

Recreational Access to Nonindustrial Private Lands in the U.S.¹

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Abstract.--The contribution of private, rural lands to this nation's supply of outdoor recreational opportunities will become increasingly important in the future. This study develops a better understanding of the individuals who own rural lands and the reasons for that ownership. Estimates of tract sizes, the amount of land dedicated to specific land uses, and leasing and posting practices currently employed by landowners were established as a framework for examining recreational access dimensions and policies.

Private lands will become increasingly important sources of outdoor recreational opportunities as this nation continues its trends toward urbanization and population expansion. Two-thirds of the U. S. land base, or the equivalent of approximately 526 million ha (1.2 billion acres) is in private ownership.

Private land and water resources provide open space for a variety of activities such as camping, hiking cross-country skiing and are especially critical to the nation's wildlife, for both the provision of habitat and wildlife-associated recreation opportunities. Unlike public lands, which are managed for public purposes including recreation, private lands are managed by thousands of individual landowners, primarily for their own private objectives.

Considerable concern has been expressed in recent years that supply of private recreational open space is decreasing through conversion and closure (Brown et al., 1984; Guynn and Schmidt, 1984; Wright and Kaiser, 1986). An estimated 607,000 ha of agricultural lands are being converted for urban development and population expansion purposes annually (Resources for the Future, 1983). Moreover, additional amounts of the remaining private open space are being closed and/or posted to deny public recreational access (Brown et al., 1984; Wright et al., 1988).

The problem of insufficient recreational access is exacerbated because decreases in the supply of available recreational open space come during a period of increasing public demand for outdoor activities and federal retrenchment in acquisition of additional public lands. For this reason, the President's Commission on Americans Outdoors (1987) suggested the need to encourage private landowners to open more lands for recreation. Therefore, it is important that the federal government monitor trends in recreational access to private lands on a national and regional basis to ascertain whether sufficient public and private acreage, in combination, is available to meet the nation's demands for outdoor recreation opportunities.

The objectives of this study were to (1) build upon previous methodological advances whereby recreational access is viewed as varying degrees of access, (2) estimate the availability of private lands for recreation nationwide and (3) develop a profile of private landowners and the private land base. Data was derived from a survey of 11,687 rural landowners who were surveyed in the 1986 National Private Land Ownership Study (NPLOS).

¹ This paper was adapted from a paper previously presented at the 2nd Symposium on Social Science in Resource Management, Urbana, IL, June, 1988.

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Rural Landowner Access Decisions

Wright et al. (1988) reported that landowners' decisions regarding recreational access were not purely dichotomous choices, but choices of the degree to which to allow or restrict access. Policy alternatives included prohibition, exclusion, restriction, open and fee (leasing). Prohibition, open and fee policies are self-explanatory. Landowners who adopted an exclusive policy excluded all but personal and family use of the property. Restrictive policies vary by degree, but generally were grounded in the acquaintanceship between the landowner and the recreationist. Thomas and Adams (1982) found that 60% of Texas hunters found access through such friendship and kinship networks.

Past tendencies of researchers to base supply estimates on posting practices and to view these posting practices as synonymous with prohibition are suspect (Brown et al., 1984). Many landowners who post their properties, do so at least partly to control access and may allow recreational activities if permission is requested. Posting practices are important, both in terms of the intent of landowners and how these practices are perceived by recreationists, but are by no means indicative of the supply of rural recreation opportunities.

Past research suggests 5 primary factors or domains influenced landowners' values, beliefs and attitudes, thus forming the bases for access policies. The first domain involved landowners' beliefs about hunters and other recreationists, both as individuals who landowners know and as a group that they perceive collectively. Inappropriate behavior by recreationists was a major disincentive for allowing access (Rounds, 1973; Brown, 1974; Holecek and Westfall, 1977). Ninety-seven percent of New York landowners who restricted access in 1972 reported a behavior-related reason contributed to their restrictive decisions. Brown and Thompson (1976) found that landowners' policies were determined not only by their personal experiences but also by the experiences of friends and neighboring landowners.

The second factor which influenced owners' access decisions was liability. Landowners' fear of liability included more than being found liable for recreational injuries occurring on their property. It involved the threat of being sued as well (Kaiser and Wright, 1985; Kozlowski, 1986). Psychological stress, lost time and money preparing litigation, and the adverse publicity that accompanies being involved in a court case were major disincentives also.

Another sphere of influence in access decisions was the owners' attitude regarding the appropriateness of the activity to be carried out on their property (Rounds, 1973; Brown, 1974). Hunting has been vulnerable as anti-hunting attitudes seem to be becoming increasingly important, especially as land ownership changes and larger proportions of rural landowners have urban backgrounds. Snowmobiling, off-road vehicle use and other activities which are perceived to have greater resources impact also may be susceptible to attitudinal bias.

Resources attributes, especially current land uses being employed by owners, also were possible determinants of access policy (Durrell, 1969; Ryder and Boag, 1981). Some agricultural practices, such as land in row crops and livestock operations, often are not perceived as conducive to allowing recreation. In addition, owners' recreational uses of their property have been found to be negatively correlated with public access. Brown et al. (1983) found that the more active the landowner is in wildlife-related activities, the greater the likelihood that he/she would limit access. Gramann et al. (1985) termed this an attitude of "exclusivity" and others have suggested it poses "...the toughest access problem of all to resolve" (Wildlife Management Institute, 1983:3).

Finally, the opportunity for landowners to derive income or other compensation in exchange for permitting access may be becoming more prominent in landowners' decisions. Leasing lands for hunting has a long history in Texas (Pope et al., 1984) and other areas of the south, and for waterfowl in Maryland (Brunori, 1987).

Although not included among these domains of influence, socioeconomic and demographic characteristics are correlated to some degree with access decisions. Age, sex, education and whether landowners reside on their property have been found to be correlated with posting and access policies (Holecek and Westfall, 1977; Brown et al., 1984; Wright et al., 1988), but these factors had low predictive power making their utility in statistical modeling of owners' access decisions limited (Wright and Fesenmaier, 1988).

METHODS

The National Private Land Ownership Study surveyed nonindustrial, private rural landowners owning a minimum of 8 ha (20 acres). Master tax rolls, available in county tax appraisal offices, were used as sampling frames from which to obtain names and addresses of eligible landowners. Using the National Outdoor Recreation Supply Inventory System's county-level data files (USFS, 1987), counties with high population densities (>200 persons/mile) or high concentrations of government-owned land (> 50%) were eliminated. Of 3,107 counties in the contiguous United States, 338 were "too urban" and 162 had "too much government land" to be included. After eliminating ineligible counties, there was a total of 2,556 counties from which to draw the national sample.

Counties were randomly selected using a grid matrix system to ensure even geographic distribution of counties chosen within each state. From each county, a stratified random sample of 25 names was chosen from the master tax rolls. County samples consisted of 3 strata of persons owning 20 - 99 acres, 100 - 499 acres and > 500 acres, ensuring equal representation of large and small landowners. A mail survey was designed, pretested and mailed to the sample of landowners in 1986, following closely the procedures outlined by Dillman (1978). As a result, 4,856 questionnaires were returned, producing an effective response rate of 41.5%.

Because a disproportionate random sample was used, post sample weighting was required. This procedure involved use of baseline information from the National Resource Inventory (USSCS 1982) regarding numbers of landowners, acreages by region and tract sizes owned. Individual case data within the NPLOS data base were weighted to reflect population-to-sample ratios, allowing the extrapolation of findings to regional and national estimates.

Frequency analyses provided a general description of landowners and their properties. Regional comparisons of landowners were made among the 4 U.S. Forest Service RPA Outdoor Recreation and Wilderness Assessment regions (Fig. 1) using a one-way analysis of variance and Duncan's Multiple Range Test ($\alpha = 0.05$). National estimates of private lands available for recreation were calculated.

Figure 1.--Forest Service regions and Assessment regions



RESULTS AND DISCUSSION

The Owners

Respondents were predominately male (79.6%) and slightly less than 58 years of age. The overwhelming majority of respondents was white (96.1%) and married (82.1%); family size averaged 2.6 people. Landowners' occupations varied greatly, however, 45% were retired. Landowners reported earning an average of \$35,303 in total family income for 1985.

Educational attainment was relatively high--58% of the property owners graduated from high school and had gone on to complete some college work. Further, 15.6% had obtained a college degree and another 14.9% had completed some graduate work.

Private land ownership across the U.S. appears to be family-oriented. Eighty-six percent of landowners reported owning their lands either solely (38.4%) or as part of family ownership (47.7%) and had owned that property for 23 years. Further, 38% resided on their land and 90% lived within a 20 mile radius of their property.

Regional differences regarding characteristics of rural landowners were found with several variables. Respondents in the southern region were significantly older (59.5 years) than landowners in all other regions ($p < 0.017$). Family incomes in 1985 were highest among persons from the Pacific Coast ($x = \$42,872$) and Southern ($x = \$39,321$) Regions ($p < 0.001$). Accordingly, landowners in the Pacific Coast Region made more money from their lands in 1985 ($x = \$12,399$) than landowners in other regions ($p < 0.001$). Ironically, southern owners were least dependent on their lands as sources of income ($x = \$5,058$). No significant differences were found among landowners in different regions regarding amount of property taxes paid in 1985.

Motives for owning rural lands appear to be changing. Four out of 10 respondents rejected crop agriculture as an important reason for owning rural land and was reported as the least important ownership objective of all reasons posed to the respondents. Landowners did report that making money from "Fee Hunting, Fishing, and other Recreation" (95%), "Growing Timber for Sale" (68%) and "Investment Potential of the Land" (61%) were very important reasons why they owned their properties.

The Land

Respondents owned an average of 74 ha. Those from the Pacific Coast and Rocky Mountain/Great Plains regions owned the largest tracts of land ($x = 125.49$ ha and 123.08 ha, respectively) which were significantly larger ($p < 0.001$) than tracts owned by eastern landowners. Southern and northern landowners owned tracts of 66 ha and 53 ha, respectively.

Ironically, cropland was reported as the largest single land use across the nation ($x = 25.65$ ha), even though many owners rejected crop agriculture as an important ownership objective. This was followed closely by land in forests ($x = 21.55$ ha). Pasture ($x = 12.74$ ha) and range ($x = 10.19$ ha) accounted for the remaining major uses of rural lands. Forty-two percent of respondents used these lands for grazing livestock, primarily beef cattle (83%).

Regionally, Pacific Coast landowners reported the largest amounts of land in forests ($x = 30.62$ ha) as compared to RM/GP owners who averaged only 3.69 ha of timber. Forested tracts in the Rocky Mountain region were found to be significantly smaller ($p < 0.036$) than tracts in other regions in the amount of land in forests. Landowners in the Rocky Mountain Region joined those from the Pacific Coast in having significantly more rangeland ($x = 28.75$ ha, $x = 36.94$ ha, $p < 0.001$) and row crops ($x = 38.9$ ha, $x = 41.34$ ha, $p < 0.001$) than owners from eastern regions. Rocky Mountain owners also possessed significantly more acreage in pasture ($x = 45.48$ ha, $p < 0.001$). No other regional disparities regarding land uses were found.

Recreation was another common use of land even though few landowners were found to be physically altering the landscape to enhance recreational opportunities. Overall, hunting was reported as the activity most conducive to private lands. In general, dispersed forms of outdoor recreation were perceived as being the most appropriate. Driving off-road vehicles, shooting, photography, nature study, hiking, birdwatching,

picnicking, riding horses, and camping were reported as being compatible activities by a majority of property owners. Water-related activities such as fishing, swimming, canoeing, and boating were much less compatible. This undoubtedly could be attributed to paucity of water resources owned by respondents (30% reported owning surface water). Ninety-three percent of respondents' properties accommodated recreation in some manner. The degree to which private landowners allow recreation is a question of high priority to recreation and natural resource planners.

Recreational Access Policies

As suggested by past research, recreational access policies adopted by private landowners in this study took many forms. Some properties were closed to recreation. Others were maintained for exclusive recreation of owners or restricted to invited guests. Still others were opened to the general public, whether it was for a fee or free of charge. Furthermore, landowners often controlled implementation of these policies by posting their properties. Even though posting is not a policy, in and of itself, it does have a significant impact on perceptions of land availability.

Posting Practices

Thirty-two percent of respondents ($n = 1,092$) posted at least a portion of their lands against trespass. Of these, 85% posted all of their property. In general, it appeared landowners did not bother with selective posting; that is, posting only a particular section of their lands. On average, owners posted 74.46 ha of their land.

Southern owners reported the highest incidence of posting (38%). Pacific Coast owners were second (33%), followed by landowners from the Northern Region (27%). Respondents from the RM/GP Region posted less than all other landowners (24%). When this practice is viewed in relation to total acreage owned, respondents from the Pacific Coast Region posted significantly more land ($x = 45.59$ ha) than did other landowners ($p < 0.001$). Conversely, northern owners reported posting the smallest number of acres ($x = 14.79$ ha) which was significantly smaller than amount of land posted in all other regions ($p < 0.001$).

Of owners who posted their lands, only 14% ($n = 152$) prohibited all recreational access. Eighty percent of posting landowners provided recreational access for members of their families and 65% allowed friends and neighbors to use their lands. Additionally, 19.2% posted their properties to protect rights of persons leasing their lands for recreation, and another 8.1% allowed the general public to use their lands as long as they asked permission.

Prohibitive Policies

Very few landowners proscribed all recreation ($< 5\%$). Landowners from the Pacific Coast region showed the highest propensity for land closures (6%), even though differences found among owners closing their properties from each region were marginal. Numbers of persons closing their lands varied from 3.7% of respondents in the North to 6% on the Pacific Coast. This, in effect, closed only 3% of total land owned by respondents. Table 1 shows effects of respondents' policies on distribution of total acreage.

Exclusive Policies

Thirty-eight percent of respondents ($n = 1,296$) reported closing a total of 69,836 ha of land to all but personal recreation ($x = 53.89$ ha). This figure represented 28% of the respondents' total land base.

Approximately 40% of owners in the Northern, Southern and Pacific Coast Regions reported excluding access to all but family members on some portion of their land. Only 22% of RM/GP owners indicated they reserved land for private recreation.

Acreage affected by these policies was most severe in the Pacific Coast Region. Here, owners holding exclusive recreation acreage averaged 137 ha. This was significantly higher than the average number of private

recreation acres held in all other regions ($p < 0.001$). Landowners from RM/GP, Southern and Northern Regions reported operating 79 ha, 47 ha and 35 ha under this policy, respectively.

Table 1. Distribution of Land Controlled Under Specific Recreational Access Policies Adopted By Nonindustrial, Private Rural Landowners Sampled (Percent of Total Acreage in Region).

Policy	North	South	RM/GP	Pac. Coast	U.S.
Prohibitive	7,479 (3%)	17,216 (6%)	7,445 (3%)	5,703 (5%)	37,843 (5%)
Exclusive	53,289 (25%)	77,847 (28%)	30,196 (13%)	45,578 (39%)	206,910 (25%)
Restrictive	99,183 (46%)	119,911 (43%)	115,892 (52%)	34,827 (30%)	369,813 (44%)
Leased	4,543 (2%)	23,062 (8%)	1,562 (< 1%)	14,280 (12%)	43,447 (5%)
Open	50,927 (24%)	35,499 (13%)	64,805 (29%)	16,380 (14%)	167,610 (20%)
Total ^a	215,421 (100%)	273,535 (100%)	219,900 (100%)	116,768 (100%)	825,624 (100%)

^a numbers may not sum due to rounding errors.

Fee Policies

Seven percent of the respondents indicated they leased a portion of their properties for recreation (< 6% of total acreage), representing a 4.9% increase over the 1976 study (Cordell et al., 1979). Those operating land under this policy ($n = 139$) reported leasing an average of 102 ha. Approximately 60% of these owners leased to clubs or groups of individuals. Slightly less than 40% leased to individuals and very few ($n = 5$) leased lands to government agencies. In general, persons owning large tracts of land (> 200 ha) leased more to clubs and groups of individuals, whereas smaller landowners (< 200 ha) leased more often to individuals.

The largest number of landowners undertaking a fee recreation policy was found in the Southern Region ($n = 74$, 7%). Between 2% and 3% of owners in remaining regions charged for recreational access to their properties.

Southern owners also dedicated the largest amount of land to fee recreation (6,749 ha, $\bar{x} = 91.2$ ha). However, landowners from the Pacific Coast, by far, possessed the largest tracts of leased land ($\bar{x} = 451$ ha). It appeared, therefore, that leasing in the Pacific Coast Region was conducted on a much larger scale in terms of acreage, than in all other regions, including the Rocky Mountain/Great Plains Region ($p < 0.039$).

Motivations for leasing were fairly consistent among all landowners. Respondents reported monetary reasons for adopting a leasing policy, such as "helping to pay taxes" and gaining "additional income." Other perceived advantages were lessees' enhanced "stewardship of the land" (32%) and their ability to aid in "controlling trespass" (32%).

Overwhelmingly, hunting was the most common type of lease. Forty-seven percent of these owners leased their lands for hunting, a majority (60%) indicating that big game was the primary type of hunting, even

though other types of hunting were allowed under conditions of most leases. These activities generated an average of \$531 per landowner. Fees charged for hunting leases ranged from less than \$10 to a high of \$8,000. Twelve percent of these persons indicated they would lease additional lands ($x = 47$ ha), if the right incentives were provided. It is important to note that other recreational activities appeared to be insignificant in terms of revenue generation.

Open Policies

Respondents (25%) allowed the general public to use 46,137 ha of their lands for recreation ($x = 55.3$ ha). This equated to 18% of total acreage owned by all persons in the sample.

The greatest regional disparities regarding open access were found in the East. Thirty-one percent of Northern owners allowed a portion of their lands ($x = 35$ ha) to be used by people other than personal acquaintances for recreation. In contrast, less than 13% of Southern landowners allowed open access.

Rocky Mountain/Great Plains landowners reported the largest percentage of lands open to the public. Slightly less than 25% of lands in this region were open to public recreation (14,018 ha). Twenty percent of northern lands were open as well. Southern and Pacific Coast landowners reported smallest percentages of total land available to the public under this policy (14.6% and 12.7%, respectively).

National Estimates

By applying the percentage of total acreage under each of the five access policies identified in the study to the total amount of private farm and ranch land in each region, statistical inferences were drawn. Estimates of the amount of land available for recreation can be seen in Table 2.

Table 2. Estimated Total Acreage of Private, Nonindustrial Land Available for Recreation by Access Policy.

Policy	North	South	RM/GP (acres X 1000)	Pac. Coast	U.S.
Prohibitive	11,857 (4%)	27,377 (6%)	13,361 (4%)	10,557 (13%)	63,152 (5%)
Exclusive	84,614 (26%)	123,789 (30%)	54,241 (14%)	32,365 (40%)	295,009 (24%)
Restrictive	156,310 (48%)	188,041 (44%)	206,731 (55%)	17,891 (22%)	568,973 (47%)
Fee	5,923 (2%)	34,719 (8%)	3,194 (<1%)	9,500 (12%)	53,336 (4%)
Open	66,663 (20%)	53,658 (13%)	97,799 (26%)	11,544 (14%)	229,664 (19%)
Total ^a	325,367 (100%)	427,584 (100%)	375,326 (100%)	81,857 (100%)	1,210,134 (100%)

^a numbers may not sum due to rounding errors.

Of the estimated 490 million ha of land in private ownership in the United States, approximately 16.5 million ha are closed to recreation. Furthermore, over 124 million ha are closed to all but exclusive use of owners. This, in effect, decreases the supply of private land available for recreation of most Americans by one-fourth (25%).

The largest blocks of recreational lands are operated under policies based on familiarity. Access to 47% of private land base was estimated to be restricted to persons who were personally acquainted with the owner. Over 229 million ha of land fall under this policy.

Land available to persons without friendship and/or kinship networks to draw upon for recreation amounts to approximately 24% of the land in private ownership. Slightly less than 23 million ha were estimated to be operated under some form of leasing arrangement and 97 million ha are open to the public. Persons gaining access to this open acreage may be required to obtain prior permission of the owner (either written or verbal) in order to use these lands, but generally, these lands are open to the general public.

Activity-Specific Policies

Beyond the 5 general policies, some landowners mandate policies that are activity-specific. *Wright and Fesenmaier (1988) noted that landowners may be more restrictive with hunting access to certain species (e.g., small game hunting was allowed but deer hunting prohibited). Failure of past research to capture activity-specific access policies of landowners was a weakness in attempts to understand landowner policy behaviors.

By eliminating landowners who indicated their lands were not appropriate for each activity and calculating the allow/disallow ratio for all persons having resources compatible with each activity, a better idea of landowners' tolerance for different activities was gained. Inasmuch as hunting was perceived to be the activity most suitable to private resources, it was the activity most often allowed. Sixty-seven percent of landowners allowed hunting on their lands (Table 3). Non-consumptive activities such as photography, birdwatching, nature study, hiking, and picnicking also were allowed by a majority of respondents.

However, even though the majority of owners felt their lands were highly conducive to shooting, camping, and off-road vehicle use, these activities were prohibited by over 65% of landowners. Perceptions of dangers and/or resource damages associated with these activities may provide some explanation for landowners' intolerance of these pastimes.

CONCLUSIONS

Based on results of this study and related research to date, several points become readily evident. First, the private land resource is vast, but threatened as a natural resource. Population increases and resultant urban expansion will require an increasing amount of rural land be converted to urban uses. Estimates of up to 607,000 ha of rural lands being converted to nonagricultural uses annually is not uncommon (Resources for the Future, 1983; PCAO, 1987).

Second, farm and forest incomes are decreasing. Less than 20% of respondents' total family incomes for 1985 were generated from their lands ($x = \$6,778$). Therefore, reasons reported by respondents for owning rural lands appear to be changing from the traditional agricultural-related ownership objectives of the past. "Making money through fee recreation," "growing timber for sale," and "investments" were reported as the most important reasons for owning rural lands. "Raising livestock," "living in a rural environment," and "crop agriculture" were much less important to today's landowners.

While it appeared that landowners possessed a latent desire to generate income through the outdoor recreation potential of their properties, this desire has not come to fruition for a majority of the landowners. Only 7% of the owners were actively charging fees for outdoor recreation, and the overwhelming majority of this activity was for hunting. Other forms of outdoor recreation seem to be limited in their income earning potential.

But, the number of landowners adopting a fee recreation policy has increased since 1977. Motivations for leasing were consistent among all landowners. Monetary reasons, such as "helping to pay taxes" and gaining "additional income" were prevalent. Other perceived advantages were lessees' enhanced "stewardship of the land" and their ability to aid in "controlling trespass." Fee recreation may help owner incomes and conserve natural resources.

Data suggests that the number of persons adopting a fee policy could increase to 11%-15% (46.5 million ha) of all landowners if the right incentives were provided. However, inconsistencies in governmental policies send mixed signals to landowners regarding leasing. First, few states have offered tax breaks or any other incentives to property owners who allow public recreation on their lands, whether for free or fee. Second, state laws designed to encourage access by eliminating fear of legal liability for recreational injury have been largely ineffective. Protection afforded under state recreational use statutes, now enacted in 49 states, is unknown to a majority of landowners. This has tremendous implications for state and federal recreation and natural resource agencies. Also, protection afforded by these laws may be inconsequential compared to the fear and burdens of being taken to court, on which these statutes have no effect. Having to pay lawyer fees, time away from work and anxieties associated with litigating court cases are major disincentives in and of themselves. Further, the vast majority of these statutes predicate insulation from liability on free access. Landowners who choose to assess a fee for access lose their protection in most states.

Legal liability notwithstanding, another major factor in land closures is the behavior of recreationists. Urban Americans have limited, if any, relationship with the land and its communities. Public ignorance resulting from this disassociation with the land will undoubtedly continue to negatively affect recreationist behavior. As property damages, litter, trespass and other problems persist, land closures and increasing restrictions on access will become more severe.

Also, it is highly likely that there will be major turnovers in land ownership over the next 10-15 years. With 45% of the landowners being retired, there is a distinct possibility of major changes in ownership. New owners may bring on even more strict access policies. As this progresses, ownership for reasons of exclusive resource use, will probably increase. This will, in effect, lock up many recreation resources and further polarize those persons who can afford to purchase land for recreation and those who cannot.

SUMMARY

The National Private Land Ownership Study is the most comprehensive research effort to date, directed to documenting the supply of private, nonindustrial lands available for outdoor recreation. Through this study, a better understanding of individuals who own rural lands and reasons for that ownership has been gained. Furthermore, estimates of the amount of land in various land uses, leasing practices currently undertaken by landowners, and amount of land controlled under specific recreational access policies were established.

However, now that NPLOS has established the benchmark from which researchers can monitor changes in the private recreation estate, more in-depth studies of factors associated with landowner behavior, particularly access policy behavior, need to be conducted. This research must go beyond merely understanding the "what" and "how much" of recreational access to private lands, to a greater understanding of "why" landowners adopt specific access policies. A deeper understanding of recreation-related problems experienced by landowners, their attitudes toward the providing recreational access, and preferences for incentives is prerequisite to undertaking programs encourage additional access in the future. To date, no research at the national level has attempted to model landowner access decisions.

Table 3. Study Landowners' Receptivity to Selected Recreational Activities (Percent Allowing Access).^a

Activity	North	South	RM/GP	Pac. Coast	U.S.
Hunting	72	64	64	60	67
Photography	69	57	63	66	64
Bird-watching	66	53	63	60	61
Nature Study	65	52	60	62	60
Hiking	64	51	60	55	59
Picnicking	54	48	52	53	51
Fishing	50	53	43	47	51
Horseback Riding	51	43	63	52	50
Shooting	36	31	36	34	34
Camping	34	30	45	29	33
Swimming	22	26	19	30	24
ORV Driving	31	15	19	14	23
Canoeing	24	19	19	17	21
Boating	16	12	7	15	14

^a Based only on landowners who indicated owning resources compatible with respective activities.

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