Modeling Rural Landowners' Hunter Access Policies in East Texas, USA

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ABSTRACT / Private landowners in East Texas, USA, were aggregated into one of four policy categories according to the degree of access allowed to their lands for hunting. Based on these categories, a logistic regression model of possible determinants of access policy was developed and probabilities of policy adoption were calculated. Overwhelmingly, attitudes toward hunting as a sport, incentives, and control over the actions of hunters were most predictive of landowners' policies. Additionally, the availability of deer was found to be negatively correlated with access, thereby suggesting management efforts to increase deer populations may be counter to increasing access. Further, probabilities derived from the model indicated that there was almost a 7 in 10 chance (0.66) that landowners would adopt policies commensurate with allowing family and personal acquaintances to hunt on their property. However, the probability of increasing access beyond this level, where access was provided for the general public, dropped off drastically to less than 5% (0.04).

From all indications, congestions in the national forests, national, state, county, and city parks and other recreation areas is not a case of temporary growing pains, but rather a mild taste of a real crisis (Clawson 1959).

Demand for outdoor recreation continues to increase throughout the United States (President's Commission on Americans Outdoors 1987). Population growth, increasing amounts of leisure time, and the rapid rise in leisure expenditures are three important aspects of society that clearly indicate the demand for recreation will continue to increase in the foreseeable future. But where will this demand be satisfied? Recent studies indicate the supply of land on which to pursue outdoor recreation activities is decreasing at alarming rates (Guynn and Schmidt 1984, Brown and others 1984, Wright and Kaiser 1986). Land is being taken out of the nation's undeveloped land base permanently due to population increases and urban expansion. For example, the United States Department of Agriculture estimates that 1.5 million acres of agricultural land are converted to nonagricultural uses annually (Resources for the Future 1983). Compounding the problem, a vast majority of the remaining open space is being closed and/or posted by private landowners, thus denying access to the public (Brown 1974, Gramman and others 1983, Resources for the Future 1983, Brown and others 1984, Guynn and Schmidt 1984, Wright and Kaiser 1986).

To address this problem, public agencies have developed a number of strategies to increase the amount of recreational open space available to the public. These strategies range from negotiating easements to fee simple acquisition. Unfortunately, it appears that many of these strategies, especially fee simple acquisition of additional lands by government agencies, appear to be impractical solutions in light of recent reductions in federal funding. The President's Commission on Americans Outdoors (1987) suggested that efforts must be made to enlist the assistance of the private sector in providing recreational opportunities since two-thirds of the nation's land base is privately owned. However, private landowners have faced a variety of problems that often dissuade them from allowing access to their properties (Brown and others 1984, Guynn and Schmidt 1984).

This article reports on a study that attempted to identify and evaluate the importance of several factors underlying rural landowners' decisions to allow access to the public for hunting recreation. The rural landowner hunter access model, shown in Figure 1 (Wright and others 1988), was used as the conceptual framework for the study and is summarized in the following section. There follows an in-depth discussion of the

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methodological aspects of the study. The results of the study are then presented, and the implications of the findings for resource managers and decision makers are discussed.

The Rural Landowner Hunter Access Model

Determinants of Access Policy

Past research efforts have suggested many possible determinants of access policy (Rounds 1973, Brown 1974, Brown and Dawson 1977, Kirby and others 1981, Gramman and others 1985). Factors affecting access decisions can be categorized into three distinct components: (a) landowner attributes, (b) user behavior, and (c) resource attributes. Socioeconomic characteristics, ownership objectives, residency status, posting policy, and attitudes toward disincentives are landowner attributes that research has shown to affect landowners' access decisions. For example, Brown (1974) reported that New York landowners with higher levels of education and those interested in non-consumptive activities, such as hiking and cross-country skiing, were more restrictive in their access policies than other landowners. Moreover, certain objectives for owning rural land, such as the desire for privacy, are not conducive to allowing recreational access. Attitudes toward hunting, liability, exclusivity, and the perceived lack of economic incentive to pro-