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Introduction

Outdoor recreation on private lands is influenced by a myriad of 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. The NPLOS methodology, results, and the implications of these results are discussed after the literature review section. This chapter ends by offering general conclusions about outdoor recreational use of private lands in the United States.

Background

Private Land Ownership and Tenure

We begin this report with a general review of private land ownership concepts to provide background and context to the more focused discussion of recreational use of private lands presented later in the chapter. Land ownership consists of claims to interests in land by individuals, partnerships, corporations, communities or nations. These claims may be asserted directly by an individual or indirectly as a member of some larger group. Easements can

incorporate a public interest, as in the case of a tax on real property. Furthermore, the individual or group may hold a single interest, such as a mineral right or easement. Land ownership may also consist of virtually all present and future interests within a described area (Wunderlich, 1993).

Land tenure concerns the different methods and time periods in which persons, corporations and governments share in the "bundle of property rights" associated with owning land (Barlowe, 1986). At first, land tenure research focused on private land tenure within agriculture rather than on public land. Presently there are numerous studies concerning public land, perhaps due to heightened interest in federal ownership in the western United States. Owners' property rights in the past were greater than the diminished rights concerning some property today. The availability of data, such as accurate listings and valid maps, in a suitable form for public use, is generally lacking (Geisler, 1993).

Private land tenure in the United States has fluctuated over time. The total area of the nation has increased as the country annexed more land, beginning with the founding of the nation in 1783 and ending with the acceptance of Hawaii in 1898 (American Heritage, 1994; Geisler, 1993). Occasionally, the federal government's share of the nation's land has risen to as much as 80 percent, resulting in less than 20 percent of land being in private hands. Despite the integral place of private ownership of land in America, little ownership information is available. An exception to this is the government's Census of Agriculture which confirms that agricultural ownership concentration is increasing (Geisler, 1993; Meyer, 1979).

A century ago Populists waged a battle to preserve an agrarian democracy built on broad distribution of private ownership. Apparently that battle has been lost. Indeed a relatively small

portion of the population actually now owns land. This phenomena could explain the consistently high percentages of Americans that support the expansion of federal ownership of lands, as indicated by public opinion surveys (Geisler, 1993).

The Agricultural Economics and Land Ownership Survey (AELOS), a part of the Census of Agriculture, aids in analyzing land ownership, land transfers, property taxes, land distribution and other issues of land policy. The AELOS study indicates that the distribution of land ownership is concentrated in a small proportion of people. Furthermore, it is shown that "large landowners pay real property tax rates at less than half the rate of small landowners." Due to the current status of land ownership, Geisler (1993) advocates replacing the Census of Agriculture with a Census of Land.

One reason for the fluctuation in federal land holdings over time is the fact that the U.S. Constitution grants Congress sweeping authority for expansion or reduction of public land. Examples include acquisition, annexation, seizure of federal land in forming the United States, conveyance of land to soldiers as payment for military service, homesteading programs to populate western frontiers, and grants to corporations and utilities. Federal ownership, coupled with public mandates to protect non-federal land for aesthetic, recreational and environmental reasons, has created questions as to the "sacredness" of private property being the highest and best use of land. Interactions between both public and private spheres of ownership are many and not always predictable. The importance of the public sector on private land tenure research is "both direct (as when public acquisition removes land from the private ownership base) and indirect (regulation of private land in the public interest) and blurs the distinction between 'public' and 'private'" (Geisler, 1993).

Because the federal government is the nation's largest landlord, it has created an overriding interest in land tenure research. The federal government owns 760 million acres or about one-third of the U.S. land mass. If one were to look at the western region of the country, this percentage is even higher at 48 percent. If Alaska is added to the western region, the federal government's share climbs to 63 percent (Geisler, 1993).

There is now an institutional nature in tenure research pertaining to the emerging forms of ownership known as "new or hybrid property." The quasi-public institutions that are proliferating in practically all states present new choices for supporters of both public or private ownership, as well as to land-use planners that are charged with balancing the interests of each. There are strong social forces at work in the development of new property. With technology and property interacting, tenure categories, concepts and concerns will move past the sole topic of private agricultural land and onto multiple new research frontiers. The incompleteness of available data somewhat impedes the research (Geisler, 1993).

Considering the importance attached to ownership of agricultural land in the history of American land policy, the limited availability of data may be surprising. Especially considering that the orientation of the Census of Agriculture is to focus on the farm. Ideally, land ownership data should arise as a characteristic of land parcels, not production units such as farms. Policy analysis of land ownership should center on the questions of not only who owns the land, but also pose questions in regard to interests, areas and wealth (Wunderlich, 1993).

Private Land Use Patterns and Issues

The only two sources of developed ("built-up") land information for the nation as a whole are the decennial U.S. Census Bureau's account of acreage in urban areas and the Natural

Resource Conservation Service's built-up area data in the National Resources Inventory (Alig and Healey, 1987). The U.S. Census Bureau defines urbanized areas as incorporated places with densely settled adjacent areas which have a minimum total population of 50,000. A density of 1,000 persons per square mile is the cutoff for the urban fringe.

In measuring land that has been economically removed from the renewable resource base, the Census Bureau's urban land measure has two major limitations that tend to work in opposing directions. The first is that defined urban areas include some land that is used for grazing, crop production and, to some extent, wood production. This is due to the Census Bureau's practice of defining nearly all land within incorporated boundaries as urban. The survey does not account for land occupied by persons living in rural areas. Secondly, even though census urban areas include such facilities as roads and airports when located within incorporated places or inside urbanized areas, the survey does not include land devoted to those same uses outside urbanized areas (Alig and Healey, 1987).

In contrast, the Natural Resources Inventory (NRI) data classification system differs from that of the Census Bureau by attempting to exclude areas devoted to crops, forestry or similar purposes even when these areas are within a built-up area. "Overall, the NRI data appear to give a relatively low standard deviation measure of built-up land, with consistent treatment of land in unincorporated areas" (Alig and Healy, 1987).

Examining the period from 1949 through 1984 in the Southeast, Alig (1986) found that both urban population and personal income provided consistent, significant information in explaining the share of land devoted to urban and related uses. Examining 40 urbanized areas across the country with 1970 populations ranging from 52,000 to 257,000, Brueckner and

Fangler (1983) conclude that "urban spatial area is related to population, income, and agricultural rent." They suggest that a balancing of the land market through the gains and losses from urban sprawl restricts spatial growth, conserving valuable resources such as land (Alig and Healy, 1987).

In their study, Alig and Healy (1987) found that the greatest determinants of built-up area were the population and personal income variables. Furthermore, their study indicated that built-up uses are so generally dominant over agricultural uses in the land market that the level of farmland prices has no significant effect on built-up land consumption. This contrasts with the findings of Brueckner and Fangler (1983), who found that agricultural rent actually had a negative impact on 40 urbanized areas. Alig and Healy (1987) also confirm that Southern states tend to have more built-up land per capita than do states in other regions.

A number of commonly held notions can give misleading signals with respect to private property and private land use in the United States (Geisler, 1993). First, there is the myth that the United States is by and large a nation of small and medium landholders, when actually a small percentage of the overall population owns private land. Indeed the land distribution in the United States mirrors the situation of many Third-World countries. Research on private land concentration is unfortunately lacking. Second, it is sometimes argued that in the western area of the United States opposition to Federal land reached a peak and was successful at limiting Federal ownership of land. However, the Western region of the country is where Federal ownership is greatest. A third commonly held notion is that "public land as a proportion to the total in the United States has been relatively constant." In reality, the proportion is constantly changing. A fourth myth is the view that the percentage of private land has been steadily declining due to a

steady increase in Federal land. A fifth notion or myth is that "private land ownership, a logical extension of the impetus to privatize the means of production in many nations of the world, will become ever more dominant in the United States." This fails to take into account that private land ownership and control have gradually diverged to the point that possession of land deeds no longer forms the basis of exclusive ownership and use (Geisler, 1993).

A final commonly held notion is that public land is a well-defined and separate category of land ownership and use. Public land ownership and use is often not clearly differentiable from private land ownership and use. For example, quasi-privatization occurs when private parties are granted exclusive grazing, water, mining or timber rights on public lands. In addition to use-rights leased from Federal land-holding agencies, private property subject to land-use regulations, right-of-ways, covenants, purchased or transferred development rights, and land in conservancies and community land trusts also obscure the distinction between public and private land ownership and use. Issues such as hazardous waste sites, soil erosion, aquifer depletion, non-point water pollution, and fish and wildlife conservation also contribute to policies and regulations that blur the distinction between private and public land ownership and use (Geisler, 1993).

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 and Kaiser, 1986). There will be increasing importance for private, rural land to be able

to add to the supply of outdoor recreational opportunities (Wright and Fesenmaier, 1988; Wright, Cordell, and Brown, 1988; Cordell, English and 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 on a decennial basis. 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 and 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, and 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 and 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 and Wright, 1985).

Laws concerning liability vary from state to state (Wright and 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 and 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. Further, 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 recreational 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 towards 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)[1]. 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 1980's and early 1990's 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

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

The objective of NPLOS was to survey a representative national sample of rural, private owners of 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 5 tracts per county. In many counties, that number was smaller. Many counties had no tracts larger than 500 acres.

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.[2] 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 being selected of about 1 in 4 (26.2 percent). A goal was to equally distribute the sample 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 over sampled 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 (Source: 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

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

versions of the questionnaire were needed[3]. 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, like additions or sales of acreage. The third section 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 fourth 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. The fifth section 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. The seventh section 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/her tract. The tenth section was a general demographic section that asked for information on age, race, gender, income, employment, education, etc.

[3]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.

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 3 weeks, respondents were mailed a postcard reminder. If respondents did not return the questionnaire within another 3 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.

Questionnaire 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 (Table1). Table2 shows the response rates by region for the study. Considering the length of the questionnaire and the amount of information requested, this result is not particularly low. The "bad address" rate was 5.6 percent, which is comparable to other studies using the same sampling method. Corporate tracts represented approximately 3.8 percent of the total sample. Some 3.7 percent of respondents contacted us by mail or phone to refuse to participate. 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.

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 (Table3). 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 4). 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 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 5). 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 lived from their land, is presented in Figure 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 2). Mean driving distances in the Rocky Mountain region and the Northern region were noticeably higher than the other two regions.

Landowners were also asked about the land surrounding their tract (Table 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.

Many landowners reported changes in their land holding since they first purchased the sampled tract (Table 7). A roughly equal number of landowners bought and sold land either adjoining or nearby the sample tract. 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 5 years differ somewhat from this trend. Only in the North and Rocky Mountain regions does the acreage bought exceed the acreage sold.

For landowners who said they sold land, Table 8 shows that the largest percentages sold to someone they knew. A substantial percentage said they had sold land to a business or corporation. The mean number of sales to these different categories of people was just over one.

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 3). Again, landowners checked an average of just over one of the reasons provided.

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 which were open to outside use (Table 9). The amount of roads and trails open to outside use does not necessarily reflect roads and trails open for people who don't have permission to use the landowners land.

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 4 presents some of the reasons landowners expressed for owning rural land. Note that the three most often 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.

The questions leading to Figures 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 of this question.

Landowners were also asked about their plans they had 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.

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 plan to buy additional acreage (Table 11). 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 12).

Rural owners produce income from their land in a variety of ways. Nationally, the most ways are "grazing cattle and other livestock," "share-cropping with someone," and "harvesting timber or pulpwood" (Figure 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 "share-cropping" in the Rocky Mountain region.

Table 13 breaks out the types of forestry products which were harvested from landowners' tracts and Table 14 shows the average number of years since the last timber harvest for each region. Across all owners, the number of products harvested off their land in the past year (bottom of Table 13) is less than one.

Nationally, 9.7 percent of landowners use, or have used, some type of forestry incentive program (Table 15). 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.

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 16).

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 17 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 17.

Another way that owners try to protect and manage their land is by limiting access to people outside their household. Table 18 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.

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 19 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.

Many owners have experienced problems from time to time with outside peoples' use of their land, which 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. Figure11 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 20, 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 and to keep persons they don't know out.

Table 21 summarizes the degree to which landowners post the different types of land they own. As one can see from Table 21, 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 22, 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 (2 percent nationally) plan to decrease the acreage they presently have posted.

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. Another is the use by persons outside the family. This section will examine various types of recreational use and access.

Table 23 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. Another question, summarized in Table 24, was asked differently, but was probing at the same information. Again, average acreage varies across regions reflecting the differences in tract sizes.

Table 25 shows the percentage of landowners who recreate on their own land. Such personal recreation might include taking walks or big game hunting.

Table 26 shows the percentage, by region, of owners allowing access to people outside their household. The influence of longstanding open access in the North is evident. Roughly half of landowners across the nation allow persons outside their household to recreation on their land. Most of those given access were known personally by the landowner (Table 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.

Approximately 15 percent of owners permit access to some of their land for recreation (Table 28). For those that have open acreage, averages are reported. Average open acreage is largest in the Western regions of the country. Table 28 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 29 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 30 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 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 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.

For various reasons, landowners allow their land to be used by people outside of their own family (Table 31). 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 5 years ago (Table 32). 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.

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 33 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 as such, results are missing in that column. 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 34 presents some general information about leasing, the average numbers of people involved in leases, as well as the amount of recreational use which 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 35 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 36. 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 region.

Table 37 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. this is most likely the least confusing leasing approach. "By the lease"[4] 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 37 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 38 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 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

[4]"By the Lease' is somewhat of a specialized term that basically means the leasee'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.

lower than the going rate in order to get someone they trust. A little over 8 percent lease to the highest bidder.

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 39). 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.

One aspect of leasing that has been a longstanding concern to owners is liability. Table 40 shows the different ways landowners handle liability. Carrying insurance, both by the landowner and leasee, is the most popular way of handling liability concerns. A lessee may also sign a waiver of injury or all hazards may be removed as other ways a landowner addresses liability. Finally, approximately 15 percent of owners say they do nothing to address the prospect of liability.

Figure13 presents results of a question asking whether the owner 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 didn't know.

Finally, owners were asked what it would take in the future for a group or individual to lease their land for recreation (Table 41). "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.

Landowner Demographics

Almost 85 percent of private landowners across the nation classify themselves to be full-time employed and 15 percent as part-time employed (Figure 14). Thirty percent of owners reported being self-employed (Table 42). Approximately 40 percent across the country have completed no more than high school, while 33 percent had received a bachelors or higher degree from college (Table 43). Ninety-three percent of the landowner population is white; average age was 60; and three quarters were male (Table 44). 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 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 45). Mean household size of the owners was just under two (Table 46). Average annual family income at the national level was about $55,000, 13.6 percent made over $100,000 and 3 percent made less than $5,000 (Figure 16).

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 all 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 rather strongly also feel 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, share- cropping 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 9 years past 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. The average number of different people landowners who allowed use reported as using their land was 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 5 years, but although there does seem to be a trend to limit more of 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 landowners. The primary way landowners manage liability was 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 were Native Americans at an estimated 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 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 '86 NPLOS to 93 percent in the '96 NPLOS. There are slightly more female landowners (80 percent male in '86, vs. 76 percent male in '96) 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 the 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 associates or bachelors. 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 '86 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 '86 to 138 in '96[5]. 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

[5]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 cut-off was 10 acres. Using the 1996 data but increasing the lower limit to 20 acres gives a mean tract size of approximately 186.

from 33 percent in ‘86 to 41 percent in ‘96. 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 that 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 4 percent responding the same in 1986.

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 of 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 their land management

closely. A number of owners take part in wetland conservation practices and even more use local 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 it. 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 versus by people they don't know outside their family or circle of friends. This 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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Table 1–Regional definitions used in NPLOS analysis.

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.

Table 2–Summary of respondent and sample numbers in the NPLOS survey of private landowners by sample characteristic and region, 1995-96.

Characteristic of NPLOS Sample	RPA Assessment Region				Total Number
	North	South	Pacific Coast	Rocky Mountains	
Total Sample	7,053	10,328	4,487	799	22,667
Bad Addresses	314	661	244	54	1,273
Refusals	262	383	134	22	801
Good survey	2,124	2,890	1,049	136	6,199
Corporate version	226	360	196	77	859
Return Percentage	32.61	31.05	25.92	20.36	30.19

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

Table 3–Average size of tract by region, 1995-96.

Tract Size	U.S. overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Acres	138.04	102.3	148.53	156.21	210.11

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

Table 4–Proportion of owners by tract size category and region, 1995-96.

Tract size category	U.S. overall	Region			
		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	31.5	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 5–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.

Table 6–Percent of responding owners by description of land and region, 1995-96.

Description of Land	U.S. Overall	Region			
		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.

Table 7–Percentage of private tracts which have changed status and average acreage by type of change and region, 1995-96.

Type of Change	U.S. Overall	Region			
		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 5 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 5 years	52.9	8.5	106.7	209.3	25.0

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

Table 8–Percentage of owners who sold some of their land in the last 5 years by identity of the buyer and region, 1995-96.

Identity of Buyer	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Local developer	1.7	1.1	2.9	0.0	0.0
Out-of-town developer	0.9	0.2	1.5	0.0	2.2
Friend or neighbor	20.9	19.8	22.6	70.6	6.8
Relative	33.1	35.3	34.8	7.1	20.7
Local individual you know, not friend or relative	19.7	22.0	17.5	0.0	22.0
Local individual you do not know	15.0	14.9	16.6	7.1	11.2
Business or corporation	6.6	5.6	6.3	0.0	15.0
Other	2.7	3.7	2.2	1.2	1.8
Average number of categories above checked	1.2	1.2	1.2	1.1	1.0

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

Table 9–Average mileage of roads or trails per tract by type of road or trail and region, 1995-96.

Type of Road or Trail	U.S. Overall	Region			
		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.

Table 10–Percentage of owners indicating primary emphasis for managing their lands by type of management emphasis and region, 1995-96.

Method of Management	U.S. Overall	Region			
		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 to just make money	8.7	7.6	7.2	13.0	14.5
Don't know/not applicable	29.9	27.7	34.0	21.4	27.9

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

Table 11–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 12–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.

Table 13–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.

Table 14–Average number of years since last timber product harvest by region, 1995-96.

Years Since Last Harvest	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Average per owner	8.8	9.1	9.1	3.9	6.9

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

Table 15–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.

Table 16–Percent 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.

Table 17–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.

Table 18–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.

Table 19–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.

Table 20–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 21–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 22–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.

Table 23–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				
		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 24–Average landowner acreage in personal reserve among owners having closed land by region, 1995-96.

Acreage Reserved for Personal Use	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Mean Acres	64.5	39.1	76.7	110.5	92.9

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

Table 25–Percentage of landowners who personally participate in recreation on their lands by region, 1995-96.

Engaged in Personal Recreation	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Percent of owners	70.7	77.3	66.2	65.0	52.1

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

Table 26–Percentage of owners permitting access for recreation by persons outside their family by region, 1995-96.

Outside People Allowed Access	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountains
Percent of owners	47.9	55.2	42.5	45.9	41.5

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

Table 27–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.

Table 28–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 29–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 30–People with explicit permission to use private land and the number of times that right was exercise 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.

Table 31–Percentage of landowners by reasons for allowing recreation on their land and by region, 1995-96.

Reasons for recreation	U.S. Overall	Region			
		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 32–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	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.

Table 33–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 34–Number of acres, leases, and use of leased private by region, 1995-96.

Acres, Leases and Uses per Tract	U.S. Overall	Region		
		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 35–Percentage of owners who lease by type of agreement and region, 1995-96.

Type of Lease Agreement	U.S. Overall	Region		
		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 36–Percentage of landowners by different types of individuals or groups who lease land and by region, 1995-96.

Who the respondent leases to	U.S. Overall	Region		
		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 that 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 37–Percentage of landowners who lease by method for charging and tenure of lease by region, 1995-96.

Method for Charging and Tenure	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.

Table 38–Percentage landowners by strategies for choosing the lessee 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.

Table 39–Percentage charging fees and amount of 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.

Table 40–Percentage of landowners by method for handling leasing and liability by region, 1995-96.

Liability Handling	U.S. Overall	Region		
		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.

Table 41–Percentage of landowners by type of access arrangement and region, 1995-96.

Types of Access Arrangement	U.S. Overall	Region			
		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.

Table 42–Percent of landowners by type of employment and by region, 1995-96.

Employment	U.S. Overall	Region			
		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 husbehusband	3.4	3.2	4.0	1.0	3.1
Other	0.1	0.0	0.2	0.0	0.0

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

Table 43–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 masters degree	9.3	8.8	9.4	8.0	11.2
Completed a doctorate degree	5.8	5.8	5.6	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 44–Percent of landowners by race, age and sex and by region, 1995-96.

Owner Characteristic	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountain
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	3.7	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	0.6	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.

Table 45–Percent of landowners by citizenship and birth place and by region, 1995-96.

Citizenship and birth place	U.S. Overall	Region			
		North	South	Pacific Coast	Rocky Mountain
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 46–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.

Figure 1–Proportion of landowners by the number of years they have owned their tracts, and region, 1995-96.

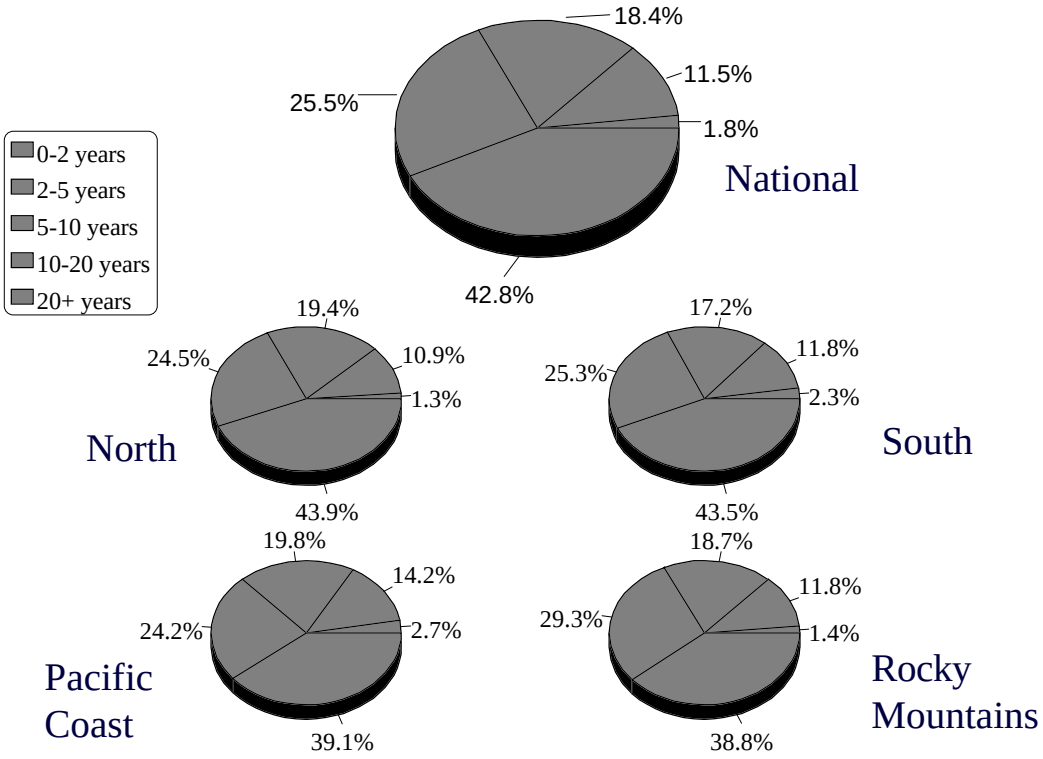

Figure 2–Proportion of absentee owners by driving distance to tract from residence and region, 1995-96.

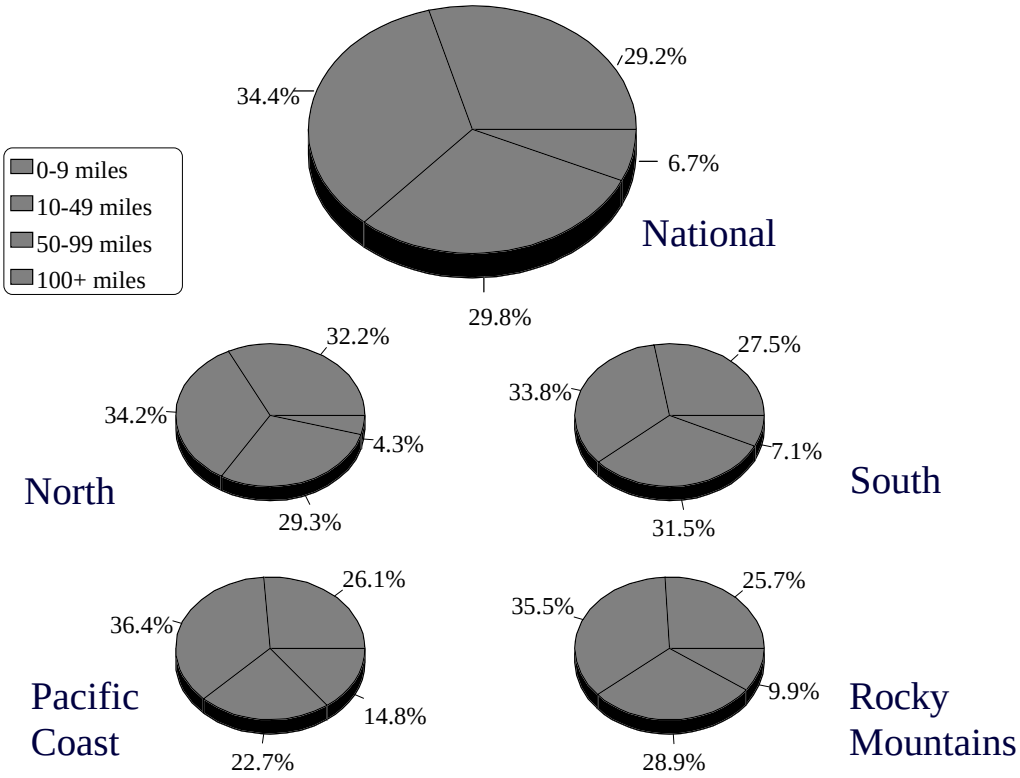

Figure 3–Percent of reasons checked by private landowners as reasons they might consider selling all or a part of their land, 1995-96.

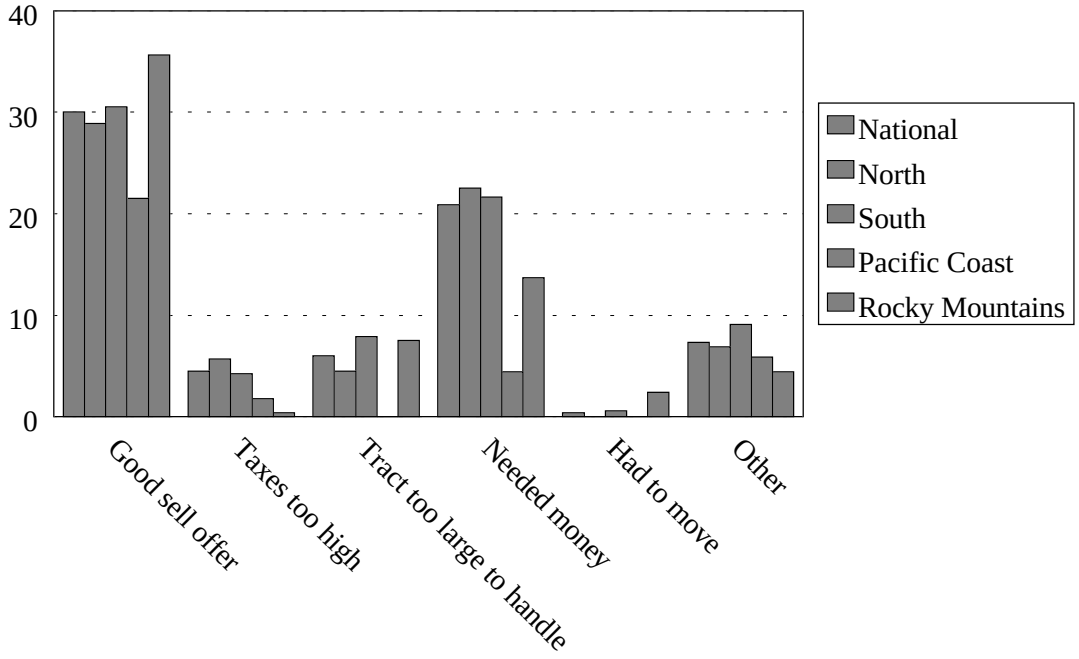

Figure 4. Percent landowners by reason for owning land and region, 1995-96.

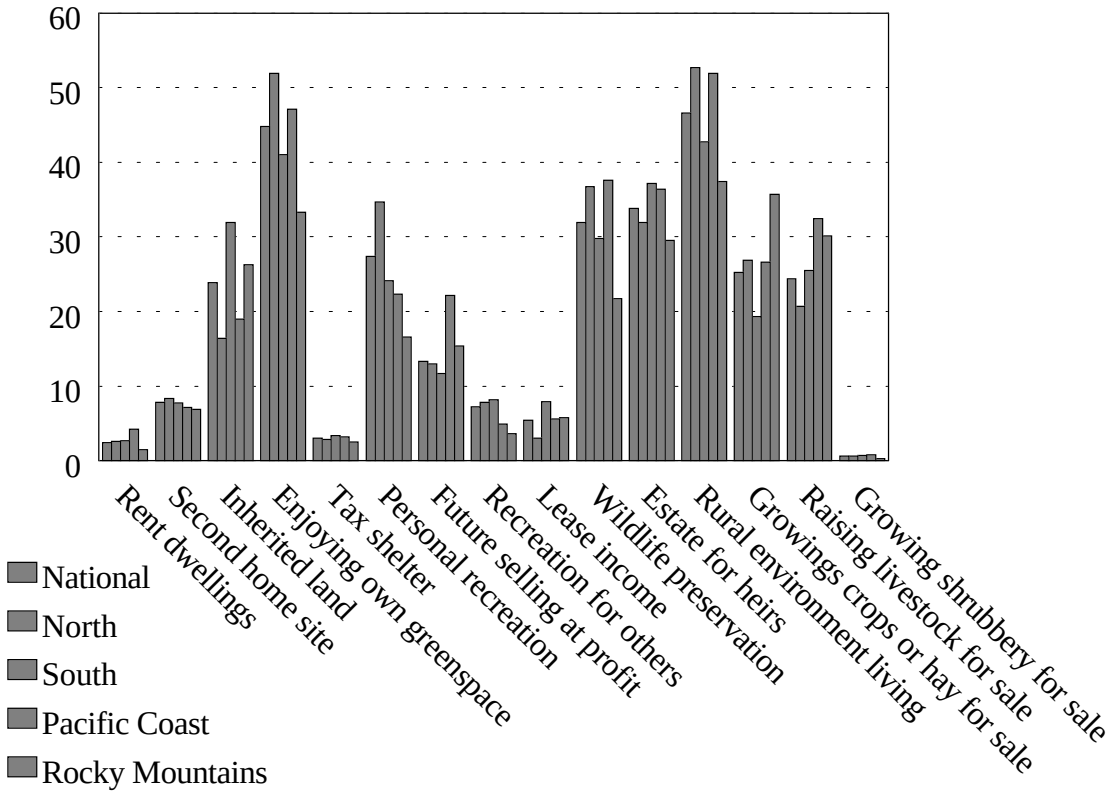

Figure 5–Percentage of landowners agreeing that people must rule over nature; plants and animals are here for our use, by region, 1995-96.

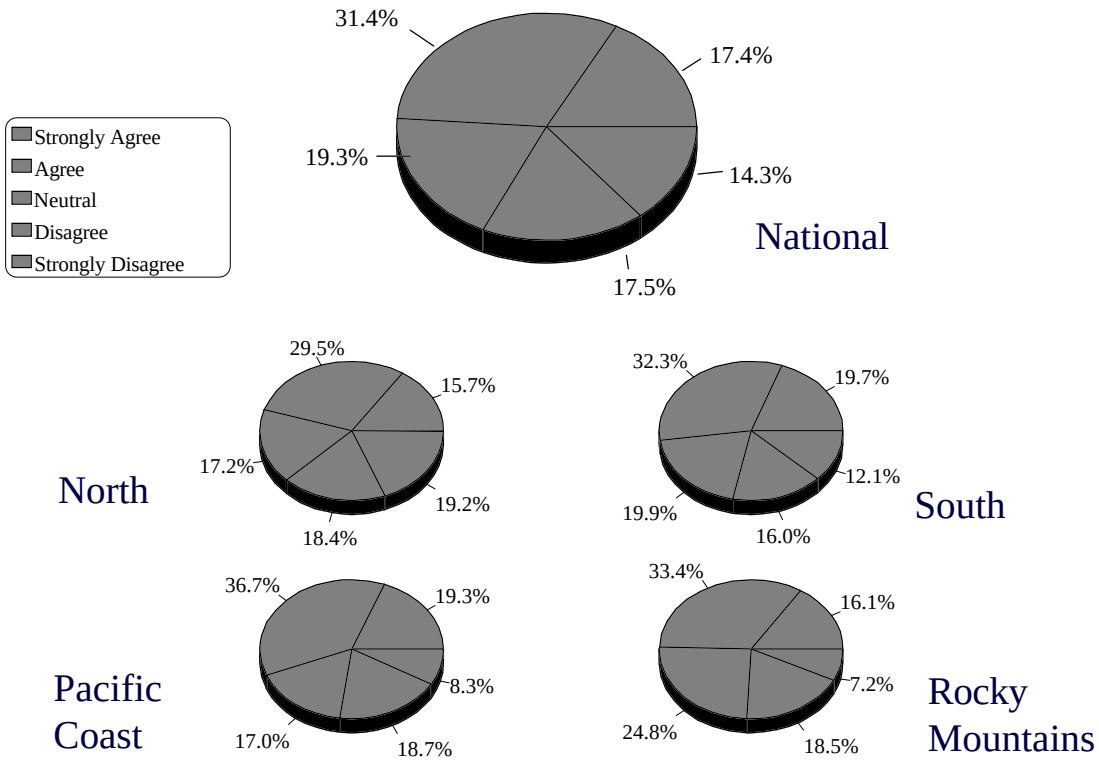

Figure 6–Percentage of landowners agreeing that the balance of nature is very delicate, so we must try to limit economic growth that exploits nature, by region, 1995-96.

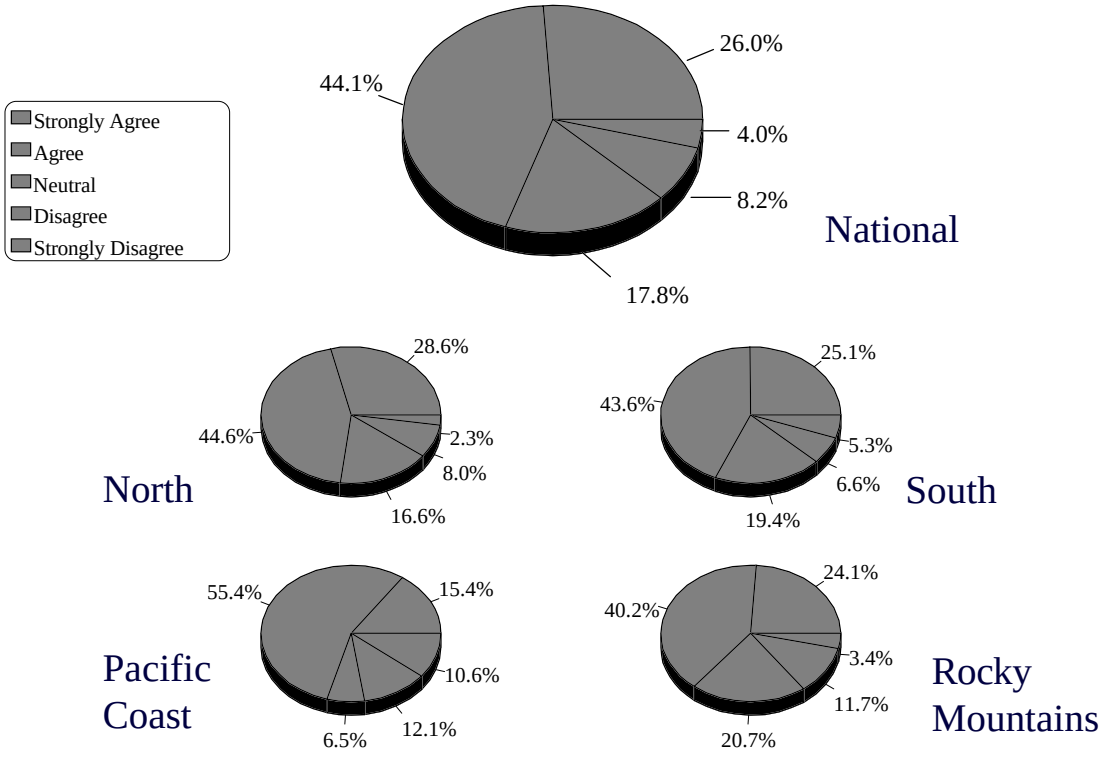

Figure 7–Percentage of landowners agreeing that private land owners have the right to do as they please with their lands regardless of what it does to the environment, by region, 1995-96.

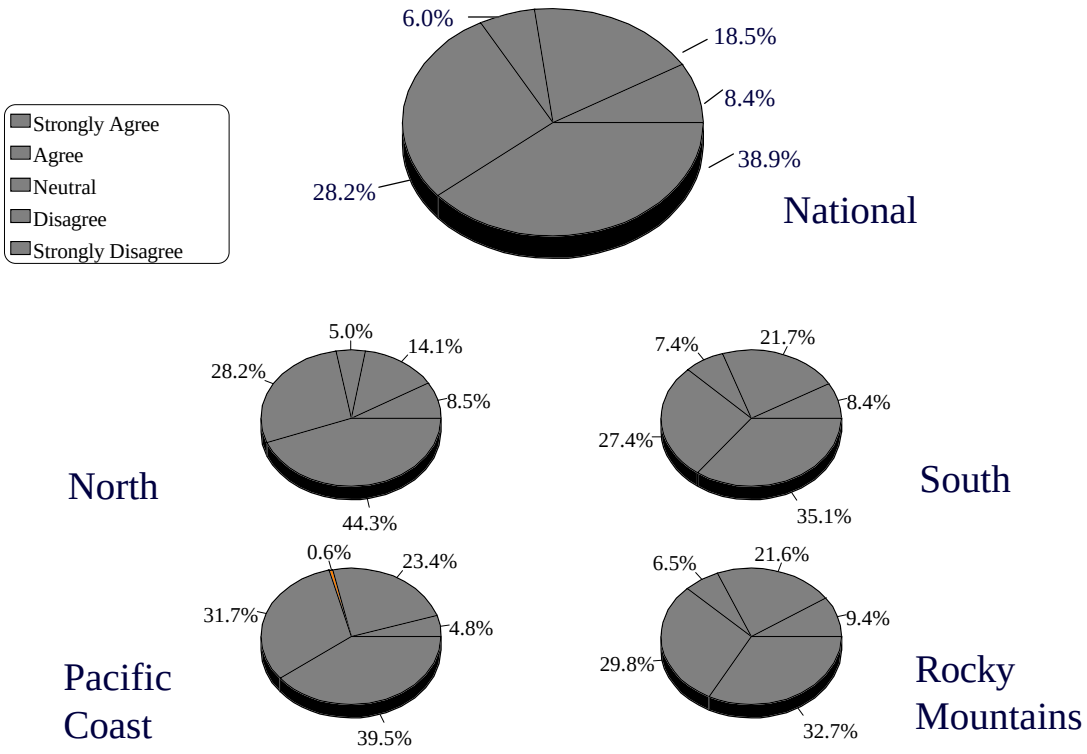

Figure 8–Percentage of landowners agreeing that private property rights are important, but only if they don't hurt the environment, by region,1995-1996.

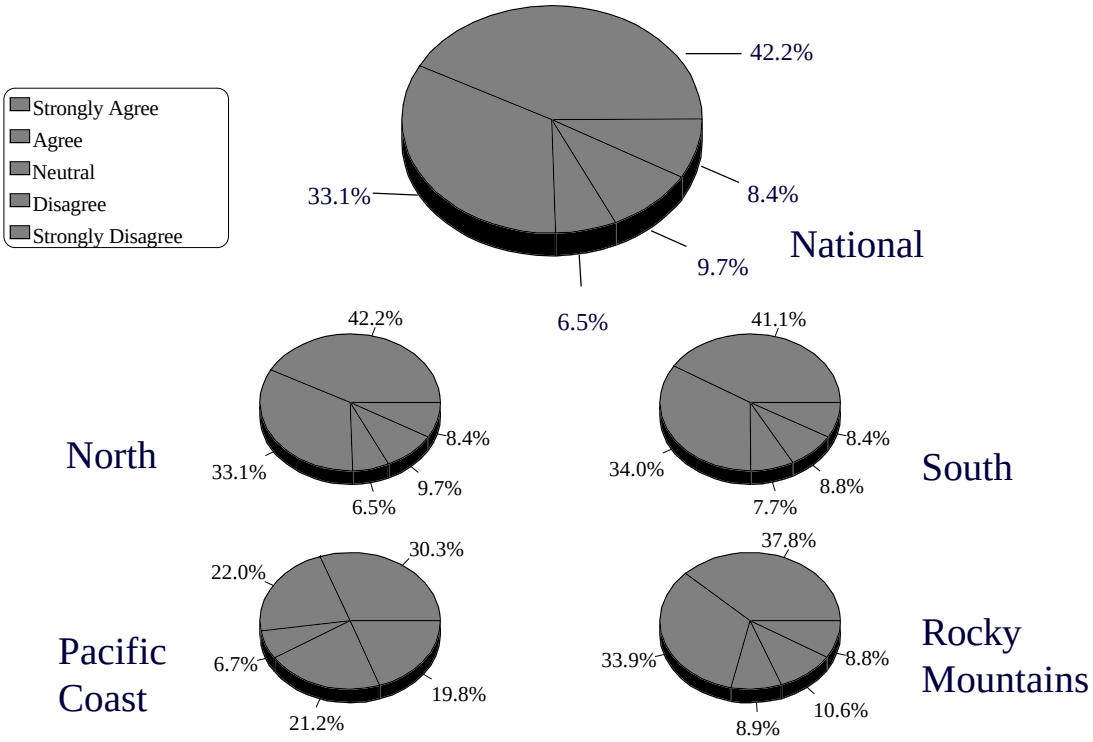

Figure 9–Percentage of landowners agreeing that private property rights should be limited if necessary to protect the environment, by region, 1995-96.

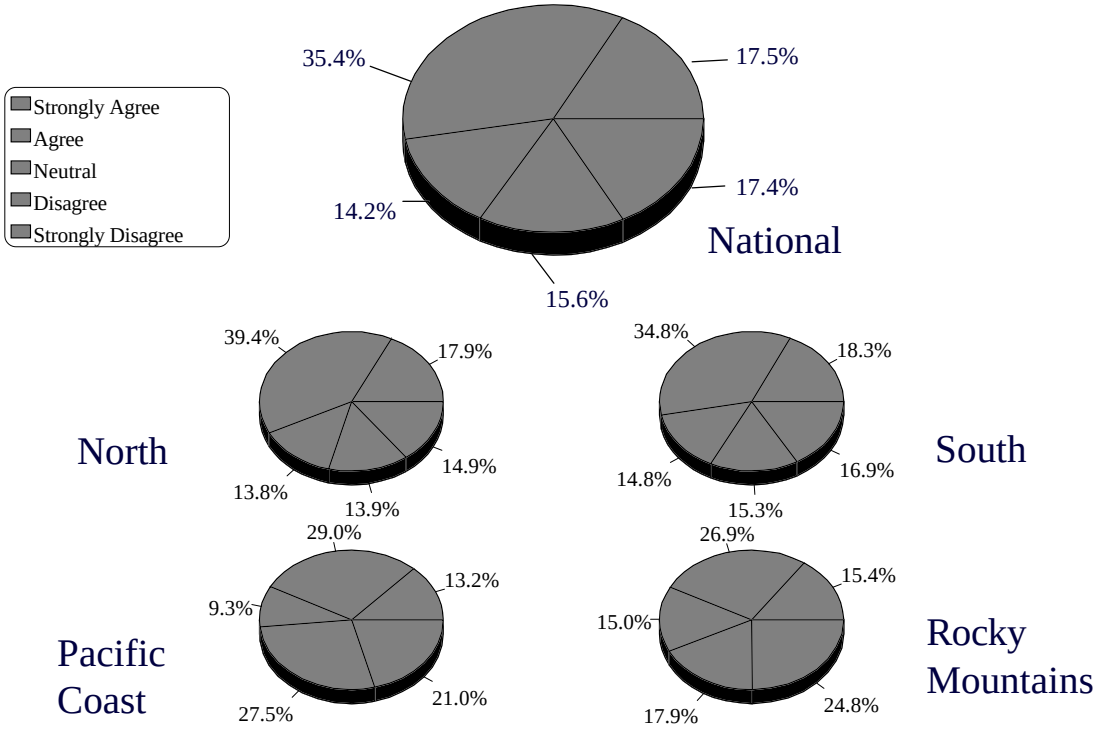

Figure 10–Percent of landowners that earn income from their land, by region, 1995-96.

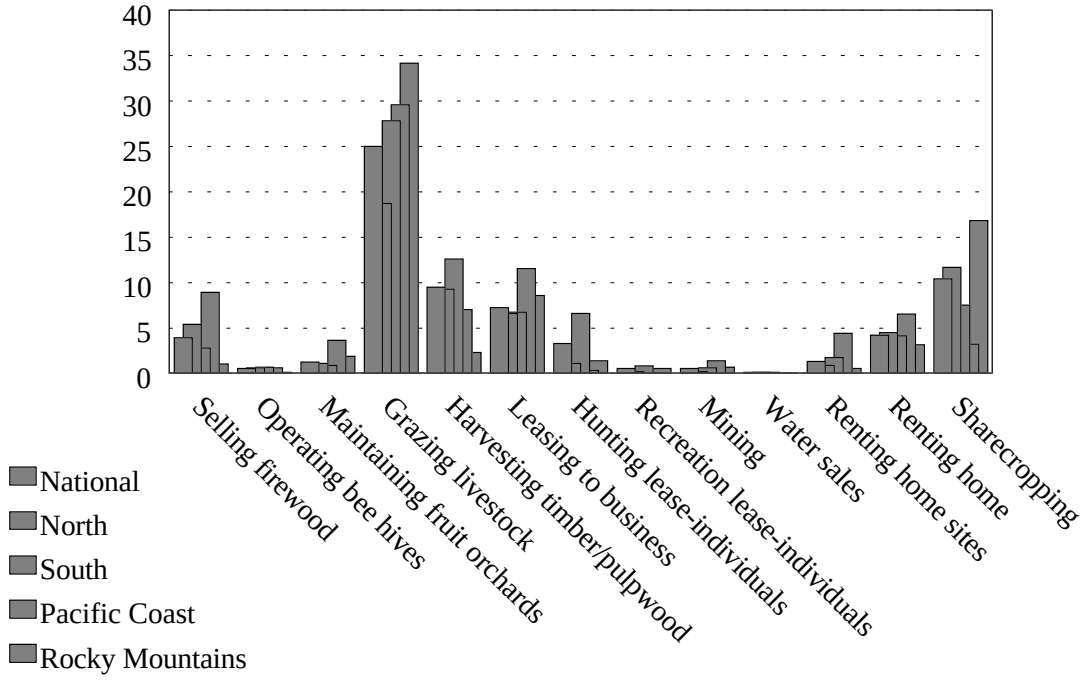

Figure 11–Percentage of landowner problems that have been encountered with outside person usage of their land, by region, 1995-96.

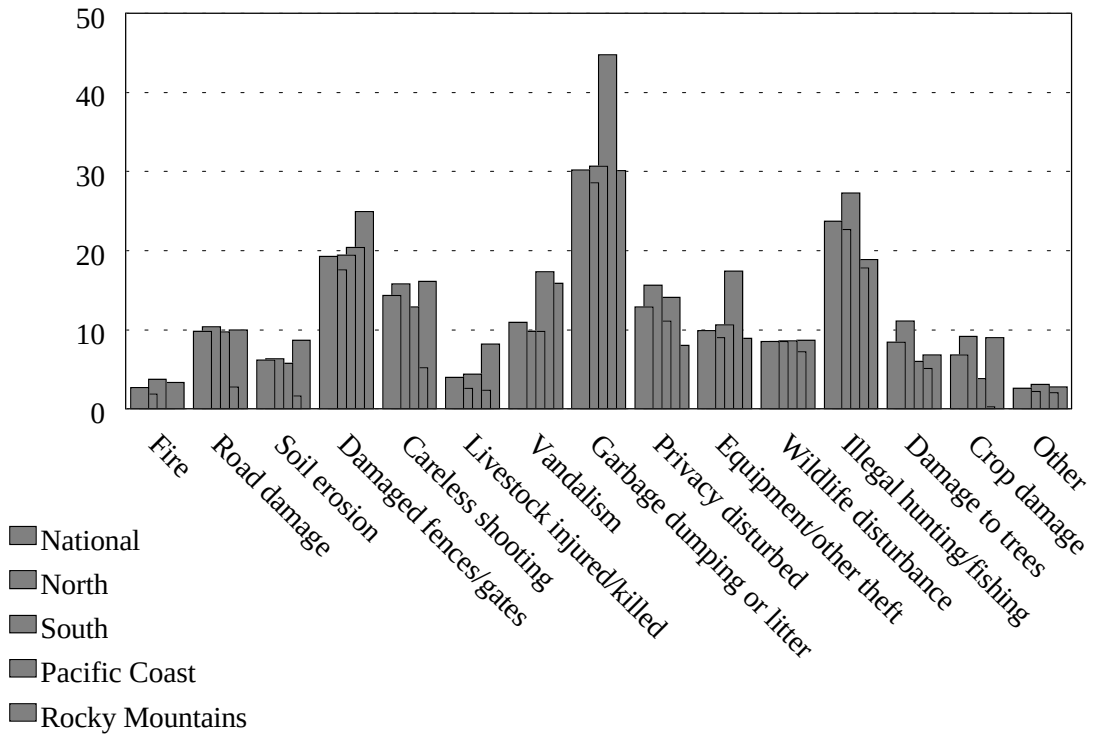

Figure 12–Percentage of recreational activities occurring on land, by region, 1995-96.

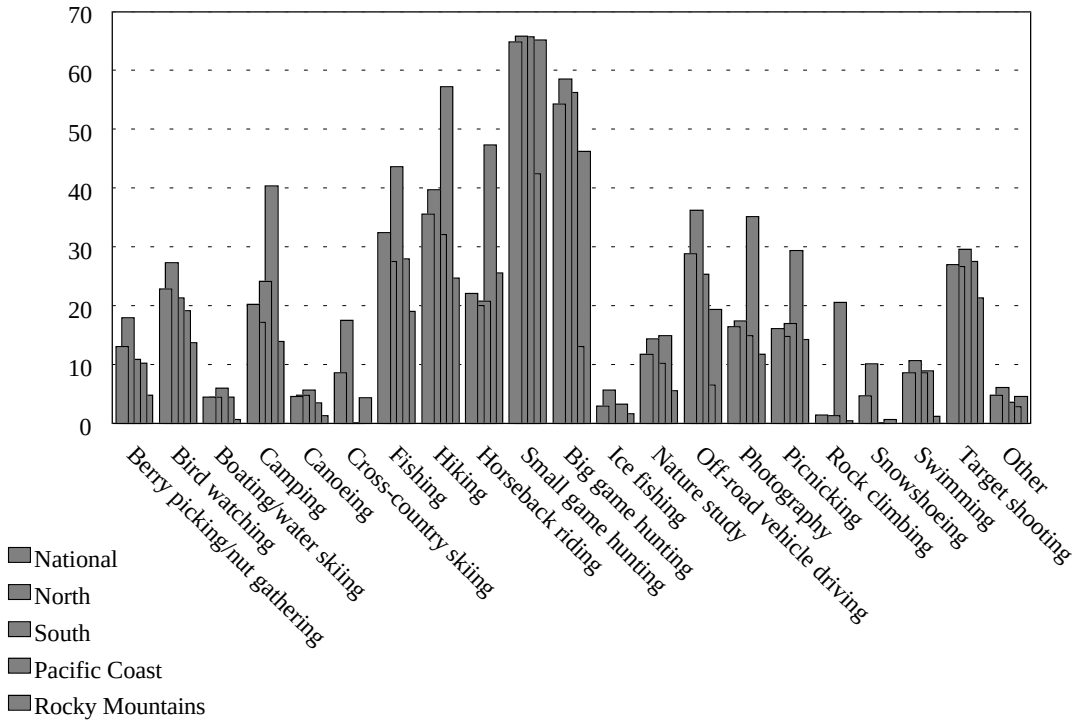

Figure 13– Percentage of landowner who would consideration letting outside people recreate on land that is completely closed, by region, 1995-96.

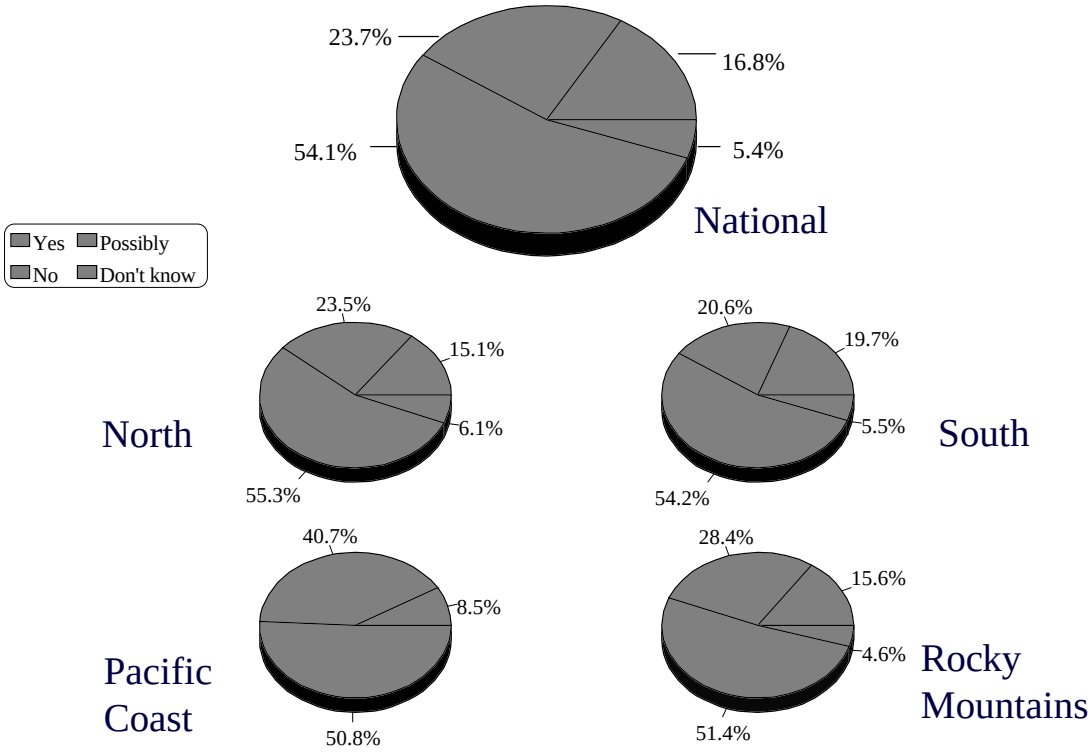

Figure 14–Percentage by employment type of rural private landowners, by region, 1995-96.

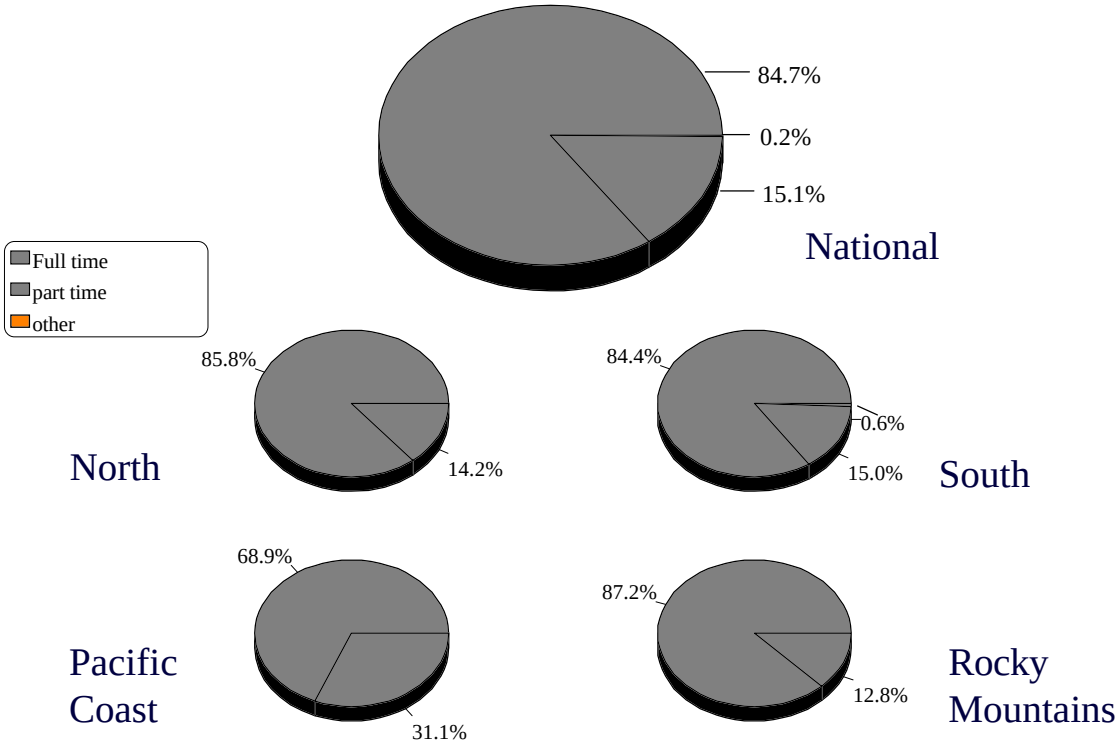

Figure 15–Percentage classification of where rural landowners reside, by region, 1995-96.

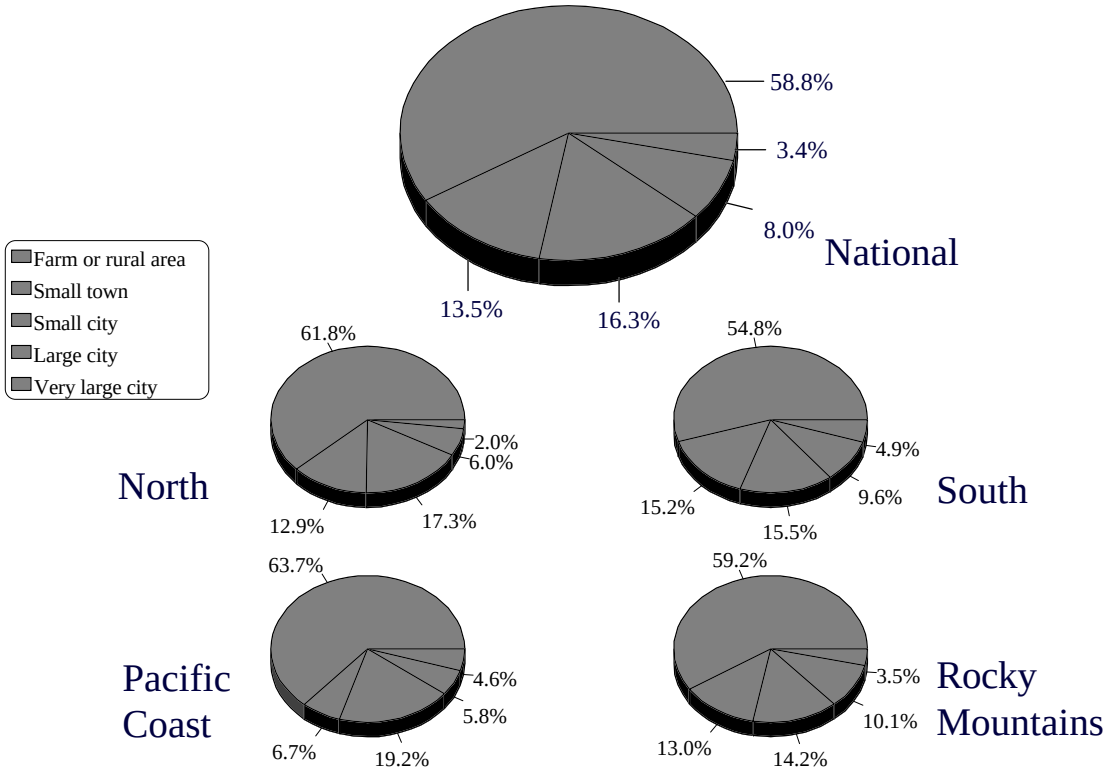

Figure 16–Percent of household income categories of rural private landowners, NPLOS, 1997.