1	4.4	3.1	1.9	8.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Because wetland management practices are so important in maintaining waterfowl habitat and the general health of the land, landowners were asked whether they undertook any wetland conservation practices. Table IV.13 shows the wetland practices employed by landowners across the nation. Application of such practices varied by region. Participation among landowners in the Pacific Coast were generally the highest among regions for these practices, although owners in the North also preserved wetlands at a comparatively high rate. For landowners who applied some type of wetland conservation practice, the average number of acres involved is shown at the bottom of Table IV.13.

Table IV.13: Percentage of Landowners Using Wetland Conservation Practices by Type of Practice and Region, 1995-96

Type of Wetland Conservation Practice	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Preserving wetlands, such as marshes, swamps, etc.	6.5	8.4	4.4	7.5	6.1
Restoring wetlands by closing drainage systems	1.0	0.7	0.9	4.7	1.2
Creating wetlands through dams or water diversion	3.5	2.9	3.6	8.1	3.7
Receiving state or federal assistance for protecting wetlands	0.6	0.3	0.7	0.0	1.0
I have not undertaken any wetland activities	69.4	71.5	69.6	60.5	65.1
Mean acres practice of those who apply	47.1	41.5	40.1	25.2	105.5

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Another way that owners try to protect and manage their land is by limiting access to people outside their households. Table IV.14 presents some methods of controlling access. The major method is by requiring verbal permission to gain access. Between the high rankings of "getting verbal permission" and having "no requirements for access," there would seem to be low-cost access for public use of private land over most of the nation.

Table IV.14: Percentage of Landowners Who Lease by Type of Agreement Used and Region, 1995-96

Type of Agreement	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Sign a lease agreement	3.1	1.0	5.6	4.6	2.4
Get written permission only, no fee	8.6	8.1	9.8	6.5	7.2
Get written permission AND pay a fee	1.6	0.8	2.6	1.0	1.6
Get verbal permission, no fee	47.0	51.2	42.8	48.8	44.9
Get verbal permission AND pay a fee	1.5	1.1	2.1	1.8	1.3
I have no requirements	15.0	16.8	11.9	18.5	16.8
Other	13.9	13.9	14.8	13.8	11.4

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Posting is a popular way to prevent or control access. Throughout the NPLOS questionnaire, questions pertaining to posting were posed to the landowner. The following tables present the results of this questioning, some of the reasons landowners gave for posting, and some of the problems they have experienced that may have led to posting.

Table IV.15 shows the percentage of owners across the country who post some or all of their land and the average acreage posted. Nationally, 40 percent of landowners post at least some of their land. The reader will note that all but the North reported acreages larger than the earlier reported mean tract sizes. This may be a result of larger tract landowners reporting posted acres and smaller tract landowners abstaining from answering the question, whether or not they posted.

Table IV.15: Percentage of Tracts and Acreage Posted by Region, 1995-96

Posting Attribute	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Percentage who post	40.5	42.2	41.0	46.7	31.9
Average acres posted	205.7	108.8	238.4	298.0	397.4

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Many owners have experienced problems from time to time with outside people's use of their land, these problems may be a cause for much of the posting that occurs today. This finding is consistent with the previous research on recreational access to private lands reported earlier in this chapter. Figure IV.11 lists problems experienced by regions of the country. Across regions, most owners have dealt with two or more of the listed problems. Some of the top problems listed nationally are littering or garbage dumping, poaching of wildlife (illegal hunting), and damaged fences or gates. Looking at the Pacific Coast region, greater percentages of landowners reported problems more frequently than landowners in the rest of the country.

Table IV.16, as a follow-up to the above, lists reasons landowners gave for posting their land. For the most part, it seems that landowners want to know who is on their land in order to keep out persons they do not know.

Figure IV.11: Percentage of Landowner Problems that Have Been Encountered with Outside Person Usage of Their Land, by Region, 1995-96

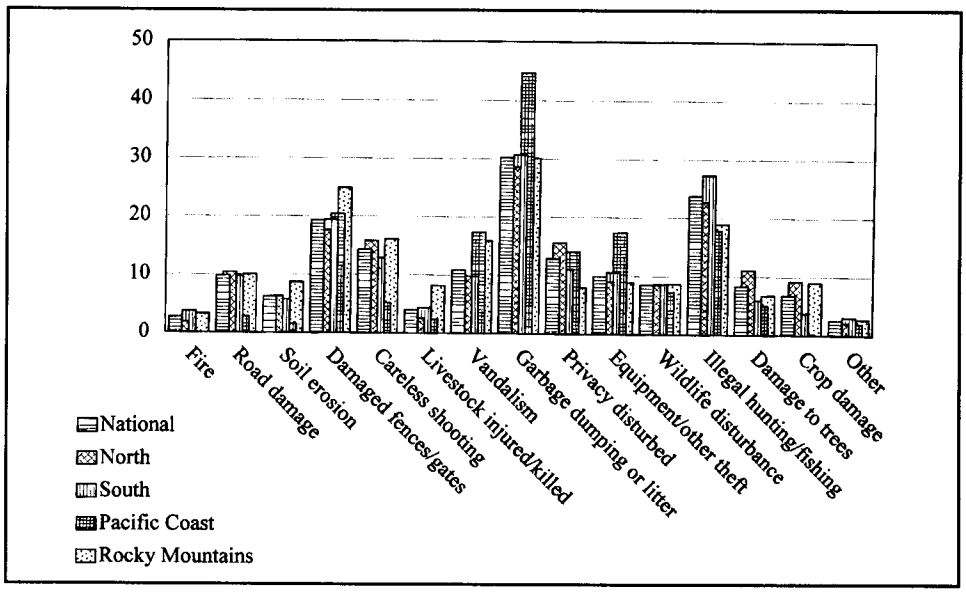


Table IV.16: Percentage of Landowner Who Post Their Land by Reason for Posting and Region, 1995-96

Reason for Posting	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Know who is on the property	39.1	40.2	39.5	41.6	33.7
Keep hunters out	29.3	29.2	32.3	37.9	18.5
Keep motor vehicles out	27.5	28.3	26.7	43.5	22.2
Keep out people I don't know	33.8	33.2	36.8	44.0	24.6
Keep out people who don't have permission	37.7	37.6	39.5	45.0	30.5
Keep everyone out	9.1	7.6	10.4	19.3	6.8
To ensure privacy	20.4	20.1	22.0	25.8	15.4
To prevent littering	27.9	26.4	30.2	38.7	22.5
To prevent damage to property or livestock	30.9	27.4	33.7	43.7	29.3
To be safe from hunters	20.6	22.4	22.1	23.5	10.2
To protect me from lawsuits	28.2	28.5	29.8	37.0	20.4
To prevent fires	20.2	16.3	25.9	28.3	14.0
Other	5.1	5.9	4.8	5.0	3.9

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.17 summarizes the degree to which landowners post the different types of land they own. As one can see from Table IV.17, lands that are leased for hunting and/or other recreational pursuits are much more likely to be posted. This is often the result of the club or individual leasing taking responsibility for posting.

Judging by the results presented in Table IV.18, most owners do not expect to post much more land than they presently post, although on average 15 percent say they will post more. A small percentage (two percent nationally) plan to decrease the acreage they presently have posted.

Table IV.17: Percentage of Landowners Who Post by Land Access Classification and Region, 1995-96

Land Access Classification	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Land reserved only for household	45.3	47.1	44.0	51.6	40.4
Land leased to a club or individual for hunting	79.0	74.1	84.3	28.2	60.6
Land open to people landowner does not know	28.7	26.4	29.1	50.5	28.9
Land closed to all but household	53.3	56.0	55.3	49.3	39.2

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.18: Percentage of Owners Expecting to Post in the Future by Level of Posting and Region, 1995-96

Expected Level of Posting	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
More	15.4	15.0	15.8	16.5	15.1
Same	82.4	83.0	81.3	82.8	83.1
Less	2.2	2.0	2.8	0.7	1.8

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Recreational Use and Access

A major purpose for the NPLOS project was to identify and quantify recreation use that occurs on private land in the U.S. One component of that recreational use is landowners' personal use, including family use. Another is the use by persons outside the family. This section will examine various types of recreational use and access.

Table IV.19 shows the percentage of owners who have acreage "closed" to all outsiders (outside the household) and the average number of closed acres per tract for those having closed land, nationally and regionally. While the percentage reporting closed land is fairly equal across regions, the mean acreage varies mostly because of differences in average tract sizes across the regions, with western tracts being larger.

Table IV.20 shows the percentage of landowners who recreate on their own land. Such personal recreation might include taking walks or big game hunting.

Table IV.19: Percentage of Ownerships and Average Acreage Closed to Recreation Except for Family Members by Land Closure Attribute and Region, 1995-96

Land Closure Attribute	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Percentage of ownerships having closed land	28.5	27.7	30.2	31.2	25.8
Mean number of acres closed for those who said they had closed land	96.4	71.1	94.7	196.3	148.6

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.20: Percentage of Landowners Who Personally Participate in Recreation on Their Lands and Landowners who Permit Access for Recreation by Persons Outside their Family by Region, 1995-96

Group	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Participate in recreation on their land (Percent)					
Landowners	70.7	77.3	66.2	65.0	52.1
Permit access for recreation by persons outside their family (Percent)					
Landowners	47.9	55.2	42.5	45.9	41.5

Table IV.20 also shows the percentage, by region, of owners allowing access to people outside their household. The influence of long-standing open access in the North is evident. Roughly half of landowners across the nation allow persons outside their household to recreate on their land. Most of those given access were known personally by the landowner (Table IV.27). The percentage of "outside groups not known personally by the landowner," curiously, was higher than for "people in no way connected with clubs and organizations" for all regions of the country but the South. These percentages were highest in the North where more private land is open to outside use than in any other portion of the country.

Table IV.21: Proportion of Landowners Who Open Access to Outside People by Persons Permitted Access and Region, 1995-96

Persons Permitted Access	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Members of your immediate family who do not live with you	49.4	53.6	48.2	52.3	39.5
People outside your immediate family or household who you know personally	49.3	55.2	45.3	60.8	39.3
Individuals or members of clubs, organizations, or groups who lease your land	5.1	4.2	7.4	4.5	2.1
Outside persons who you may or may not know and with whom you have no personal connections	11.9	16.0	6.5	11.0	14.1

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Approximately 15 percent of owners permit access to some of their land for recreation (Table IV.22). For those who have open acreage, averages are reported. Average open acreage is largest in the Western regions of the country. Table IV.22 also presents estimated average number of 'outsiders' who used the open acreage, as well as the average number of times per year each person used the land.

Table IV.23 also presents percentages of ownerships by type of persons permitted access. The estimated average number of people who used the landowner's land in the East is almost double that of the West.

Table IV. 22: Percentage of Owners, Acreages and Use of Open Private Land by Region, 1995-96

	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Percentage having some land completely open	14.5	19.5	8.4	14.2	16.6
Average number of acres per open tract	238.7	130.4	220.1	327.2	942.8
Average numbers of people using the tract	28	27.7	35.0	10.7	23.0
Average number of times tract used per person	5.2	4.8	7.4	3.1	3.0
Average annual use	158.5	176.8	174.2	29.4	119.6

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.23: Percentage of Ownerships by Categories of Persons Having Access to Land and Number of Users, 1995-96

Persons Having Access	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Percent Response					
Landowner and members of their family who live with owner	66.5	59.4	69.4	95.1	54.6
Members of family who do not live with owner	51.6	36.7	56.3	95.1	51.7
Others owner know	32.5	42.0	29.7	0.0	31.5
Others owners don't know	8.8	3.1	12.2	4.9	0.0
Number					
Number of people who used the land in the last year	13.9	14.2	14.6	7.3	7.3

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.24 presents the results of the question of how many of the people who had explicit permission to use the private land for recreation did so and the average number of times they recreated on the land in the past year. The bottom section of the table provides an estimate of total use. With the exception of the Pacific Coast, most of the use seems to be by people from outside the family.

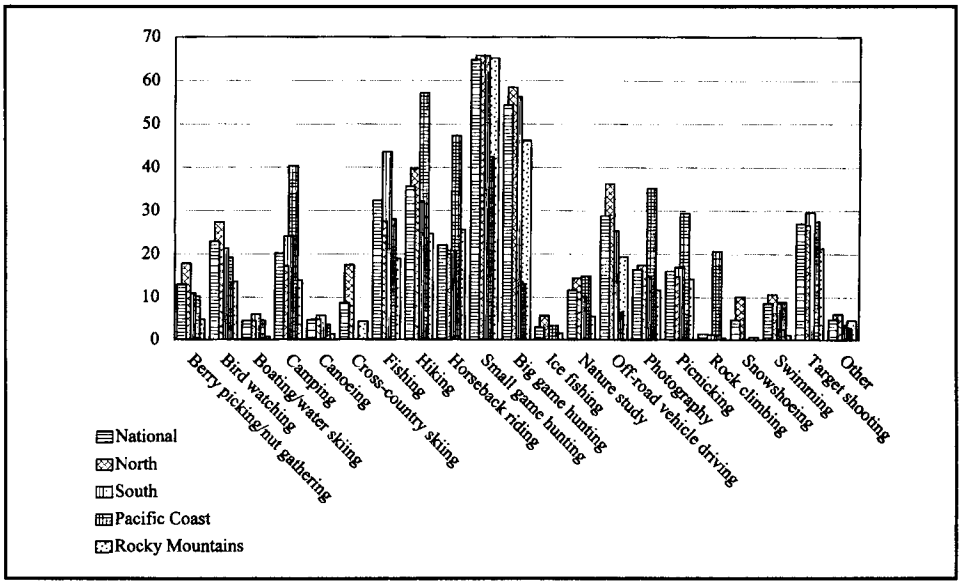
In this study, we were interested not only in the amount of recreation that was occurring on private land, but also in the types of recreation. Figure IV.12 summarizes the types of recreational activities that landowners reported as occurring on their lands in the past year. A number of the activities listed occur frequently on private lands, with some variation among activities by region. Small game hunting is reported as the most popular activity nationally especially in the North and South.

Table IV.24: People with Explicit Permission to Use Private Land and the Average Number of Times that Right Was Exercised 1995-96

People and Use by Group	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Number of people with permission					
Household	1.7	1.8	1.4	2.2	1.7
Family not living with you	4.7	4.9	4.7	5.9	4.1
Others	6.7	7.2	6.1	6.6	7.0
Number of times in past year people went					
Household	31.8	40.1	26.2	39.1	17.9
Family not living with you	9.8	8.7	11.9	15.4	4.8
Others	8.7	9.4	8.3	9.2	7.1
Total use per year					
Household	92.6	113.7	64.7	187.1	71.8
Family not living with you	97.9	95.9	94.4	324.6	30.3
Others	140.8	172.5	113.3	75.2	142.3

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Figure IV.12: Percentage of Recreational Activities Occurring on Land, by Region, 1995-96



For various reasons, landowners allow their land to be used by people outside of their own family (Table IV.25). Overwhelmingly, "maintaining goodwill with their neighbors and others" is the primary reason for allowing access. This percentage drops noticeably in the Pacific Coast and Rocky Mountain regions, but is still ranked as the number one reason for allowing access in these regions.

Responses of landowners to questions about past access to their land suggest that the access situation is about the same now as it was five years ago (Table IV.26). Although the most frequent response was that access will remain the same, there is a noticeable trend toward closing more land to outside recreation in the future in all regions.

Table IV.25: Percentage of Landowners by Reasons for Allowing Recreation on Their Land and by Region, 1995-96

Reasons for Recreation	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Primary source of income	0.6	0.3	0.9	0.0	0.6
Helps pay the taxes	2.9	1.2	5.0	9.4	0.6
Extra income	0.0	0.0	0.0	0.0	0.0
Help care for and protect my land	3.7	2.0	6.2	4.3	1.8
Help control trespassing	8.4	7.1	11.2	4.0	5.6
Maintain goodwill with neighbors and others	41.2	44.8	40.0	26.9	37.9
Other reasons	15.5	16.7	14.8	15.7	13.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.26: Percent of Owners Indicating More, Same, or Less Land Open to Recreation for Non-Family Members by Time Period and Region, 1995-96

	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Five years ago					
More	5.0	4.9	5.3	6.2	4.2
Same	88.2	89.1	86.1	88.4	91.0
Less	6.8	6.0	8.6	5.5	4.8
Five years from now					
More	3.0	1.8	4.2	2.0	3.9
Same	83.7	85.8	81.7	85.8	82.1
Less	13.3	12.4	14.1	12.2	14.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Leasing and Access Rules

Another type of access to private lands is conveyed by a lease agreement. Because leasing can be an important income source to the owner as well as a means of protecting the land, it was given detailed treatment in the NPLOS.

Table IV.27 presents several reasons why landowners might want to lease their land. There was not enough data to support analysis of the Pacific Coast region for leasing, and no column is presented for that region. Nationally and regionally the two major reasons landowners gave for leasing their land are to help pay property taxes and to help control trespassing or unwanted use.

Table IV.28 presents some general information about leasing, the average numbers of people involved in leases, as well as the amount of recreational use that occurs on tracts. The first row, "mean acres leased for recreation," reflects the average acreage leased across all landowners nationally and regionally. This average includes many zeroes for those who do not lease. The second row, "mean acres leased for recreation," summarizes the average acres leased among those owners who had a lease agreement.

Table IV.27: Percentage of Landowners by Reasons for Leasing Land and Region, 1995-96

Reason	U.S. Overall	Region		
		North	South	Rocky Mountains
Source of income	14.8	6.3	16.6	25.1
Helps pay property taxes	74.5	61.5	80.5	42.2
Extra income	39.4	30.0	39.3	82.9
Control trespassing or unwanted use	60.7	29.6	70.2	53.8
Maintain goodwill	25.3	17.5	27.5	26.7
Help care for and protect land	52.0	27.0	60.7	31.1
Other	0.1	0.0	0.2	0.0
Mean number of above reasons checked	2.7	1.8	3.0	2.6

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.28: Number of Acres, Leases, and Use of Leased Private Land, by Region, 1995-96

Acres, Leases, and Use per Tract	Region			
	U.S. Overall	North	South	Rocky Mountains
Mean acres per tract leased for recreation across all landowners	14.9	3.7	32.4	5.2
Mean acres leased for recreation by landowners	338.0	183.0	418.4	341.5
Number of different leases per tract	1.0	0.8	1.0	1.4
Number of different people covered by leases per tract	12.4	9.4	14.1	8.5
Average number of times used per tract, per year	32.8	22.6	37.9	15.8
Mean "person trips" per year to lease	586.0	192.3	750.5	262.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.29 shows the different types of lease agreements across regions. For the most part, these are written agreements with fees, though a substantial number are verbal with a fee. The verbal agreement seems more prevalent in the North.

The percentage of owners leasing by different types of leasing groups is shown in Table IV.30. Clubs are the most common of lessees, especially in the South. In the Rocky Mountain region, different proportions among group types are evident with more individual leasing being reported. The number of people who live within 50 miles of the leased tract is higher in the South than in other regions.

Table IV.29: Percentage of Owners Who Lease by Type of Agreement and Region, 1995-96

Type of Lease Agreement	Region			
	U.S. Overall	North	South	Rocky Mountains
Verbal agreement with no fee	2.4	4.1	2.0	0.0
Verbal agreement with fee	23.4	47.3	15.4	32.3
Written agreement with no fee	5.3	8.4	4.8	0.0
Written agreement with fee	68.6	40.2	77.3	67.7
Other	0.3	0.0	0.5	0.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.30: Percentage of Landowners by Different Types of Individuals or Groups Who Lease Land and by Region, 1995-96

To Whom the Respondent Leases	Region			
	U.S. Overall	North	South	Rocky Mountains
Individual	16.9	11.4	15.9	31.7
Group of individuals, but not a club	25.2	25.1	24.6	31.1
A club	32.0	21.1	39.6	16.8
Business or corporation	5.2	12.1	1.9	10.3
Government agency	0.3	0.0	0.4	0.0
Others	0.4	0.3	0.7	0.4
Mean number of people leasing who live within 50 miles	6.0	1.6	7.5	2.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.31 shows the results of questions about method and time period by which they leased their land. The most prevalent time period is the annual lease, which is most likely the least confusing leasing approach. "By the lease"[5] also is a popular way of leasing and seems to be increasing as a result of specialization. Length of leases also reflects how the owner manages his/her leasing strategy. The bottom of Table IV.31 indicates that "yearly" leasing is most popular nationally, with leasing "by the season" falling second. In Rocky Mountain regions, however, this relationship is reversed.

Table IV.32 presents strategies for owners for leasing with fees. The highest percentages of landowners choose charging a fee slightly lower than the "going rate" in order to lease to someone whom they trust will take care of their land (42.2 percent). An exception to this leasing practice is in the Rocky Mountain region, where 63 percent lease at the "going rate." Nationally, leasing at the going rate is second at 30 percent, while almost 20 percent lease at a rate much lower than the going rate in order to get someone they trust. A little over eight percent lease to the highest bidder.

Table IV.31: Percentage of Landowners Who Lease by Method for Charging and Tenure of Lease and by Region, 1995-96

Method for Charging and Tenure	Region			
	U.S. Overall	North	South	Rocky Mountains
Method of Charging				
By the year	67.6	39.5	79.3	60.7
By the season	13.2	17.3	10.9	25.4
By the person	7.9	9.6	6.4	5.2
By the lease	9.8	5.3	11.6	18.7
Other	0.5	0.2	0.8	0.4
Tenure of lease				
Season	36.2	43.3	34.7	49.2
Combination	5.2	10.8	1.9	6.4
Other, less than a year	8.3	18.0	1.4	15.0
Yearly	50.3	27.8	62.0	29.4

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

[5] By the Lease' is somewhat of a specialized term that basically means the lessee's pay by the type of recreation activity. For example, a landowner might offer a lease to hunt turkeys AND a lease for big game hunting.

Table IV.32: Percentage Landowners by Strategies for Choosing the Lessee and by Region, 1995-96

Leasing Strategies with Fee	U.S. Overall	Region North	South	Rocky Mountains
Lease to highest bidder	8.1	26.8	3.6	0.0
Lease at the going rate	30.0	19.1	30.6	63.3
Lease at slightly lower rate in order to get someone I trust to take care of the land	42.2	36.2	46.0	10.0
Lease at a much lower rate in order to get someone I trust to take care of the land	19.8	17.9	19.8	26.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Another strategy for capturing revenue from recreation on private lands that is similar to a lease is "pay-as-you-go." The landowner charges an access fee to people who use their land on each occasion of use. This would probably be most effective when some type of "special attribute" exists on the land. Examples of such attributes are: a section of whitewater on a river, a scenic hiking trail, a pay fishing pond, or a strategically located boat ramp providing access to a lake or canal. There are, however, very few owners across the nation who practice a pay-as-you-go policy (Table 4.33). However, it seems to be most prevalent in the South, where approximately eight percent of owners reported charging a fee for the use of their land for recreation. Almost 80 percent of these owners charged a "per person" fee.

Table IV.33: Percentage Charging Fees and Amount for Recreation Access to Private Land by Region, 1995-96

	U.S. Overall	Region South	Rocky Mountains
Do you charge fees for people, in general, to use your land? (% Yes)	2.7	8.1	1.9
What is the charge?	$30.24	$30.48	$18.14
Is fee:			
per person	74.6	79.3	100.0
per group	35.3	33.2	0
per vehicle	13.4	17.0	0
other	0.1	0.2	0.1
Is charge per day? (% Yes)	94.6	97.7	69.6

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

One aspect of leasing that has been a long-standing concern to owners is liability. Table 4.34 shows the different ways landowners handle liability. Carrying insurance, both by the landowner and lessee, is the most popular way of handling liability concerns. Other ways a landowner addresses liability may be a waiver of injury signed by the lessee or removal of all hazards. Finally, approximately 15 percent of owners say they do nothing to address the prospect of liability.

Figure IV.13 presents results of a question asking whether the owners would be willing to lease or allow an individual to recreate on that part of their land they considered closed. The question probed willingness under the condition that interested individuals personally contact the landowner, demonstrating honesty and

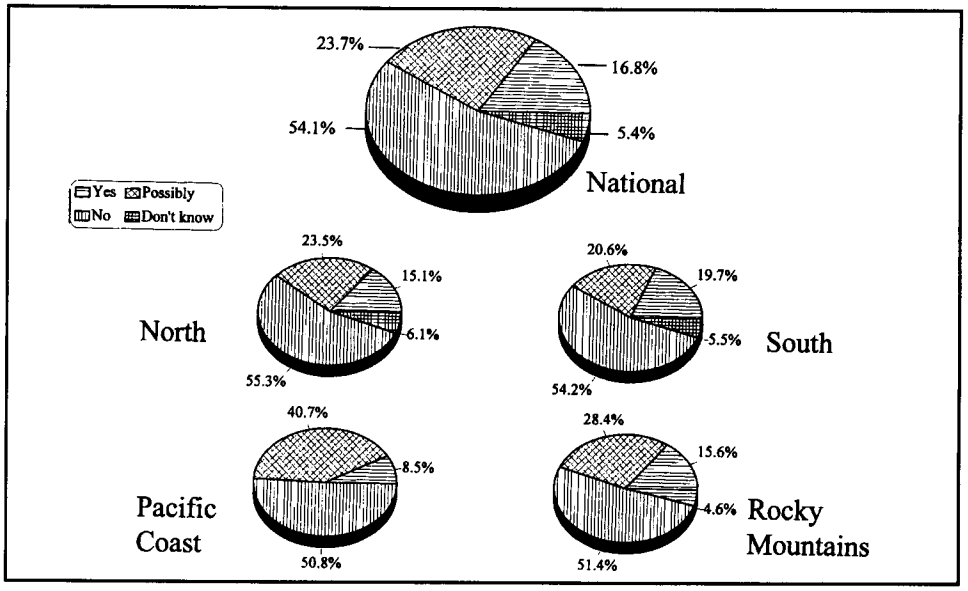
trustworthiness. Over half of owners in all regions replied negatively to this question. Roughly 40 percent indicated willingness to consider this type of access and five percent said they did not know.

Table IV.34: Percentage of Landowners by Method for Handling Leasing and Liability and by Region, 1995-96

Liability Handling	Region			
	U.S. Overall	North	South	Rocky Mountains
I carry insurance	44.1	73.6	36.0	36.7
Lessee carries insurance	48.8	53.5	49.0	25.1
Lessee signs a waiver	26.5	27.2	26.9	17.1
All known hazards removed	20.9	18.6	22.9	0.0
Do nothing about liability	14.8	5.3	16.8	25.1

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Figure IV.13: Percentage of Landowners Who Would Consider Letting Outside People Recreate on Land that Is Completely Closed, by Region, 1995-96



Finally, owners were asked what it would take in the future for a group or individual to lease their land for recreation (Table IV.35). "Verbal permission with no fee" was the highest response category, with over 55 percent of owners indicating their consent. Almost 20 percent of owners would require a fee with some type of agreement and 12 percent would have no requirements whatsoever.

Table IV.35: Percentage of Landowners by Type of Access Arrangement and Region, 1995-96

Types of Access Arrangement	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Obtain lease agreement and pay fee	11.1	7.1	15.4	5.1	13.5
Obtain lease agreement, no fee	0.4	0.0	0.7	0.9	0.5
Written permission only	13.6	12.7	14.8	19.3	11.3
Fee only	0.6	0.4	0.5	3.4	0.6
Written permission and a fee	4.1	2.3	5.1	9.5	5.3
Verbal permission and a fee	2.7	2.6	2.9	2.6	2.8
Verbal permission, no fee	55.8	62.6	50.4	49.8	551.5
No requirements	11.7	12.3	10.2	9.4	14.4

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Landowner Demographics

Almost 85 percent of private landowners across the nation classify themselves as full-time employed and 15 percent as part-time employed (Figure IV.14). Thirty percent of owners reported being self-employed (Table IV.36). Approximately 40 percent across the country have completed no more than high school, while 33 percent had received a bachelor's or higher degree from college (Table IV.37). Ninety-three percent of the landowner population is white, the average age was 60, and three quarters were male (Table IV.38). Almost 60 percent of all private landowners lived on a farm in what they consider to be a rural area, while almost 12 percent reported living in a large to very large city (Figure IV.15). Almost all private owners said they were citizens of the U.S. and 98.3 percent said they were born in the U.S. (Table IV.39). Mean household size of the owners was just under two (Table IV.40). Average annual family income at the national level was about $55,000, 13.6 percent made over $100,000 and three percent made less than $5,000 (Figure IV.16).

Table IV.36: Percent of Landowners by Type of Employment and by Region, 1995-96

Employment	Region				
	U.S. Overall	North	South	Pacific Coast	Rocky Mountains
Retired	38.8	36.6	42.7	27.6	38.4
Unemployed and actively looking for work	0.4	0.6	0.3	1.0	0.2
Unemployed but not actively looking for work	0.4	0.5	0.6	0.0	0.1
Federal, state, or local government employee	8.0	7.8	8.4	9.3	7.1
Employee of private business or corporation	18.8	20.8	18.4	17.9	13.8
Self-employed	30.1	30.5	25.4	43.2	37.4
Housewife or househusband	3.4	3.2	4.0	1.0	3.0
Other	0.1	0.0	0.2	0.0	0.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.37: Percent of Landowners by Education Level and by Region, 1995-96

Education Level	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Grades 1 to 8	5.4	4.7	6.5	3.3	5.0
Some high school	6.2	6.4	6.9	3.9	4.6
Graduate high school	27.9	33.6	23.6	17.6	25.6
Some college	21.4	19.5	22.4	22.7	23.9
Completed an associates degree	7.1	6.9	6.5	13.1	7.4
Graduate undergraduate college	16.9	14.3	19.1	20.8	17.3
Completed a master's degree	9.3	8.8	9.4	8.0	11.2
Completed a doctorate degree	5.8	5.8	5.5	10.6	5.0
Other	0.0	0.0	0.1	0.0	0.0

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.38: Percent of Landowners by Race, Age and Sex and by Region, 1995-96

Owner Characteristic	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
White, not of Hispanic origin	92.5	93.9	89.9	92.1	95.6
Hispanic or Latino	1.4	0.9	1.1	5.1	2.6
African American	1.5	0.2	3.8	0.0	0.1
Native American	4.5	4.9	5.2	2.1	1.7
Asian or Pacific Islander	0.1	0.1	0.0	0.7	0.0
Other	0.0	0.0	0.0	0.0	0.0
Mean Age	59.5	58.6	60.6	57.6	60.1
Male	76.1	80.8	71.1	80.3	74.6
Female	23.9	19.2	28.9	19.7	25.4

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Figure IV.14: Percentage by Employment Type of Rural Private Landowners, by Region, 1995-96

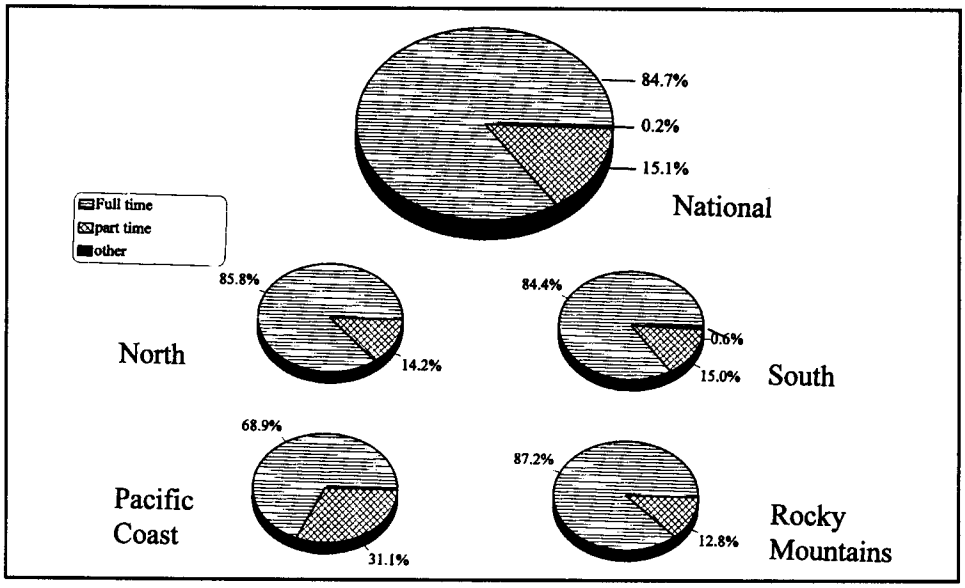


Figure IV.15: Percentage Classification of Where Rural Landowners Reside, by Region, 1995-96

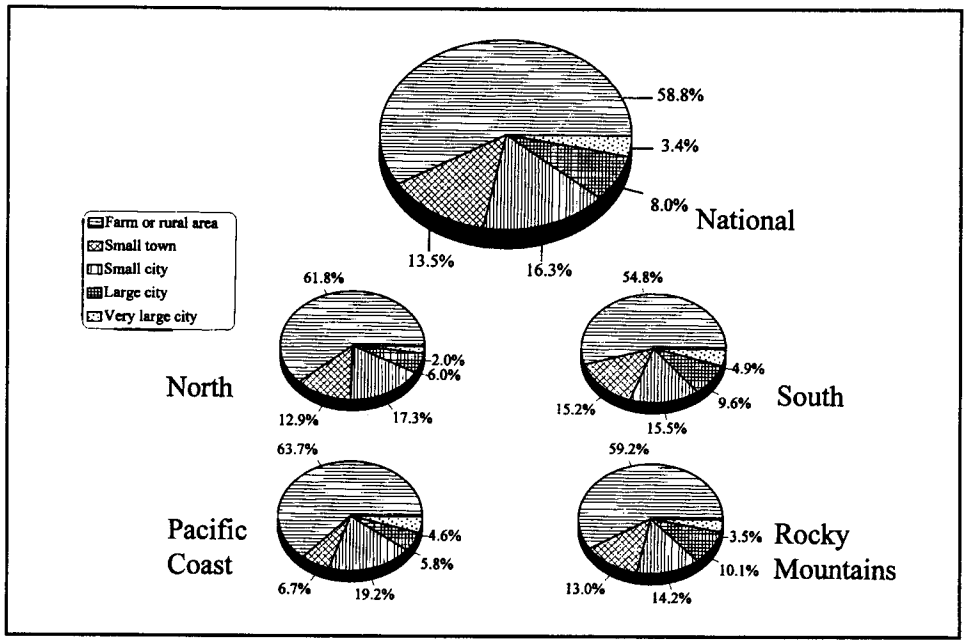


Figure IV.16: Percent of Household Income Categories of Rural Private Landowners, by Region, 1995-96

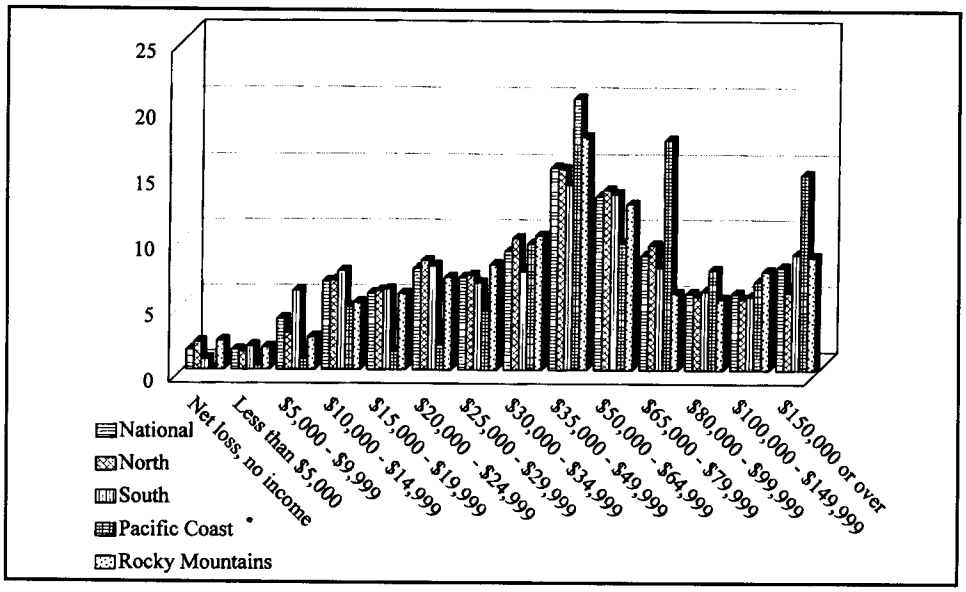


Table IV.39: Percent of Landowners by Citizenship and Birthplace and by Region, 1995-96

Citizenship and Birthplace	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
U.S. Citizen	99.7	99.9	99.9	95.3	100.0
Born in U.S.	98.3	97.4	99.4	97.3	98.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Table IV.40: Mean Number in Household Members by Region, 1995-96

Number in Household	U.S. Overall	Region North	South	Pacific Coast	Rocky Mountains
Mean number of children	0.6	0.6	0.5	0.7	0.5
Mean number of relatives	0.1	0.1	0.2	0.03	0.1
Mean number of unrelated others	0.1	0.1	0.1	0.1	0.1
Mean household size	1.8	1.8	1.7	1.8	1.7

Source: National Private Landowners Survey (NPLOS), Environmental Resource Assessment Group, Athens, Ga.

Summary

The majority of rural landowners in the U.S. are white and over 60 years of age. They have owned their land for more than 20 years. The national average tract size, as indicated by the NPLOS, is almost 140 acres. The range of tract size observed in the NPLOS was from 10 to almost 40,000 acres. Almost half of the total hold other tracts of land and live on the tract asked about in our questionnaire. Of those who do not live on the land, 60 percent live within 20 miles. However, among those who do not live on their land, almost 30 percent have a residence over 100 miles away.

A substantial percentage of private lands border public lands, especially in the West. Also, many tracts adjoin a paved public road and have streams or rivers running through them. Only a small proportion of owners have added to or sold any of their land. Those who have tended to add more than they sold for a net gain in average tract size. Most of those who did sell some of their land did so because they got a good offer when they needed the money and sold to someone they knew, either a family member, friend, relative, or someone local. Many rural landowners said they own their land primarily for aesthetic reasons such as, "enjoying their own green space," "providing a place for wildlife," and just "living in a rural environment." More landowners feel that "people should rule over nature", but also feel rather strongly that there must be a "balance between human use of the environment and its maintenance." Over 70 percent of rural landowners expect to use their land for making money, but they also plan to put some effort into maintaining the natural components of the land. While it seems that rural landowners believe the environment needs to be protected, at the same time they are leery of private property rights being limited by an outside agency.

Rural landowners have definite plans for the land they own. Some of the plans listed include selling all or part of their land to make a profit, but 12 percent of owners indicated plans to add land to their existing holdings. They use a variety of ways to earn income from their land, including grazing cattle, sharecropping and leasing to outside interests. Harvesting timber products seems to be one of the major commercial uses of rural land. The last wood product harvesting, including firewood, pulpwood, and lumber, as a national average, was about nine years ago for most owners. This reflects the rotating nature of growing trees for sale. Only 10 percent of landowners used any kind of forestry incentive program, and their major sources of information for farm or forestry operations are the Cooperative Extension Service or the Natural Resources Conservation Service. Many landowners have engaged in conservation practices, including planting trees, improving habitat for wildlife, and using burns to control unwanted vegetation. Some owners are consciously using wetland conservation practices.

Protecting their land seemed of great importance to most owners. One way of doing this is through posting. Approximately 40 percent of landowners reported posting their property, and of those who post, the average acreage per tract is 200 acres. Some of the more significant problems landowners have had, which may have led them to take protective measures, were destruction of property, littering, poaching, and disruption of privacy. Landowners said they began posting so they would know who was on their property and when, to prevent damage to property and livestock, and to be safe. The percentage of reserved land that was posted closely parallels that percentage of the overall acreage owners typically post. Close to 80 percent of the land leased to clubs or individuals for recreation has been posted, either by the club or by the owner. Ninety-eight percent of landowners said they would post the same or even more of their acreage in the future.

Learning more about recreation on private land was one of the main reasons for undertaking NPLOS. A major determinant of the amount of recreation that occurs on private lands is accessibility of the land to outsiders. One-third of rural owners said portions of their tract were completely closed to all people outside their family. Nationally, owners said they kept a private reserve of land equal to about 65 acres for their use only. Over 70 percent of landowners across the U.S. reported that they engaged in recreational activities on their own land, and almost 50 percent said they had allowed access to people outside their family. Only 15 percent of rural landowners said they made some option of their land available to access by outside people. The largest percentage of landowners allowed only family, friends, and other people they knew personally. Landowners who allowed use reported the average number of people using their land as 14 per year. Of the different categories of people who recreated on private land, the number of times family members used the land per year was approximately 95, and use by people outside the family was well over 100 times per year.

Many types of recreational activities were pursued on private land. Hunting, fishing, hiking, and camping were among the top activities listed. Activities less frequently mentioned were swimming, nature study, and target shooting. When landowners were asked why they allowed access to their land for recreation, most said it was to maintain good will with their neighbors and others, and a notable percentage said it helped to pay taxes and provided income. Rural owners reported that they have changed little on the issue of access in the past five years, although there does seem to be a trend to limit more land in the future.

Some landowners get income by granting access to groups outside their family. By and large they use this income to help pay taxes, but they also see other benefits, such as help from clubs and individuals who lease protecting their land. Typically, a landowner leases to only one group. For the most part, this lease is a written agreement with a fee. Three-quarters of leasing owners charged by the year or hunting season, and close to 90 percent said the lease covered a "season or year." Many owners said they leased at a rate slightly lower than the going rate to entice lessees who they felt they could trust take care of the land. Aside from leasing, few landowners seem to be using daily or other pay-as-you-go fees as a source of income. Such fees probably are a viable alternative only if the land has notable and saleable recreational attributes. According to most landowners, outside people will be permitted to use their land in the future if they obtain verbal permission, and there will be no fee.

The concern about liability is always an issue for landowners. The primary way landowners manage liability is by having the club or individual who is leasing carry insurance or by carrying insurance themselves.

Almost 40 percent of rural landowners listed themselves as retired and almost 50 percent reported being self-employed or employed by a private business or corporation. A little over 10 percent of private owners said they had not completed high school and 28 percent said they had no more than high school. Six percent of landowners across the U.S. said they had completed a doctoral degree. Outside of whites, who represent the overwhelming majority of rural owners, the largest racial group owning rural land was Native Americans. They make up 4.5 percent of the landowner population. The most common single household income category reported was $35,000 to $50,000 per year. Households reporting incomes over $100,000 represented 13.6 percent of landowners across the country. The Pacific Coast had the highest concentration of those high-income households.

TRENDS

Comparing the 1996 NPLOS to the 1986 NPLOS (Wright, et al., 1988) we see several notable differences, but also many similarities. Landowner demographics seem to be changing slightly. There is a drop in white ownership from 96 percent in the 1986 NPLOS to 93 percent in the 1996 NPLOS. There are slightly more female landowners (80 percent male in 1986, vs. 76 percent male in 1996) and the average age of owners in the U.S. has risen almost two years to 60. Family size has dropped by approximately one person per household and there are fewer self-classified retirees as owners. The largest change demographically between the two studies is in household income and education level. Reported household incomes have risen from an average of just over $35,300 in 1986 to approximately $55,500 in the 1996 study. Educationally, there is a percentage decline in the category of "high school graduates only" but the percentage is picked up in the greater number of landowners who reported finishing a college degree, either an associate's or bachelor's. The percentage of owners claiming a graduate degree has changed little and is still approximately 15 percent.

Ownership patterns also seem to have changed somewhat. Forty-seven percent of landowners in the 1996 study said they lived on their land, whereas only 38 percent responded the same for the 1986 survey. However, where 90 percent of landowners said they lived within 20 miles of their land in 1986, only 50 percent indicated the same in 1996. The number of years owners have had their tracts has dropped somewhat from 23.3 to 21.3 years in the 10 years between surveys. Average reported tract size has decreased from 183 acres in 1986 to 138 in 1996.[6] Hunting remains the most popular recreational activity pursued on private lands, although a number of other activities are gaining in popularity and are higher on the list reported by the landowner. The percentage of owners who post at least some portion of their lands has risen from 33 percent in 1986 to 41 percent in 1996. The average number of acres owners posted per tract has decreased slightly from 232 acres to 206.

Though the way in which the questions were worded to respondents were slightly different between the surveys, it seems that access for recreation to individuals who the landowner does not know (open land) has decreased from 25 percent to 15 percent. Access to private land by individuals known by the landowner has remained close to the same (47 percent in 1986 and 50 percent in 1996). Leasing of land by landowners for recreation has also remained close to the same, with only three percent of landowners reporting they leased land in 1996 and slightly less than four percent responding the same in 1986.

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[6] More investigation needs to be done on acreage comparison between the two studies, however, for the 1986 NPLOS limited its sample to tracts larger than 20 acres and the 1996 cutoff was 10 acres. Using the 1996 data but increasing the lower limit to 20 acres gives a mean tract size of approximately 186.

DISCUSSION

The right to own land, especially rural land, is an important part of our heritage as Americans. Rural landowners are seen by many as the backbone of our society. As farm acreage is taken out of agricultural production, either by urban sprawl or the ravages of the agricultural market, it drives rural owners to find other values and ways of using their lands. Because recreation is a major part of American lifestyles, access to private rural land is critical in assessing outdoor recreation opportunities in the United States.

Nearly 60 percent of all land in the U.S. is privately owned. The rural private portion of this "estate" supports a large number of recreational activities. A small portion of private land is open to recreation without any restriction. Other, larger portions are available through leasing or by asking permission from the owners.

Rural private owners are very interested in the management of their land. Because most owners live on or within 50 miles of it, they are able to watch the effects of their land management closely. A number of owners take part in wetland conservation practices and even more use local Cooperative Extension Service and Natural Resource Conservation Service field offices as sources of information about farm and forestry practices. Landowners seemed to be aware of environmental situations that may affect their land as well. However, the thought of an outside entity exercising control over their land uses is not an acceptable approach.

Overall, landowners seem to make quite a bit of their land available for recreation outside of their own family, with approximately half allowing people outside their family to recreate on their land as long as they know them. Private land, therefore, provides substantial recreation opportunities. In many cases, the accessibility to private lands may be somewhat greater than accessibility to public lands. This is especially true if one looks at public access in terms of the distance the majority of the population lives from the land. Centers of population are quite a bit further from public land in the North and South than they are in the West, where most of the public land exists.

Landowners seem much more comfortable with use of their land by people they know than by people outside their family or circle of friends. This tendency was evidenced both by the percentages of owners allowing certain group classifications to use their land and by the responses given for posting lands.

Liability issues are persistent and of increasing concern to rural landowners, but few take actions to limit their liability. An exception is in the North, where the majority of landowners have insurance. However, given the prevalence of litigation in the U.S., the issue of granting access and risking a lawsuit seems a major influence on the availability of private land for public recreational use. This possibility is reinforced by landowner predictions that they will make less land available in the future.

Despite liability problems, most landowners seemed open to the possibility of providing some form of public access to their lands. For example, when answering the question of why they allow outside access, owners overwhelmingly said it was to maintain goodwill with their neighbors and others.

Generally, limited public access to private land in the U.S. has been, and is expected to remain, fairly stable. Access is for the most part dictated by location. Without potentially large incomes to support leasing, most urbanites will not be able to require access to private land. Landowners usually grant permission to use their lands based mainly on their familiarity with the recreationist or the trustworthiness of the lessee.

However, because many urban dwellers do not participate in the types of recreational activities that occur on rural private land, limited access for these activities found in the NPLOS may not constrain the overall availability of appropriate recreational opportunities much. Referring back to the 1994-95 NSRE study (Cordell, et al., 1997), we see high rates of participation in many activities that are either land attribute intensive (e.g., caving, rock climbing, downhill skiing, etc.) or facility intensive (e.g., visiting nature centers, team sports, camping, etc.). For the most part, these types of activities do not occur on private rural land. Also, from a review of associated literature, it seems that most city dwellers do not have the means or the time to spend traveling past urban areas to take advantage of recreational opportunities on private land, even if those opportunities are available.

Recreation activities with the greatest potential for future demand on private land include hunting and fishing, wildlife observation, and hiking. According to NPLOS, hunting was the number one activity pursued on private land. Even though NSRE results (Cordell, et al., 1997) suggest reduced participation in hunting, it is expected that demand for high-quality lease hunting on private land will remain high. Trends also suggest there may be increased opportunity for leasing private land for warm and cold water fishing, as well as for camping.

Trends also suggest growing opportunities to lease private land for non-consumptive recreation activities. For example, NPLOS showed that hiking was a major use of private lands in the Pacific Coast. This result suggests the possibility of leasing land, for example, to private hiking clubs. Also, NSRE results (Cordell, et al., 1997) show very high participation in wildlife observation. This result suggests opportunities for leasing private land for wildlife observation. Private land may also be made available without a fee to individuals and groups engaging in wildlife observation.

Some type of intermediary brokerage service could perhaps give landowners and potential urban users a communication link to help in expanding the recreation market for private land. Given the propensity of landowners to allow access mostly to those they know personally and the potential demand for outdoor recreation that exists in urban areas, a service that would screen potential users for the landowner and make opportunities on private land available to urbanites could increase the utilization of and income from private lands for recreation. This approach could benefit private rural landowners while providing high-quality, low-cost recreation to segments of the population that otherwise might never go past the urban fringe.

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