LANDOWNER-HUNTER INTERACTIONS IN DEER MANAGEMENT UNIT 78:

A Qualitative Study With Implications for Development of Hunting Access Incentive Programs

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Key Words: access, hunter education, landowners, leasing, liability, services, social networks, wildlife program planning.
JOB DESCRIPTION

1. PROJECT TITLE: PUBLIC ATTITUDES TOWARD WILDLIFE AND ITS ACCESSIBILITY

2. STUDY TITLE: Public Access for Wildlife Recreation


4. JOB DURATION: 1 April 1995 - 31 March 1996

5. JOB OBJECTIVES:
   - Characterize the relationships between the landowner and the individuals who hunt on the property.
   - Assess landowner opinions toward a set of access program options.
   - Develop hypotheses about how access relationships are formed and what types of economic and lifestyle factors facilitate those relationships for particular types of landowners and hunters.
   - Develop hypotheses about landowner acceptance of potential access programs and what types of economic and lifestyle factors are associated with acceptance of those programs.

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We express our thanks to members of the Human Dimensions Research Unit for their assistance with various aspects of this study. Jody Enck provided extensive input that we integrated into our model of landowner-hunter access relationships. Jody Enck and Daniel Decker provided manuscript reviews. Margie Peech and Heidi Christoffel provided assistance with sampling and report preparation.

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EXECUTIVE SUMMARY

INTRODUCTION

DEC Information Needs

Trends of increased posting against trespass, decline in the number of active farms and total farmed acreage, and reduction of rural open space, have raised concerns about the future of public hunting access on private lands. Thus, wildlife managers in New York's Department of Environmental Conservation (DEC) are asking the question -- are hunting access opportunities declining? And if so, what if anything, can a state wildlife management agency do to maintain those opportunities?

DEC is interested in knowing whether incentive programs might maintain or increase hunting access opportunities. DEC staff have expressed particular interest in incentive programs in four categories: (1) managing landowner liability; (2) providing goods, services, or privileges to landowners; (3) providing monetary payments to landowners; and (4) expanding hunter education.

Study Purpose and Objectives

In 1995, DEC staff asked HDRU staff to conduct a qualitative study of hunting access. A team of DEC staff directed HDRU to address the following question: under what conditions would access incentive programs produce additional opportunities for people to hunt deer on private lands? DEC directed HDRU to explore potential programs in four categories: (1) greater liability protection for landowners; (2) monetary payments to landowners; (3) services provided by DEC to landowners; or (4) additional training for hunters.

We began this study with an assumption that adoption of any access incentive program will depend on compatibility with existing social relationships between landowners and hunters. Our first study objective was to collect qualitative data on the hunting access relationships that exist now. Our second objective was to collect qualitative data on landowners' opinions about access incentives in the four areas described above. We addressed Objectives 1 and 2 directly, using findings from face-to-face and telephone interviews with landowners and hunters that we conducted in central New York in 1995. We discuss related results and recommendations in the first half of this report.

Our third and forth study objectives were to develop a set of hypotheses about how access relationships are formed and how different types of landowners and hunters would respond to new access programs in each area. In our discussion section, we use information from this study and another HDRU study (Enck 1996) to hypothesize a model of landowner-hunter networks that determine hunting access on private lands. We then present hypotheses about whether the people within those networks are likely to accept access programs sponsored by the state. We conclude the report with a discussion of related implications for DEC access programs if our hypothesized relationships hold true.

THE STUDY

Procedures:

Study area: DEC staff identified Deer Management Unit (DMU) 78 as the study area. DMU 78 was chosen because it had deer management characteristics of interest to DEC and it afforded an opportunity to conduct personal interviews at minimal cost.
**Landowner sample:** We sampled landowners from DEC records of landowners who applied for a deer management permit in DMU 78 the year before the study. During each interview, we asked the landowner for referrals to other landowners in that area with more than 50 acres.

**Hunter sample:** We used three methods to identify a sample of hunters. First, DEC staff conducted screening interviews to identify potential interviewees from the small game harvest survey conducted by DEC in February-March, 1995. Second, we drew a sample of names from DEC records of deer hunters using the Tompkins-Cayuga Cooperative Hunting Area (King Ferry, New York). Finally, we met and corresponded with Fish and Wildlife Management Act (FWMA) Board members and local sportsmen’s clubs and asked these organizations to help us identify people who might participate in an interview. Individuals were encouraged to identify hunters who had concerns about access or had stopped hunting, perhaps because of access concerns.

**Implementation:** We conducted a set of interviews with 30 landowners and 10 hunters between October 1995 and April 1996. We contacted each potential interviewee in advance by mail and telephone to solicit participation. Interviews were exploratory and qualitative. The interview format was informal and conversational. HDRU staff used a topic outline to direct each interview toward areas of research interest. Each interview was recorded on tape. We prepared a written summary of each tape-recorded interview.

**Analysis:** We analyzed the interview data qualitatively by comparing and contrasting the patterns of responses of different landowners and hunters. We used Interview data to develop hypotheses about landowner-hunter relations and acceptance of potential access program options by people in particular types of landowner-hunter relationships. As we formed hypotheses, we investigated these ideas in subsequent interviews.

**RESULTS**

**Access Relationships**

Landowner-hunter relationships can be placed in one of four basic categories. We observed all four types of relationships in the study area.

**Sentiment-based relationships** (i.e., noneconomic relationships based on friendship) were the most common type of relationship. Some of the sentiment relationships we observed involved the landowner and one to four other people who had been close friends and hunting companions for many years. Some landowners made comments that revealed sets of rules and norms that operated to control the behavior and number of group members in sentiment relationships. Sentiment relationships often involved a hunting "camp" pattern of behavior. That is, the hunters tended to hunt together with the landowner, they hunted the same part of the season each year, and they stayed at the landowner’s house or camp while hunting.

**Kinship relationships** were also common. Landowner-hunter relationships included networks of immediate family (e.g., fathers and sons, brothers) and extended family (e.g., fathers and sons-in-law, uncles and nephews). In cases where the land was passed down through the wife’s family, hunting relationships often involved members of the wife’s immediate and extended family.
Casual associations (i.e., where landowners grant access privileges to people they don’t know well) occurred in the study area, but were less common than sentiment or kinship relationships. Casual associations typically occurred between landowners and neighbors, casual acquaintances from work, or people associated with friends or neighbors.

Exchange relationships (i.e., based on an exchange of goods, services, privileges, or money) occurred, but were uncommon. For example, the study area contains lands owned by a wood products company known to lease land to hunters. At least two professional guides lease land for deer and turkey hunting in DMU 78. Some parcels in the area are owned by small logging companies who also may enter exchange relationships.

Landowner-hunter associations based on an exchange of hunting privileges on lands owned by members of the association had been common in the recent past, but they had declined markedly by the time this study was conducted.

Patterns in Relationships: Many landowners were involved in multiple types of access relationships. However, landowners who did not grow up in the area where they owned land, and had no direct family connections to the land they owned, tended to have only one strong landowner-hunter relationship. Moreover, those new, less connected landowners were more likely to have strong landowner-hunter connections with family, not friends or neighbors. That is, they were more separated from their community, with respect to hunting relationships. Most of the hunters we interviewed had a very limited network of relationships with landowners or other hunters. Their most common relationship was with a landowner who was a family friend.

Opinions Toward Access Incentive Programs

Liability protection for landowners: Every landowner we interviewed said that a law change would have no influence on their hunting access decisions. About half said that liability for hunters’ injuries wasn’t a strong concern for them and it wasn’t an issue that influenced their decisions about hunting access.

Services Provided by DEC to Landowners: Most landowners were disinterested in exchanging access for services. The most common reason for disinterest was that the owner didn’t perceive any need for services that the state might provide. Another common reason for disinterest was that allowing public access would interfere with the owner’s personal hunting.

A few landowners expressed interest in a services program, under certain conditions. For example, one landowner would have interest in such a program if he retained control over specific access decisions (e.g., control over hunting locations and times; ability to reject individual hunters). Two landowners said they would consider accepting services from the state, but this wouldn’t increase access because they already had an open access policy. Two other landowners said they wouldn’t participate in a state program, but they would exchange access to individuals such as neighbors who were willing to provide services.

We asked hunters if they were willing to provide services to landowners. We also asked them if they thought providing services to landowners was necessary to create hunting access opportunities. Hunters expressed a range of opinions on this topic. One hunter thought providing services would create access opportunities and he said hunters should work hard to provide services and do other things to cultivate a strong relationship with the private
landowner. Several hunters thought providing services was important, but they believed that the state should be the middle man providing the services. Other hunters thought providing services to landowners would be ineffective. They thought such actions would fail to address the real issues behind access decisions (i.e., safety and trustworthiness).

**Monetary Payments to Landowners:** Most of the landowners we interviewed were disinterested in programs where they would be paid for hunting access privileges. The most common reason for disinterest was that fee hunting would interfere with the owner's personal use of the property for hunting. A number of landowners also were concerned that they would lose control over their land if they participated in such a program.

A few landowners did express interest in access exchange relationships. However, those owners also expressed a desire to retain control over the specifics of who would be given hunting access, and how, when, and where those individuals would be allowed to hunt.

The hunters we interviewed found it acceptable that private landowners might charge a fee for hunting. However, none of these hunters regarded fee hunting as a viable means to significantly increase access to private lands for themselves or hunters in general.

**Additional Training Requirements for Hunters:** All the landowners said that efforts to get hunters to go through more or better hunter education experiences would have no influence on their current access decisions. For many landowners who hunt, hunter education is not a central issue because hunter behavior is not a primary part of their decisions about access. Improving hunter training would not address two of these landowners' central concerns: personal use of the land and personal control over land use decisions.

Some landowners were making decisions based on hunter behavior. However, these landowners did not believe that state programs could improve hunter behavior. Other landowners believed that it was worthwhile for the state to encourage better hunter education, but not as a means to increase access to private lands.

We asked hunters if they would be willing to complete additional hunter training requirements. We also asked them if they believed improvements in hunter education would influence landowner attitudes about permitting public access for hunting. Nine of the 10 hunters interviewed were either unwilling to accept additional training requirements, or didn't believe such changes would influence hunter's behavior or landowner's decisions.

**RECOMMENDATIONS FOR ACCESS PROGRAM DEVELOPMENT**

1. **Design Multidimensional Programs**

Hunting access is sometimes portrayed as a unidimensional problem that calls for a unidimensional solution. Nongovernment organizations, for example, may portray access restriction as a problem that stems from poor hunter behavior, so they propose additional hunter education as the solution. But this study (and others) reveal public access to private lands as a multifaceted issue. Addressing any single landowner or hunter concern in a stand-alone program is not likely to increase hunting access opportunities. For the best chance of success, DEC should design initiatives that are multi-dimensional and integrated across program areas.
2. Address the Landowner's Need for Control

One of the clearest findings that emerged from this work was that private landowners harbor a strong desire to remain in control of decisions about the use of their land. Control is an issue that cuts across landowner types and access program types. Anticipated loss of control over landuse decisions would be a barrier to acceptance of new access initiatives for many landowners. Access programs will only be attractive to landowners who perceive that the program will maintain or increase their personal control over public use of their land.

DEC can increase the chances that landowners will adopt access programs if the agency makes landowner autonomy over land use decisions a priority consideration in program development. Landowners who participate in a state-sponsored access program should retain the ability to: (1) deny any individual access privileges, and (2) set guidelines determining when and where people may hunt.

3. Reduce Landowner Uncertainty

We suggest that landowner uncertainty about the costs and benefits of participating in access programs will impede adoption of access programs. Providing landowners with better information can remove uncertainty as a program adoption barrier. At least three types of landowner uncertainty are likely to impede hunting access program adoption. DEC access programs should address uncertainty related to: (1) financial outcomes, (2) hunter behavior, and (3) personal liability.

**Financial uncertainty:** Access programs should be accompanied by information that reduces financial uncertainty associated with program participation. Landowners will be reluctant to participate in a given program until they have a means to clearly assess the financial implications of their involvement. One way to reduce financial uncertainty would be to establish and demonstrate a program that included monetary payments to landowners who provided public access.

Pilot programs should be accompanied by information that a given landowner can use to calculate the financial costs and benefits he or she is likely to incur as a program participant, based on factors such as parcel size, land type, property tax assessment, and current land use. Programs should be piloted with owners who have the characteristics of the target group that program is intended to serve (e.g., homeowners with small nonfarm properties; hobby farmers; agri-business owners with large parcels; nonindustrial private forest landowners; wetlands owners). To be most efficient, DEC should place a priority on programs that target agri-business or forest products business owners with large parcels, or develop pilot programs that create an exchange relationship on blocks of land that include multiple owners.

**Hunter behavior:** One way to reduce landowner uncertainty about hunter behavior would be to link access programs to programs that prepare participating hunters to meet landowner-generated standards of practice. It should be noted that such hunter training is probably necessary, but not sufficient as a means to facilitate landowner participation in hunting access programs opportunities. Hunter training that is not directly linked to an access program may meet other goals, but is not likely to affect landowner decisions about hunting access.
Personal liability: For some landowners, concern about personal liability for hunters' injuries will be the most important factor that influences their decisions about whether to participate in a hunting access program. Reducing financial uncertainty will not be enough to stimulate program participation by those people. DEC will have to design programs that reduce uncertainty about hunter behavior or liability for hunters' injuries if it wishes to reach these types of landowners through a hunting access program. DEC may be able to reduce landowner uncertainty in this area by serving as a source of accurate information on what New York and other states are doing to address issues of landowner's legal obligations to recreationists.

DISCUSSION: METHODS FOR FURTHER RESEARCH

Our third and fourth study objectives were to develop hypotheses about how access relationships are formed and how different types of landowners and hunters would respond to new access incentive programs. Based on information from this study and another HDRU study conducted by Enck (1996), we developed a conceptual model of landowner-hunter networks in New York State. In Part Two of the discussion section, we describe our model, which includes a set of hypotheses about the way that people in given social networks will respond to access incentive programs sponsored by DEC.

The hypotheses we advance in Part Three of the discussion section are tentative and untested. Additional quantitative research will be necessary to verify the structure of landowner-hunter networks, and thus test the propositions of the model. We believe that a quantitative approach called network analysis should be used for that purpose. We begin the discussion section by describing network analysis. Then, we use information from our hunter and landowner interviews to develop an example of the way that researchers could apply network analysis in future studies.

If one assumes for purposes of discussion that our model will be verified by later studies, one can project a number of implications for DEC as access program designers and implementors. We conclude the discussion section (and the report) with a discussion of those implications.

CONTINUING RESEARCH NEEDS

This study generated insights that DEC can use immediately to make more informed decisions about access programs in central New York. However, this work was qualitative and limited in scope, and all its findings are offered as tentative hypotheses. As opportunities arise, researchers should conduct mail or telephone surveys to test these hypotheses and quantify the potential effects of access program initiatives in various regions of New York State.
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INTRODUCTION

DEC Interests Related to Hunting Access

The Bureau of Wildlife, New York State Department of Environmental Conservation (DEC), recognizes an array of benefits that current and future generations of New Yorkers hope to attain related to wildlife (Barnhart et al. 1993). These benefits include opportunities to enjoy wildlife close to home, opportunities to continue sustainable uses of wildlife (e.g., hunting), relief from conflicts with wildlife, relief from conflicts with other recreationists, and relief from conflicts between landowners and recreationists. Wildlife managers in DEC want to understand more about hunting access because access-related issues can prevent New York’s citizens from attaining benefits in all of these categories.

DEC is especially interested in access issues associated with deer hunting. Hundreds of thousands of people seek deer hunting opportunities each year. Even though the number of big game hunters declined during the 1980s, the number of hunter days expended by big game hunters increased during the 1980’s (Siemer and Brown 1993b). The majority of hunters desire opportunities to hunt deer on private land (Siemer and Brown 1993b). Hunting continues to be permitted on the majority of private rural land holdings in New York. However, over the past 30 years, restrictive access policies have become more prevalent on private lands (Siemer and Brown 1993a). Population growth and development of open space in the Northeast may diminish the availability of huntable rural land in coming years (Cordell et al. 1993). Diminished availability of hunting access is an issue of concern to DEC to the degree that it results in loss of benefits desired by New York’s citizens.

Private nonindustrial landowners are a key stakeholder group with regard to hunting access issues. Private landowners control over 80% of all land in New York State and their lands are the site of over 60% of all hunter days (Siemer and Brown 1993b). Their decisions
have a great influence on the quality and quantity of hunting-related benefits that are available to the public. Landowners also have a stake in hunting access issues because they desire two types of benefits (i.e., relief from conflicts with wildlife, relief from conflicts with hunters) that are directly related to hunting and hunters.

Although hunters and landowners are key stakeholders with regard to hunting access issues, many other state residents are interested in or affected by deer populations, and thus have a stake in hunting access issues. Regulated hunting is the primary tool by which DEC manages white-tailed deer. Hunting on private lands is an important part of area-specific deer population control (Brown et al. 1984). In localities where hunting access is restricted, hunting may be inadequate to control deer numbers. Under such conditions, local populations of deer can exceed wildlife acceptance capacity of many stakeholder groups (e.g., fruit growers, motorists, forest owners) (Decker and Purdy 1988).

**Past Research and Current Information Needs**

Because hunting access is associated with the benefits that many people seek from wildlife, DEC has sponsored periodic research to monitor access supply and demand, and inform related program decisions (Brown and Dawson 1977; Brown and Thomson 1976; Brown et al. 1983; Siemer et al. 1990; Siemer and Brown 1993a, 1993b; Waldbauer 1986). Together with other information, these studies have raised questions and concerns about changes in access to private lands for hunting.

New York's DEC, like wildlife management agencies in other states, is interested in learning whether incentive programs might maintain or increase hunting access opportunities in the future. State agencies across North America are considering program initiatives within four broad categories: (1) managing landowner liability; (2) providing goods, services, or privileges to landowners; (3) providing monetary payments to landowners; and (4) expanding
hunter education. A state agency like DEC could take many different courses of action in any of these program areas (Table 1). For example, an agency could provide liability protection in the form of a legal defense fund for landowners. It could offer landowners goods like free tree seedlings or assistance with a wildlife management plan. An agency could pay landowners to provide access, through mechanisms like an access fund supported by hunter fees. Or, an

Table 1. Examples of potential actions states might undertake to address public hunting access on private lands.

<table>
<thead>
<tr>
<th>Potential Program Areas</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Managing Landowner Liability</td>
<td>• State-sponsored liability insurance</td>
</tr>
<tr>
<td></td>
<td>• State-administered legal defense program for landowners</td>
</tr>
<tr>
<td></td>
<td>• Changes in liability law</td>
</tr>
<tr>
<td>Providing Goods, Services</td>
<td>• Free materials: seeds, seedlings, fence posts</td>
</tr>
<tr>
<td></td>
<td>• Access control services: patrolling</td>
</tr>
<tr>
<td></td>
<td>• Technical advice: forest and wildlife management planning</td>
</tr>
<tr>
<td>Providing Monetary Incentives</td>
<td>• Tax incentives</td>
</tr>
<tr>
<td></td>
<td>• Easements for public access</td>
</tr>
<tr>
<td></td>
<td>• Hunting access “stamp” program</td>
</tr>
<tr>
<td>Expanding Hunter Education</td>
<td>• Expand existing hunter education course</td>
</tr>
<tr>
<td></td>
<td>• Create additional hunter education courses</td>
</tr>
<tr>
<td></td>
<td>• Facilitate hunter-landowner meetings</td>
</tr>
</tbody>
</table>
agency could change the quality or quantity of hunter education in an attempt to improve landowner perceptions of hunter behavior.

Research in New York has shown that certain hunter and landowner attributes (i.e., hunter behavior; landowner attitudes, beliefs, values, and interests) are associated with landowners' decisions about hunting access. Documenting these attributes has been useful, but does not answer all the questions managers have about hunting access. Studying landowners and hunters as social units may yield insights about why landowners make particular access decisions. A team of DEC staff determined it would be useful to examine the social networks that determine access to private lands. Findings that emerge from such research could help DEC staff understand how to design access programs that are acceptable to particular subgroups of landowners and hunters in specific localities.

Study Purpose and Objectives

A team of DEC staff directed HDRU to address the following question: under what conditions would access incentive programs produce additional opportunities for people to hunt deer on private lands? DEC directed HDRU to explore this question with regard to potential programs in four categories: (1) greater liability protection for landowners; (2) monetary payments to landowners; (3) services provided by DEC to landowners; or (4) additional training for hunters.

When we began this inquiry, we assumed that adoption of any access incentive programs would be influenced by compatibility with existing social relationships between landowners and hunters. Thus, our first study objective was to describe existing hunting access relationships. Our second objective was to learn more about landowners' opinions about access incentives in the four areas described above. We addressed Objectives 1 and 2 directly, using face-to-face and telephone interviews conducted with landowners and hunters.
in central New York in 1995. We discuss related results and recommendations in the first half of this report.

Our third and fourth study objectives were to develop a set of hypotheses about how access relationships are formed and how different types of landowners and hunters would respond to new access programs in each area. In the discussion section, we use information from this study and another HDRU study (Enck 1996) to hypothesize a model of landowner-hunter networks that determine hunting access on private lands. We go on to present hypotheses about whether the people within those networks are likely to accept access programs sponsored by the state. We conclude the report with a discussion of related implications for DEC access programs if our hypothesized relationships hold true.

RESEARCH DESIGN

Study Area

In some areas of New York, hunting access and use of firearms is severely limited. For this study, DEC was interested in learning more about hunting access in more typical areas, where hunting access and use of firearms is less restricted. DEC identified Deer Management Unit (DMU) 78 as the study area. DMU 78 was chosen because it was representative of many DMU's in central New York and it afforded an opportunity to conduct personal interviews at minimal cost (i.e., over-night travel was not necessary). DMU 78 is comprised of parts of five counties in central New York (Chemung, Cortland, Schuyler, Tioga, and Tompkins), in the southwestern portion of DEC Region 7.

DMU 78 is probably representative of other DMU's in Central New York where human populations have been stable or declining. According to U.S. Census Bureau statistics (New York State Senate Research Service 1996), between 1990 and 1995 three New York counties in or near the study area (i.e., Broome, Chemung, and Seneca) experienced a small loss in
population (i.e., population in that county dropped 1% - 4%). Three counties in the study area (i.e., Cortland, Tioga, and Tompkins) experienced small increases in population (1% - 2.4%). Schuyler and Yates were the only counties in the immediate area that had experienced moderate or substantial population growth (2.5% - 4.9% and 5% - 7%, respectively).

**Landowner Sample**

The target group of landowners for this study were those who own 50 or more acres and allow some hunting. We sampled from DEC records of landowners who had applied for a deer management permit in DMU 78. Landowners must own at least 50 acres to apply for these permits, so no additional screening was necessary to identify owners in the target group. During each interview, we asked the landowner to refer us to other people in that area who owned more than 50 acres.

Our strategy identified landowners who had hunted deer at some time in the past (some, however, were not active hunters at the time of the interview). A 1991 study (Siemer and Brown 1993a) found that over 50% of New York landowners with 10 or more acres of rural land had hunted deer or had an adult family member in their household who had hunted deer in the past 12 months. Based on that information, we estimated that our sample might represent as much as half the landowners in DMU 78. We chose to focus on landowners who hunted because we believed that such landowners were more likely than nonhunting landowners to participate in any future public access programs.

**Related study limitations:** Our sampling strategy precluded contacts with landowners who did not hunt or were opposed to hunting as an activity. Thus, when interpreting the results, the reader should note that findings and recommendations from this pilot study are not intended to be generalizable to nonhunting landowners or to all landowners.
The Landowner Interview

We designed a landowner interview (Appendix A) that covered four concept areas: (1) personal characteristics; (2) hunting access practices; (3) landowner-hunter relationships; and (4) opinions toward four categories of potential access programs. Each interview was qualitative and exploratory. HDRU staff followed an interview outline and directed the conversation to ensure coverage of specific study questions.

Hunter Sample

We were interested in three subgroups of hunters: (1) hunters who had established access to private lands, (2) hunters who did not have established access to private lands, and (3) hunters who had quit hunting at least in part due to lack of access to private lands.

We used three methods in an attempt to identify hunters in each subgroup. First, DEC staff conducted screening interviews to identify potential interviewees from the small game harvest survey conducted by DEC in February-March, 1995. Second, we drew a sample of hunter names from DEC records of people who hunted deer at the Tompkins-Cayuga Cooperative Hunting area (King Ferry, New York). Finally, we met with FWMA Board members and local sportsmen's clubs and asked each organization to help us identify people who might participate in an interview. Individuals were encouraged to identify hunters who had concerns about access or had stopped hunting, perhaps because of access concerns.

The Hunter Interview

We designed a hunter interview (Appendix B) that covered seven concept areas: (1) personal characteristics; (2) hunting characteristics; (3) access experiences; (4) social relationships as a hunter; (5) opinions about access programs that involve additional hunter training; (6) opinions about access programs that involve payment to landowners; and (7)
opinions about access programs that involve services to landowners. Each interview was qualitative and exploratory. HDRU staff followed the interview outline and directed the conversation to ensure coverage of specific study questions.

Implementation

We mailed advance letters to potential interviewees and contacted them by telephone to seek permission for interviews. We told interviewees that we would use their information to develop a better understanding of access to private land and inform DEC decisions related to hunting access.

We conducted a set of 40 qualitative interviews with landowners and hunters between October 1995 and April 1996. We conducted most landowner interviews in person and most hunter interviews by telephone. We tape-recorded each interview (later, we prepared a written summary of each tape-recorded interview). At the end of each face-to-face interview, we gave each respondent a coffee mug as a token of appreciation for their willingness to participate in the study.

We interviewed 30 landowners. The final number of interviews was a function of variation across landowners (we stopped interviewing when additional interviews yielded little new information on landowner-hunter relationships and landowner opinions on access incentives).

We planned to interview 15-20 people in each of three hunter subgroups. We chose to discontinue the interview process after completing 10 interviews in hunter subgroup one (i.e., hunters who have some access to private lands). The final number of interviews was a function of variation across hunters (we stopped interviewing hunters in subgroup one when additional interviews yielded little new information about landowner-hunter relationships or
hunter opinions on access incentives). Fewer interviews were necessary with hunters because all the landowners we interviewed also provided information about themselves as hunters.

We conducted no interviews with hunters in two subgroups because our sampling strategy did not result in identification of any hunters in those categories.

**Analysis**

We analyzed the interview data qualitatively by comparing and contrasting the patterns of responses of different landowners and hunters. We used the interview data to characterize landowner-hunter relationships as sentiment-based (i.e., noneconomic relationships based on friendship); kinship-based (i.e., based on family ties); exchange-based (i.e., based on exchange of goods, services, or money); or casual association (i.e., encounters between acquaintances or strangers, characterized by little interpersonal communication). These general categories of social interaction have been used by other authors (e.g., Stokowski and Lee 1991) to describe social networks that influence use of leisure time.

We used interview data to develop hypotheses about landowner-hunter relations and acceptance of potential access program options by people in particular types of landowner-hunter relationships. As we formed hypotheses, we investigated these ideas in subsequent interviews.

**RESULTS**

**Landowner Personal Characteristics**

We interviewed 30 landowners who lived in 21 different townships, in 4 counties: Broome (n=4), Schuyler (n=3), Tioga (n=14), and Tompkins (n=9). We spoke with landowners in their 30's (n=4), 40's (n=4), 50's (n=10), 60's (n=5), 70's (n=6), and 80's (n=1) (Appendix C).
Most (n=22) of the landowners resided on the land discussed. A few (n=3) maintained a deer camp on their land. Five were absentee landowners.

Because of the nature of the sampling process (i.e., we identified potential interviewees from a list of landowners who had applied for a deer management permit), we focused on a subset of the spectrum of landowner types. All of the landowners we interviewed hunted or had a family member who hunted. Most (80%) of the landowners we interviewed had some connection to farming. Three landowners were part of second-generation families who produced agricultural or forest products on their land. Four other landowners were first-generation farmers or forest products producers. Seventeen of the landowners we interviewed had parents who had farmed.

**Nature and Extent of Hunting Access**

About a third (n=10) of the landowners we interviewed maintained an open access policy (i.e., access generally permitted to anyone who asks permission; access without express permission may also be tolerated). Another third (n=8) had a restricted access policy (i.e., strangers who ask permission are granted access on a case-by-case basis). The final third (n=12) had an exclusive access policy (i.e., access maintained for family and friends; strangers not permitted to hunt). As noted above, this sample did not include nonhunters, and none of the people we interviewed had a closed hunting access policy.

**Landowner - Hunter Relationships**

Landowner-hunter relationships can be placed in one of four basic categories: (1) kinship-based, (2) sentiment-based, (3) casual association, and (4) exchange-based. We observed all of these relationships in the study area.
**Sentiment-based:** Access relationships based on friendship were common in DMU 78. Some of the sentiment relationships we observed involved the landowner and one to four other people who had been close friends and hunting companions for many years. Some landowners made comments that revealed sets of rules and norms that operated to control the behavior and number of group members in sentiment relationships. Sentiment relationships often involved a hunting “camp” pattern of behavior. That is, the hunters tended to hunt together with the landowner, they hunted the same part of the season each year, and they stayed at the landowner’s house or camp while hunting.

We also observed what may be a less common sentiment relationship, wherein the landowner forms a greater number of sentiment relationships with hunters, and hunts with different sets of friends at different times. For example, this type of landowner might have a group of hunters stay at his home for the first three days of deer season, then later in the season, he will spend part of a day hunting on his own land with local friends.

**Kinship:** Many landowner-hunter relationships were based on family ties. These kinship networks included immediate family (e.g., fathers and sons, brothers) and extended family (e.g., fathers and sons-in-law, uncles and nephews). In cases where the land was passed down through the wife’s family, hunting relationships often involved members of the wife’s immediate and extended family.

**Casual association:** Some landowners granted hunting access privileges to people they didn’t know well, or didn’t know at all. These hunters included neighbors, casual acquaintances from work, and people associated with friends or neighbors.

**Exchange relationships:** We found evidence of several exchange relationships in DMU 78. For example, the study area contains lands owned by a wood products company known to lease land to hunters. At least two professional guides lease land for deer and turkey hunting in DMU 78. Some parcels in the area are owned by small logging companies that also may
enter exchange relationships. For example, we interviewed one owner of a small lumber company who described a monetary exchange relationship with two turkey hunters.

We also interviewed members of landowner-hunter associations that are based on an exchange of hunting privileges on lands owned by members of the association. Landowner-hunter associations varied with regard to the degree to which the exchange relationship was formalized. Some were informal agreements between a few landowners. Others had a large membership, written bylaws, and organization officers.

**Patterns in Relationships:** Frequently, a landowner was involved in multiple types of access relationships (Appendix E). However, landowners who did not grow up in the area where they owned land, and who had no direct family connections to the land they owned, tended to have only one strong landowner-hunter relationship. Moreover, those new, less-connected landowners were more likely to have strong hunting connections with family, not friends or neighbors. That is, they were more separated from their community with respect to hunting relationships.

**Landowner Opinions Toward Different Categories of Potential Access Programs**

**Greater Liability Protection for Landowners**

We asked landowners to describe their opinions on current liability protection and the relationship between liability and their personal hunting access practices (Table 2). Every landowner we interviewed said that a law change would have no influence on their hunting access decisions. About half said that liability for hunter’s injuries just isn’t a strong concern for them and it isn’t an issue that influences their decisions about hunting access.

Landowners had a variety of reasons for their disinterest in a liability law change. Some were skeptical and had little faith that law changes would give landowners true
Table 2. Landowner responses to questions about whether a change in the law related to landowner liability for hunter’s injuries would influence their hunting access decisions.

<table>
<thead>
<tr>
<th>Would a law change influence your hunting access decisions?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>16</td>
<td>Liability for hunter’s injuries is not a personal concern and is not a consideration in the owner’s access decisions.</td>
</tr>
<tr>
<td>No</td>
<td>3</td>
<td>Not something that would influence owner’s access policy, but owner believes the law should be changed and that the issue of liability needs to be addressed as part of any proposed solution to access problems.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Allowing public hunting would interfere with owner’s personal land use (hunting).</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>A law change wouldn’t help landowners, so it wouldn’t affect the owner’s access policy.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>There is no way to improve on the law as it exists.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner wouldn’t feel safe even if law were changed.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner still wouldn’t participate in any state program that involved liability protection because that would mean loss of control over choice of who hunts on the property.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner already has open access, so a law change would not influence access decisions.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner controls liability his own way; has nothing to do with state laws.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner very concerned about liability and wouldn’t trust people to hunt even if the law were strengthened.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner has insurance and believes that is adequate to protect him from potential liability claims.</td>
</tr>
</tbody>
</table>
protection from liability suits. Some owners were disinterested in law changes because they protect themselves from liability in other ways (e.g., they only grant access to people they trust; they rely on people they permit to hunt to screen out hunters who might be a liability problem). Still others simply won’t consider participating in any access programs because they don’t want to allow additional hunters on their land. A few (three) landowners believed that strengthening the law to protect landowners was important, but they said such changes would have no influence on their personal access decisions.

Services Provided by DEC to Landowners

We asked people if they would be willing to permit public hunting access if DEC provided some package of landowner services (Table 3). Most landowners were disinterested in exchanging access for services. The most common reason for disinterest was that the owner didn’t perceive any need for services that the state might provide. Another common reason for disinterest was that allowing public access would interfere with the owner’s personal hunting. Other reasons for disinterest included: distrust of state government, concerns about control over land use, concerns about liability, reluctance to allow any access to the public, and a belief that services wouldn’t be worth the bother of putting up with public hunting.

A few landowners were interested in services. One landowner said he might participate in such a program if he retained control over specific access decisions (e.g., control over hunting locations and times; ability to reject individual hunters). Two landowners said they would consider accepting services from the state, but this wouldn’t increase access because they already had an open access policy. Two other landowners said they wouldn’t participate in a state program, but they would exchange access to individuals such as neighbors who were willing to provide services.
<table>
<thead>
<tr>
<th>Would services influence your hunting access decisions?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>8</td>
<td>Owner doesn't perceive a need for state-sponsored services.</td>
</tr>
<tr>
<td>No</td>
<td>5</td>
<td>Accepting services would mean allowing public hunting, and that would interfere with owner's hunting.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Owner doesn't trust the state or state programs.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Owner feels services are not worth the bother of allowing hunting (unless services were very high value).</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Owner unwilling to allow public access, regardless of incentive.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner disinterested due to anticipated loss of control over access decisions.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner thinks services are not necessary – says hunters should &quot;just find out what the owner wants.&quot;</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner already allows access, services are unnecessary.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner interested in labor, but wouldn't accept labor from hunters, even through a program, due to anticipated liability problems.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Land holdings too small to consider accepting services.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner would like services, but not if part of an access program.</td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
<td>Owner would consider accepting services, but they already allow public access.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner might allow a few people to hunt in exchange for services.</td>
</tr>
<tr>
<td>Yes and No</td>
<td>1</td>
<td>Owner will exchange access with neighbors who provide services, but will not do so with the state.</td>
</tr>
<tr>
<td>Maybe</td>
<td>1</td>
<td>Owner might have interest if he could retain control over access decisions.</td>
</tr>
</tbody>
</table>
Some of the landowners we interviewed already allowed public access and they didn’t think services were necessary to encourage them or other landowners to allow public access to private lands. Others said their property was too small to consider as part of a public access program.

Monetary Payments to Landowners

Most of the landowners we interviewed were disinterested in programs where they would be paid for hunting access privileges (Table 4). The most common reason for disinterest was that fee hunting would interfere with the owner’s personal use of the property for hunting. A number of landowners were also concerned that they would lose control over their land if they participated in such a program. Most of these landowners were not interested in making money from their rural land, but a few were, and a few more expressed interest in access exchange relationships. Owners who would accept monetary payments still expressed a desire to retain control over the specifics of who would be given hunting access, and how, when, and where those individuals would be allowed to hunt.

Additional Training Requirements for Hunters

We asked landowners if they would allow more access to hunters who had completed more or better hunter education experiences (Table 5). All the landowners said that such efforts would have no influence on their current access decisions. For many landowners, hunter education is not a central issue. Their decisions about access have more to do with personal hunting than the behavior of other hunters. Improving hunter training would not address two of these landowners’ central concerns: personal use of the land and personal control over land use decisions.
Some of the landowners we interviewed were making decisions based on hunter behavior. However, these landowners did not believe that state programs could improve hunter behavior. Some landowners believed that it was worthwhile for the state to encourage better hunter education, but not as a means to increase access to private lands.

Table 4. Landowner interest in programs whereby DEC paid landowners who allowed public hunting access.

<table>
<thead>
<tr>
<th>Would payments influence your hunting access decisions?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>15</td>
<td>Allowing public access would interfere with owner’s personal use of the property for hunting.</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>Owner anticipates a loss of control over access decisions.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Owner fears loss of control and personal hunting rights.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner believes that such a program would be too much bother.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Making money from the property is not an issue for the owner.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner thinks such a program would encourage too many hunters to use his property.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner doesn’t want to lease or share the land.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner not opposed to the idea, but thinks holding is too small to be part of an access program.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner would accept payments, but the land is already open.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner has leased before and would do it again.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner would put up “Ask Permission” signs if the price were right.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Owner would allow public hunting on a small parcel he doesn’t hunt personally.</td>
</tr>
</tbody>
</table>
Table 5. Landowner interest in programs whereby public access to private lands was linked to improved hunter education.

<table>
<thead>
<tr>
<th>Would better hunter ed. influence your hunting access decisions?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>7</td>
<td>Poor hunter behavior hasn't been the basis for owner's access decisions and won't change future decisions.</td>
</tr>
<tr>
<td>No</td>
<td>7</td>
<td>Owner wouldn't allow better hunters either; that would conflict with personal hunting.</td>
</tr>
<tr>
<td>No</td>
<td>6</td>
<td>Owner doesn't believe education will change hunter behavior.</td>
</tr>
<tr>
<td>No</td>
<td>4</td>
<td>Owner doesn't believe hunter behavior is that bad.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Owner would still base decision on personal experience with each individual.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner fears loss of control over access decisions.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner just doesn't want other people on the land.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Owner doesn't believe education would eliminate hunter problems.</td>
</tr>
</tbody>
</table>

Hunter Personal Characteristics

We interviewed 10 hunters. They lived in seven different townships, in 4 counties: Broome (n=3), Cortland (n=1), Tioga (n=1), and Tompkins (n=5). We spoke with hunters in their teen's (n=1), 20's (n=1), 30's (n=2), 40's (n=2), and 50's (n=4) (Appendix D).

Nature and Extent of Hunting Access

Seven of the hunters we interviewed hunted primarily on private land. One hunted primarily on public land. One hunter spent about equal amounts of time on public and private
land. One of the hunters we interviewed had only gone hunting a few times and had no established history of use or preference for private or public land.

**Hunter - Landowner Relationships**

With a few exceptions, the hunters we interviewed maintained a very limited network of relationships with other hunters or landowners. Seven of the hunters depended on one strong connection to get hunting access (Appendix F). The other three hunters had two strong connections that resulted in access. The most common relationship was one where the hunter had access to private land owned by a family friend. In some cases, this family friend was someone with whom the hunter’s father had an access relationship.

**Hunter Opinions Toward Different Categories of Potential Access Programs**

**Greater Liability Protection for Landowners**

We didn’t question hunters about reducing landowner liability because hunters cannot address this topic personally.

**Monetary Payments to Landowners**

We asked hunters what they thought about fee hunting as a practice, and if they were interested in fee hunting opportunities (Table 6). The hunters we interviewed found it acceptable that private landowners might charge a fee for hunting. However, none of these hunters regarded fee hunting as a viable means to significantly increase access to private lands for themselves or hunters in general. Two hunters said they were not interested in fee hunting opportunities because they couldn’t afford to pay for hunting access. Two other hunters said they weren’t personally interested in fee access opportunities, but they believed
Table 6. Landowner interest in programs whereby DEC paid landowners who allowed public hunting access.

<table>
<thead>
<tr>
<th>Would you be willing to pay a fee for access to private land?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>3</td>
<td>Would pay to hunt, but couldn't afford to pay much, and wouldn't do so very often.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Happy with current access opportunities.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Happy with current access opportunities (Believes it wouldn't be right for the state to charge for access to public land, but thinks it is OK for private owners to charge if they wish).</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Happy with current access opportunities (believes many hunters will pay for a high quality experience [e.g., abundant game, controlled experience]).</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Doesn't think landowners want money; they want respect.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Costs too much (but thinks state should give a tax break to landowners who permit public access).</td>
</tr>
</tbody>
</table>

Many other hunters would be willing to pay for a hunting experience where the number of other hunters was controlled, or the probability of taking game was high (due to presence of stocked game birds). Two hunters said they would be opposed to any fee hunting system operated by the state, especially if that entailed a fee to hunters in addition to the regular license fee. However, one hunter favored a fee hunting system in the form of tax relief for landowners who provided hunting access to the public.

**Services Provided by DEC to Landowners**

We asked hunters if they were willing to provide services to landowners. We also asked them if they thought providing services to landowners was necessary to create hunting
access opportunities (Table 7). Hunters expressed a range of opinions on this topic. One hunter thought providing services would create access opportunities and he said hunters should work hard to provide services and do other things to cultivate a strong relationship with the private landowner. Several hunters thought providing services was important, but they believed that the state should be the middle man providing the services (e.g., one hunter suggested that the state should create a system that linked landowners with deer damage problems to trained bowhunters). Other hunters thought providing services to landowners would be ineffective. They thought such actions would fail to address the real issues behind access decisions (i.e., safety and trustworthiness).

Additional Training Requirements for Hunters

We asked hunters if they would be willing to complete additional hunter training requirements (Table 8). We also asked them if they believed improvements in hunter education would influence landowner attitudes about permitting public access for hunting. One hunter believed better training would help matters and he said he would be willing to participate in advanced training or hunter certification programs. However, the other nine hunters were either unwilling to accept additional training requirements, or didn't believe such changes would influence hunters' behavior or landowners' decisions.

RECOMMENDATIONS

How can a state wildlife management agency design hunting access programs that address landowners' concerns about retaining personal control and personal use of land? Based on the results of landowner and hunter interviews, we offer the following recommendations for consideration by DEC or other organizations seeking to increase public hunting access opportunities on private lands in New York State.
Table 7. Hunter opinions related to providing services to landowners in exchange for hunting access privileges.

<table>
<thead>
<tr>
<th>Would landowner services influence access decisions?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1</td>
<td>Hunters couldn’t provide enough services to make it worthwhile for the landowner to grant access on that basis alone.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>His family has land and they wouldn’t be influenced by an offer of services, so he didn’t think other landowners would be interested either.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Landowners may expect services as part of a business transaction, but hunting access isn’t a business transaction for most landowners.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Services won’t help. Things that identify a person as safe and trustworthy are more important to landowners.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Services won’t help, but a tax break would influence landowners’ decisions.</td>
</tr>
<tr>
<td>Yes</td>
<td>2</td>
<td>Services will influence landowners, and it is up to the individual to cultivate a good relationship. Service should be part of that relationship.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Landowners appreciate services like those provided to participants in the cooperative hunting areas at King Ferry, NY.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Services will influence landowners, but the services should be provided through a state-run program, not by individuals. For example, DEC could provide a service as a “middle man” who connects landowners with deer damage to skilled bow hunters.</td>
</tr>
</tbody>
</table>
Table 8. Hunter willingness to complete additional hunter training as a means to increase their chances of getting hunting access to private lands.

<table>
<thead>
<tr>
<th>Would you be willing to complete additional hunter education?</th>
<th>Freq.</th>
<th>Reason for response</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>1</td>
<td>Doesn’t believe it would help him get additional hunting opportunities.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Doesn’t believe additional training is necessary to get access; just need to use basic ethics and common sense.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Believes current hunter education requirement is sufficient.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>A course cannot teach people anything more than they will learn in their first few years of hunting. You have to catch people when they are young.</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>Hunter behavior is not a function of hunter training courses; requiring additional hunter education won’t influence landowners’ decisions anyway.</td>
</tr>
<tr>
<td>No</td>
<td>1</td>
<td>Doesn’t think he needs another course; he believes he already knows everything necessary.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Refresher course is a good idea, but many hunters will be upset about additional education requirements.</td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>Would be willing to go through a rigorous certification process if it were directly linked to access opportunities on private land.</td>
</tr>
</tbody>
</table>
Design Multi-Dimensional Programs

Hunting access is sometimes portrayed as a unidimensional problem that calls for a unidimensional solution. Nongovernment organizations, for example, may portray access restriction as a problem that stems from poor hunter behavior, so they propose additional hunter education as the solution. But this study (and others) reveal public access to private lands as a multifaceted issue. Addressing any single landowner or hunter concern in a stand-alone program is not likely to increase hunting access opportunities. For the best chance of success, DEC should design initiatives that are multi-dimensional and integrated across program areas. DEC access initiatives should consider the landowner’s need for control and decision-making information, among other things.

Address the Landowner’s Need for Control:

One of the clearest findings that emerged from this work was that private landowners harbor a strong desire to remain in control of decisions about the use of their land. Control is an issue that cuts across landowner types and access program types. Anticipated loss of control over landuse decisions would be a barrier to acceptance of new access initiatives for many landowners. Access programs will only be attractive to landowners who perceive that the program maintains or increases their personal control over public use of their land.

DEC can increase the chances that landowners will adopt access programs if the agency makes landowner autonomy over land use decisions a priority consideration in program development. Landowners who participate in a state-sponsored access program should retain the ability to: (1) deny any individual access privileges, and (2) set guidelines determining when and where people may hunt.
Reduce Landowner Uncertainty:

In focus group research with farmers, Morris et al. (1996) found that landowner uncertainty about the financial costs and benefits of creating wildlife habitat is a major impediment to increasing wildlife habitat on grain farms in Eastern North Carolina. Morris et al. (1996) asserts that providing landowners with better information can remove uncertainty as a barrier to creating wildlife habitat on private lands. We suggest that landowner uncertainty also will be a barrier to adoption of hunting access programs by New York State landowners. At least three types of landowner uncertainty are likely to impede hunting access program adoption. DEC access programs should address uncertainty related to: (1) financial outcomes, (2) hunter behavior, and (3) personal liability.

Financial uncertainty: Removing financial uncertainty will be a key to involving a subset of central New York landowners. This subset includes agribusiness owners and private industrial forest owners. Such owners are psychologically used to dealing with land use decisions in formally structured ways, and financial costs and benefits may be the most important considerations in their decisions about involvement in programs to provide public hunting access.

Access programs should be accompanied by clear information about the financial costs and benefits landowners would incur by participating in a DEC access program. One way to reduce financial uncertainty would be to establish and demonstrate a program that included monetary payments to landowners who provided public access. Pilot programs should provide examples of the financial costs and benefits that are likely to be incurred by people who have different parcel sizes, land types, and land use goals. Programs should be piloted with owners who have the characteristics of the target group that program is intended to serve.
(e.g., homeowners with small nonfarm properties; hobby farmers; agri-business owners with large parcels; nonindustrial private forest landowners; wetlands owners).

Agency resources will influence decisions about the number of pilot programs that can be initiated. The agency should place a priority on programs that target agri-business or forest products business owners with large parcels. Some interview data suggested that low income landowners with smaller parcels (less than 100 acres) may be interested in programs that involve payments, tax relief, or services like free fence materials or labor to install fence. However, many of those owners would be inappropriate targets for programming because they own parcels with poor wildlife habitat, in areas that include safety zones near homes. Landowners who own hundreds or thousands of acres are a more appropriate target group for programs that involve an economic exchange relationship because they are pressured to make land use decisions based strongly on economic factors.

In most localities within central New York, land ownership is highly fragmented. This fragmentation represents a potential impediment to the effectiveness of any hunting access program developed by the State. To overcome this impediment, DEC should consider developing pilot programs that create an exchange relationship on blocks of land that include multiple owners.

**Hunter behavior:** One way to reduce landowner uncertainty about hunter behavior would be to link access programs to programs that prepare participating hunters to meet landowner-generated standards of practice. It should be noted that such hunter training is probably necessary, but not sufficient as a means to facilitate landowner participation in hunting access program opportunities. Hunter training that is not directly linked to an access program may meet other goals, but is not likely to affect landowner decisions about hunting access.
Personal liability: For a subset of central New York landowners, concerns about liability for hunters' injuries will be the most important barrier to participation in hunting access programs. If DEC wishes to reach these types of landowners through a hunting access program it will have to reduce uncertainty about issues of liability for hunters' injuries. Several types of uncertainty may exist for any given landowner. Landowners may be uncertain about their rights under the law, the probability that they will experience a lawsuit, or the consequences of a lawsuit.

Reducing uncertainty about liability for hunters' injuries will be a challenging task. In New York State, the General Obligations Law (ECL 9-103) states that private landowners have no obligation to warn recreationists about hazards on their property, nor do they have any special obligations to keep their premises safe for entry by recreationists, including hunters. This statute holds for landowners who receive no payments or other considerations from recreationists. The practice of posting does not affect liability, but it does afford the landowner a means to support charges that a recreationist has knowingly trespassed.

Periodically, New York State Senate or Assembly members introduce bills intended to address landowner concerns about liability associated with permitting public access for outdoor recreation. For example, New York State Senate Bill S.2803 (House Bill A.4793), introduced during the 1997-1998 Regular Sessions, would expand the types of recreational activities covered by landowner liability protections in the General Obligations Law. The bill also would limit the cost of liability insurance coverage for landowners who make land available to the public for recreational purposes.

There is little evidence to suggest that such changes would have any effect on landowner decisions about public access for recreation like hunting. The list of recreationists from which landowners are protected has been expanded before, with little documented impact on landowner decisions about public access. Deeper changes in the law seem
necessary to reduce landowner uncertainty in this area. Such legislative changes are largely outside the control of wildlife management agencies. However, the agency may be able to facilitate dialogue about legislative revisions by serving as a source of accurate information on what other states are doing to address issues of landowner's legal obligations to recreationists.

DISCUSSION, PART 1: METHODS FOR FURTHER RESEARCH

Our third and fourth study objectives were to develop hypotheses about how access relationships are formed and how different types of landowners and hunters would respond to new access incentive programs. Based on information from this study and another HDRU study conducted by Enck (1996), we developed a conceptual model of landowner-hunter networks in New York State. In Part Two of this section, we describe our model, which includes a set of hypotheses about the way that people in given social networks will respond to access incentive programs sponsored by DEC.

The hypotheses we advance in Part Three of this section are tentative and untested in New York. Additional quantitative research will be necessary to verify the structure of landowner-hunter networks, and thus test the propositions of our model. We believe that a quantitative approach called network analysis (Knoke and Kuklinski 1982) should be used for that purpose. We begin this section by describing network analysis. Then, we use information from our hunter and landowner interviews to develop an example of the way that researchers could apply network analysis in future studies.

If one assumes for purposes of discussion that our model will be verified by later studies, one can project a number of implications for DEC as access program designers and implementors. In Part Four, we conclude this section (and the report) with a discussion of those implications.
Network Analysis as a Tool to Understand Hunting Access Relationships

Most research related to hunting access can be categorized as an attempt to identify the attributes of land, landowners, and land users associated with different access practices. This work has created valuable insights, but also leaves some compelling questions unanswered. An approach called network analysis offers researchers an alternative way to analyze social interactions, like hunting access relationships. Network analysis is compelling as a tool to help researchers quantify and explain why particular attributes are associated with hunting access decisions. In the following pages, we briefly define network analysis and we describe several properties that future researchers could use to differentiate between network types.

What is Social Network Analysis?

Social Network analysis assumes that every person participates in a social system and that each person forms perceptions, makes decisions, and takes actions that are influenced by other people in that social system. The term "network" refers to "a specific type of relation linking a defined set of persons, objects, or events" (Knoke and Kuklinski 1982:12). People can and do belong to multiple networks simultaneously. Social network analysis is the examination of a specific subset of relations that connects members of a social system. For example, we might study a friendship network, a business communication network, a formal power network, or a hunting access network.

Social networks can be conceptualized as systems of nodes linked by ties (Stokowski and Lee 1991). The nodes of the social network are individuals (e.g., landowners, hunters) or groups (e.g., a landowner-sportsmen's club, corporate landowners, natural resource management agencies). Social relationships are the ties that link two or more nodes together. Ties can take a variety of forms. They may result from kinship, casual association, or
exchange relations. Examining the multiple personal relationships of each individual actor
(Stokowski and Lee 1991) is intended to produce practical definitions of different patterns of
social interaction.

**Defining Properties of Social Networks**

Social networks can be defined on the basis of many different properties. We believe
that it would be useful for future researchers to examine and define landowner-hunter social
networks based on four characteristics: network structure, strength of ties between members,
sense of community, and rules that maintain network integrity.

**Network Structure:**

Researchers refer to the overall pattern of interconnections in a network as its structure
(Stokowski and Lee 1991). Researchers studying communication and innovation-adoption
networks have suggested structure labels like: "stars" (central communicators), "isolates"
(actors with few ties to others in a network), "liaisons" (actors who link cliques without being a
member of either), and "bridges" (a clique member who provides a link to another clique)
(Stokowski and Lee 1991). Researchers have used a variety of characteristics to describe the
structural aspects of social networks (Rogers and Kincaid 1981). These include: network size,
density, centrality, distance, and clustering patterns (e.g., roles, sub-groups, cliques, friendship
circles) (Stokowski and Lee 1991). We believe it will be useful for future researchers to
examine structure with regard to group membership size, group clustering patterns, and
distance between group members.

**Strength of Network Ties:**

Researchers can examine a range of interactional criteria to measure the strength of
ties between individuals or groups. These criteria include: frequency of communication,
amount of time spent interacting, reciprocal services, emotional intensity, and intimacy (Stokowski and Lee 1991). In a given study, the interviewer could assess strength of ties by asking a given respondent about a set of these criteria for each other person (landowner or hunter) they mention. We believe future researchers should attempt to quantify strength of network ties by asking hunters to clarify the strength of their hunting-related connections to immediate family, extended family, friends, neighbors, and acquaintances.

Sense of Community:

We believe that community relationships influence access opportunities. Stokowski and Lee (1991) use a definition of community defined by Bender (1978:6-7). They refer to community as "a fundamental and enduring form of social interaction . . . best described as a network of social relations marked by mutuality and emotional bonds." This definition of community encompasses a range of locales and social relationships. These authors suggest that one look for community in the "extended social structures of patterned community relationships" (Stokowski and Lee 1991:97). The structures they refer to are "the relational attachments and interactions that underlie 'sustained associations' of people (Shibutani 1986:205)" (Stokowski and Lee 1991:97). Future research should characterize the sense of community hunters and landowners hold with regard to hunting relationships.

Political/Economic Paradigm vs. Social/Cultural Paradigm:

All social relationships are guided by rules of interaction. We believe that future researchers can distinguish between hunting access networks based on the use of two distinct types of rule-making structures: political/economic and social/cultural.

Decision-Making in the Political/Economic Paradigm: Hunting activities are governed and affected by political and economic rules (e.g., regulations, laws, and market forces). For
example, hunters are required to complete a 10-hour training course, purchase a hunting license, and abide by state regulations regarding when, where, and how wildlife may be taken. Landowners are obliged to follow regulations and laws, as well. Additionally, both hunters and landowners may be affected by economic rules. For example, landowners may prohibit hunting because it is perceived to interfere with profit-making enterprises (e.g., production of row-crops or wood products). Conversely, hunting privileges may be granted for a fee, where market forces make such an exchange economically viable.

In this sense, hunting is merely a specific example of activities which occur within and reflect the rules of the dominant social paradigm in western society. Western society is dominated by a political/economic paradigm that is based on the dual notions of exclusivity and governmental power. In this paradigm, the world is made up of human subjects and nonhuman objects. Subjects own themselves and can obtain exclusive ownership of any object. Rights of exclusivity associated with ownership of private property (i.e., objects) are endowed and supported by governmental powers invested in the State. That is, the State exists to uphold the owner's rights to exclusive ownership of objects like land. Within the political/economic paradigm, people invest in exchangeable objects and the State protects and sanctions their rights to exchange objects (like private land) with other people. The nature of the political/economic paradigm results in objectification and commoditization of the land and relationships between people and the land.

Any given hunter or landowner faces a set of political/economic rules imposed by the state and society at large. It is useful to recognize that opportunities and constraints produced by the State's rules and regulations pertaining to hunting and hunting access may either be supportive of, or in conflict with, social rules. Thus, the actions and policies of the State may facilitate or impede formation of social networks that produce hunting access on private lands.
Decision-Making in the Social/Cultural Paradigm: Hunting activities may be influenced by more than political/economic rules. Hunting may also be governed and affected by social or cultural rules (e.g., norms and social sanctions). Which individuals become hunters, fill certain hunting-related roles, or express specific types of hunting-related manifestations may all be determined to some degree through social rules. For example, in some groups, decision-making power resides in experienced adult hunters. New hunters (children and adults) must go through an apprenticeship period, and the experienced hunters (those who have already attained a certain status) decide when new hunters can participate fully in the various aspects of the hunting experience (Enck 1996).

Social and cultural rules are a product of a social/cultural paradigm. A social/cultural paradigm is based on notions of shared identity and meaning. Within such a paradigm, people subjectify the world around them (i.e., they temper their understanding of objective facts based on personal experience). For example, within a social/cultural paradigm, the objective (legal) definition of exclusive private property is tempered by a sense of "ownership" created through intimate knowledge of the landscape and the people in a particular place. Both personal and community identity are produced and reinforced through shared knowledge, meaning, and personal experience. Within a social/cultural paradigm, the land on which someone lives or works and the plants and animals that occur there may become as much a part of their identity as any object they accumulate, or behavior they exhibit.

A parcel of land or other possession (in the political/economic sense) can contribute to the identity of more than one person. In this way, many people can say, "this is my land" without indicating exclusive or legal ownership. The number of people who gain part of their identity from a thing depends on the number who have knowledge of it and understand the same shared meaning of it. Because of the importance of knowledge and understanding in
producing and reproducing identity, knowledge and understanding are controlled by those who share it.

Rights related to knowledge and understanding are endowed by the group of people who share the identity. Endowment occurs through systems of kinship and long-term friendships. Experienced individuals, usually elders and those who have been associated with a tract of land the longest, are respected as repositories of knowledge and are the ones who transfer meaning to less experienced individuals. Knowledge and meaning are not generally shared with strangers—that protects community identity from outside control. However, knowledge and meaning may be shared with long-time friends and neighbors who also share similar values and attitudes.

Social rules that guide the sharing of knowledge and meaning are based on age, kinship, and gender. Older, more experienced individuals make all important decisions and teach younger, less experienced individuals about becoming a landowner or hunter. Relatives, especially sons, are higher in the social hierarchy. Men are generally more actively involved than women. These social rules act as guidelines through which people can, cannot, or must relate to others in certain ways. The rules allow certain behaviors to occur (a person can do it), prohibit some behaviors (a person cannot do it), and make other behaviors expected (a person must do it or face social sanctions).

Social rules are not as uniform or widespread as political/economic rules. Social rules are imposed within one’s own social networks, so they vary across social groups. What this means is that each hunter and landowner may operate within a different mix of rules, so each potentially faces a different set of opportunities and constraints related to hunting access (among other things).
DISCUSSION, PART 2: OUR MODEL OF LANDOWNER - HUNTER SOCIAL NETWORKS

As we reflected on the information we collected in this study, and the information collected in another HDRU study conducted by Enck (1996), we developed a set of hypotheses about landowner - hunter interactions. The result of our reflection is a model of two particular types of hunting access networks. We call them Insider Networks and Outsider Networks. In this section, we describe those two hypothetical networks.

Within our model, Insider and Outsider Networks are comprised of two types of landowners (insiders and outsiders) and two types of hunters (insiders and outsiders). We begin the section by giving our definitions of those landowner and hunter types. We follow with characterizations of the properties that define the prototypical or ideal Insider and Outsider Networks within our hypothetical model. We define Insider and Outsider Networks based on differences in four properties: the structure of the network, the strength of ties between different potential members, the sense of community held by members, and the rules that maintain network integrity. Table 9 summarizes our hypotheses on the defining properties of each network. We use hunter and landowner quotes throughout the section to illustrate the properties of each network that we believe researchers will be able to document in future studies. We use the letters “L” and “H” to designate quoted materials from landowner and hunter interviews, respectively.¹

¹ The reader is reminded that we use interview quotes to help illustrate the concepts within our model, not as verification of model elements (verification can only come from later quantitative research).
Table 9. Defining characteristics of Insider and Outsider Networks.

<table>
<thead>
<tr>
<th>Defining Property</th>
<th>Insider Network</th>
<th>Outsider Network</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Network Structure</strong></td>
<td>• Large kinship membership.</td>
<td>• Small kinship membership.</td>
</tr>
<tr>
<td>(network size, interactions, positions, roles, distances)</td>
<td>• Family members close by.</td>
<td>• Family members distant.</td>
</tr>
<tr>
<td></td>
<td>• Large friendship circles.</td>
<td>• Small friendship circles.</td>
</tr>
<tr>
<td></td>
<td>• Friendship circles local.</td>
<td>• Friendship circles distant.</td>
</tr>
<tr>
<td></td>
<td>• Many “stars.”</td>
<td>• Many “isolates.”</td>
</tr>
<tr>
<td><strong>Strength of Network Ties</strong></td>
<td>• Ties to immediate family strong and common.</td>
<td>• Mixed ties to immediate family.</td>
</tr>
<tr>
<td>(frequency, intimacy)</td>
<td>• Ties to extended family strong and common.</td>
<td>• Mixed ties to extended family.</td>
</tr>
<tr>
<td></td>
<td>• Ties to friends strong and common.</td>
<td>• Mixed ties to friends.</td>
</tr>
<tr>
<td></td>
<td>• Ties to neighbors strong and common.</td>
<td>• Weak ties to neighbors.</td>
</tr>
<tr>
<td></td>
<td>• Reciprocity occurs frequently with multiple neighbors.</td>
<td>• Reciprocity absent or confined to a single neighbor.</td>
</tr>
<tr>
<td></td>
<td>• Weak (stranger or acquaintance) connections common.</td>
<td>• Weak (stranger or acquaintance) connections uncommon.</td>
</tr>
<tr>
<td><strong>Sense of Community</strong></td>
<td>• Strong.</td>
<td>• Weak.</td>
</tr>
<tr>
<td><strong>Rule-Making Paradigm</strong></td>
<td>• Cultural boundaries strong.</td>
<td>• Legal boundaries strong.</td>
</tr>
<tr>
<td></td>
<td>• Social/cultural when dealing with Insider Hunters.</td>
<td>• Political/economic when dealing with Insider Hunters.</td>
</tr>
<tr>
<td></td>
<td>• Social/cultural when dealing with Insider Landowners.</td>
<td>• Mixed when dealing with Insider Landowners.</td>
</tr>
<tr>
<td></td>
<td>• Political/economic when dealing with the state.</td>
<td>• Political/economic when dealing with the state.</td>
</tr>
<tr>
<td></td>
<td>• Mixed when dealing with Outsider Hunters.</td>
<td>• Political/economic when dealing with Outsider Hunters.</td>
</tr>
<tr>
<td></td>
<td>• Mixed when dealing with Outsider Landowners.</td>
<td>• Political/economic when dealing with Outsider Landowners.</td>
</tr>
</tbody>
</table>
Landowner and Hunter Types:

Landowners and hunters differ with regard to personal characteristics, background, and interests. We believe it is useful to conceptualize landowner and hunter types as part of a continuum. We label one end of each continuum as "insiders." At the other end of each continuum are people we label as "outsiders" (Figure 1). In the following paragraphs, we describe the characteristics of the prototypical landowners and hunters one would find at the ends of the spectra in our model.

Insider Landowners:

We hypothesize that Insider Landowners are people who grew up in families that have owned a property for more than one generation. They are people who earn income from their land, or their parents did, and the land has been passed down through the family. We believe Insider Landowners are people who feel a strong sense of community identity with similar rural residents.

We believe Insider Landowners are people with a strong desire to control how their land is used. With regard to hunting, Insider Landowners want to control hunter behavior, hunter numbers, and property damage. Insider Landowners expect hunters to observe special guidelines related to things like taking female deer, taking fawns, shooting at running deer, using 4-wheel drive vehicles, honoring safety zones, and hunting during the first week of deer season.
Insider Hunters:

According to our model, Insider Hunters are usually long-time residents of the area where they hunt. They're often neighbors of Insider Landowners and may themselves be Insider Landowners. Insider Hunters may work outside of the local area, perhaps in a nearby city, but they have roots in the local area. These connections give them a strong sense of local identity, and they engender systems of beliefs and values that the hunter shares with Insider Landowners.

Outsider Landowners:

We hypothesize Outsider Landowners to be predominately first-generation landowners. They may live on their rural land year-round, but they usually grew up somewhere else, often in a more urbanized, populated area. They usually work outside the local community. Some Outsider Landowners purchase land to have a piece of rural America for their exclusive use. They do not want anyone else on their land, including their neighbors. Other Outsider Landowners hold land for investment or production purposes.

We hypothesize that Outsider landowners have a strong desire to control hunter behavior, hunter numbers, and property damage. In that sense they are similar to Insider landowners. However, we believe they can be distinguished from Insider Landowners in the way they attempt to achieve control (this is discussed in the sections on networks).

Outsider Hunters:

We hypothesize that Outsider Hunters generally do not live in the local area where they hunt. They may be residents of metropolitan areas or residents of distant rural areas. They are often identified as "city-hunters" or "out-of-towners" by residents of the area where they hunt. The locals don't believe these visitors are part of the local community identity. We
believe the Outsider Hunter knows he is a visitor and feels little or no connection to the local community. He simply hunts there and then leaves.

**Insider Networks**

**Structure of Insider Networks:**

In our model, Insider Networks are created when Insider Landowners provide access to Insider Hunters. Insider Networks can be extensive. Insider Networks are likely to involve multiple landowners and links to multiple groups, including: immediate family, extended family, friends, and neighbors. Thus, the typical Insider Network takes on the structure of a wagon-wheel, or a star, with an Insider Landowner at the center and connections radiating to other group members (Figure 2).
The most extensive Insider Networks build around a landowner who is a community "insider," well connected to local communication networks. These owners allow many people to hunt, even though they do not necessarily have large landholdings, productive agricultural land, or top quality wildlife habitat. We hypothesize that providing access gives them status in the community and becomes part of the reciprocal relationships they build with people in the community. These owners may also be community hunters (Enck 1996), and probably hold strong affiliative hunting motivations (Decker and Mattfeld 1988).

Insider Networks may become smaller over generations. Networks get smaller as reciprocal relationships change with landowner turnover. Loss of reciprocal relationships is illustrated in the following quotes.

"There's a farmer over here, he has quite a bunch hunting with him, but I think its just, like his bunch. But we always used to drive down his roadway, park the truck and walk up on the hill, and come across. He says he wished we wouldn't do it anymore, So, to please him, we don't do it anymore. But in return, please don't you do it to us. So, one hand washes the other.

... He bought this place after we had this. I don't blame that guy, I really don't blame him one bit. He kinda wants to keep the land for him and his buddies, and the same way here. You know. But yet, every once in a while, him and his buddies sneak up around on top, and, you know, what are ya gonna do? ... as long as they walk, I really don't care. But when they start driving vehicles up there, ... then you put up a bunch a poster signs up along the road and the next day they're all torn down, so what does that tell ya? They know its posted -- just don't get caught now." (L18)

"Used to be ... when it was all farm land, you know, you knew everybody; everybody knew you. If you wanted to go on hunting season, you just took your gun and went, and you walked across the land and hunted. They didn't care. But now its an entirely different thing, you know. Nobody wants you out there at all. And that's one reason why, I have posted the land in the last few years. I didn't for a long time. And that's one reason I did, I guess." (L17)

Insider Networks tend to become smaller as landowners age (e.g., an Insider Landowner may lose all direct contacts with other hunters as age and infirmity advance).

For example, L5 is someone we would classify as an Insider Landowners. He is a 76-year-old retired farmer, born and raised in the local area. He operated a 100-head dairy farm, and later, a fairly large poultry operation. He and his brother owned 450 acres. They split the parcel in half in 1975; he kept 225 acres. He later sold 50 acres to his son and 115 to another
person. He now has only 60 acres. As this owner aged, his siblings passed away and his connections with extended family declined. The network that exists now is centered on his son, who he said may implement more restrictive access policies. Another person we would describe as an Insider Landowner also suggested that his son might eventually change the access policies.

"...The only strangers I ever met is if somebody gets lost or some fellas were chasing a wounded coyote all the way across here one time. Which is fine. For instance a wounded deer. You know, they don't have to have permission. I don't want the deer to die in the woods. I'd let 'em go on. ... of course, my son thinks I should post it all, and restrict it, and don't let um come up with the motorcycles and, but so far, I'm Mr. Lenient. If something major happens, then I might change my mind." (L10)

Insiders sometimes form landowner-hunter cooperatives, where landowner-hunters have rights to hunt on the land of other owners in the group. We hypothesize that landowner-hunter cooperatives are formed by landowners seeking to protect and insulate themselves from outsiders.

"We had cases where people were more or less running over some of the farmers. They'd come in from down in New York City or Syracuse, Binghamton, different places and big cities you know, and they'd come in and they wouldn't ask permission, they even tried to run some of the farmers out while they were hunting, and so we got a club together and we had some rules got made up, and you couldn't hunt if you didn't belong to the club. And the land was posted... cause some of these people think, 'the land is there, so we're gonna use it.'" (L11)

Owning land in the community was a prerequisite for club membership; adherence to group norms bound the members together as an insider network. One such club developed in Lockwood, New York. At one time the club in Lockwood had approximately 300 members and controlled hunting on approximately 12,000 acres. The club set a guideline that new members had to bring in enough land so that the club could maintain a ratio of 40 acres per member.

"I was in what they called the Lockwood Farmers and Sportmens Club, and it was all posted... And basically, the landowners had control of it. They allowed people to come in and hunt it, plus they gave permits out at the time as to how many people could hunt it. They could become a member... for $10... and then if they put in 4 hours of work, it was $5, so a very small amount of money. And that seemed to work quite well for a number of years [that was about 30 years ago]." (L4)
These cooperatives seem to be much less popular than in times past. The general pattern seems to be that membership declines as older owners pass away or sell their land. During those transitions, the parcels become smaller and the newer owners establish more restrictive or exclusive access policies.

"... It's become a lot smaller [membership declining] ... the only problem with it is the large parcels of property have since been bought up. I mean a lot of the parcels have changed hands. ... they bought the property, they'd like to hunt it themselves, and some people did stay in, some people didn't. And the membership, the people that were real active in it originally, they basically, a number of them have died. It's become less, it's not a real focused deal. I think they have one meeting a year, ... and I doubt that they have much more than 20-30 people who go to that. ... its pretty much lost interest." (L4)

"We had a group. Most of them were farmers there. And of course, what has happened, in the area where we live, we lived on the road there about a mile and a half. And there used to be 12 farms there, amongst which ours was one, but then gradually all of us moved and went to work in the factories and sold the cows, so there are only one or two farms left. But we got together with all of them and all of us just posted it, all along the road. But we were reciprocal. We let anybody hunt on anybody's land. We tried not to do it on the first day, obviously. It worked out quite well, but it gradually faded because of families disseminating, or moving away, you know what I mean?" (L9)

"Club is pretty well gone now ... I guess because of problems being caused ... inactivity mostly [caused the decline] ... lot of work keeping a thing like that going ... course they had people come from out of town ... people that weren't willing to abide by the rules ... " [were some people dropping out?] "Well, that's part of the reason why there's inactivity, cause there's people who dropped out. Like the guy I was telling you about who didn't want any hunting on his place. Now, he died, and the guy that has the place now he likes to hunt, but he didn't want to be in the club, cause he wanted his friends to hunt with him ... the places are sold off and split up, so that we got down to where there wasn't enough acreage in some of these places to have 'em be members. There's all sorts of little things that came along to complicate it." (L11)

One interviewee suggested that the club approach was popular with farmers because most of them were interested in the practice of drive hunting. Drive hunting requires access to more area than still hunting, so farmers with considerable acreage had an incentive to participate in landowner clubs. Another interviewee linked the demise of cooperatives to flagging interest in the practice of driving deer.

[Why are these clubs falling apart?] "... there are some of em in the club that don't like a lot of people, like if we get together we might get 5 or 6 guys and put 3 drivers and 2 watchers and go drive it. A lot of people don't like that. ..." (L7)
Strength of Network Ties:

Insider Networks often exhibit strong ties between Insider Landowners and immediate family, extended family, friends, and neighbors. Insider Landowners tend to form multiple reciprocal hunting agreements with other insiders. For example, one Insider Landowner explained that "many" neighbors hunt his land.

"The neighbors and I have a good understanding on the property. You hunt on mine and I hunt on yours and we both kind of respect each other for it. I mean, And I have several neighbors that bound this property and its open hunting to the neighbors and the people they actually hunt with, and we rarely if ever had any disagreements about anything, and if we do, its just somebody's just hunting too close to the house, or somebody's doing something like that. It's been a real good agreement that way." (L2)

Insider Hunters:

Some people are Insider Hunters in the area where they grew up, and Outsider Hunters in the area where they live as adults. We hypothesize that Insider Hunters recognize that they gain access by virtue of being an Insider; they know that their status as an insider is spatially limited.

"The problem is, I grew up in the area. Now if I were to go to the other side of Owego to an area that I didn't grow up with the folks, it would be a different story. ... As an example, when we were hunting in the Candor area, till it was posted, we were welcome on that property. But then, some people decided that they wanted the right to hunt there, so they posted it, and they don't want anybody else in there. That's ok; that's why they put the posters up. But they felt that they didn't want us there, so we don't hunt there anymore ..." (L7)

"... There's less places to hunt. And frankly, if I were new and came into an area like Tioga County, I'd be a little concerned to where I hunted, because there's a lot of it that posted and people don't want you on, and... But having lived here all your life you build up certain informal relationships with people, and you know where you can hunt and where you can't. And you know, at least I do, I don't go where I'm not supposed to, you know. But I have friends and I call and I ask if I can hunt, or I hunt there year after year and they don't mind." (L8)

Even though these people may lose access to places they hunt as outsiders, they can still find someplace to hunt because of their connections to an Insider Network. We believe that Insider Networks provide members with an access "safety net" that keeps them involved in hunting.

Insider Hunters understand the reciprocity relationship and may find it easy to hunt on private lands because they understand how to help Insider Landowners.
"I have two farmers that I hunt. I shoot their pigeons for um and they love to have me come and show up and shoot their pigeons around their barns, and I get to hunt their property, and we go in with groups, I mean 3-4 people and we shoot ... and you get to know um, and they think you're a nice guy and they allow you hunting on their property. .. one is a 100-cow dairy operation and we'll go in there right around the barn. And we'll maybe shoot 30-40 pigeons in a day. And that piece happened to be on the river [so now he has access for duck hunting] and I mean, then his brother. I hunt his brother's property. You know, if they know you're respectable, then access isn't a problem." (L2)

We hypothesize that Insider Hunters don't have to be close friends with an Insider Landowner to become part of the Insider Landowner's network.

[Do you know of landowners who are changing the way they permit access because of hunter behavior?] "Yeah. I told you about my neighbor. I can relate to that. I know several people he's run off his land. He doesn't want anybody in there. He tolerates me because he almost looks at me like a friend, but I wouldn't say we're friends, really, as you and I might classify a friend, but he's known me since I was a pup, and a, he treats me very respectfully, and never questions my being on his property. But I know of other people who he's not been very charitable with, on the same hillside." (H7)

"You know, I grew up right here. All I have to do is tell em my name, and they say, 'oh, ok', but they don't challenge me. Most of 'em know me by sight." (H7)

Sense of Community:

We believe that members of Insider Networks feel a strong sense of community identity and a sense of obligation to other community members. Insider Landowners often follow access policies that reflect the open access tradition they encountered in their local community as youth. Even though they hold exclusive ownership rights by law, they feel obligated to permit hunting access.

"I've always been very generous. Because when I was a kid growing up I always disliked if I wanted to woodchuck hunt or deer hunt and it was posted. You always should stop and ask um, but usually they'd let ya. I don't remember anyone except [name] refusing to let us hunt. So I've always -- people come up and hunt, I tell um to come up and hunt. But now that I'm retired and I'm here ... during the two weeks or three weeks of deer season, now I tell um they can come up the second week. So that's the way I work it now." (L10)

... I don't feel comfortable puttin up a posted sign, like nobody can step foot on my land, ya know? ... I don't really like puttin up a posted sign, because if I do that, then I'd feel that I shouldn't hunt on anyone else's land. If I don't allow anyone here, then I shouldn't be huntin on anybody else's land. And I do, occasionally, on some of the neighbors around here." (L12)

[...how did you learn how to treat landowners. Did you learn that growing up?] "Oh, yeah. Usually, like a lot of times ... I lived over in Waverly when I first started hunting and toward the end of the night or whatever, I'd go over the hill. And if I seen a deer or something like that, in the field or something like that, I'd stop and ask the owner if I could go down in there and hunt or whatever. And if they didn't, I respected em for that, cause like I say, I knew what was comin,
cause sooner or later, I'd probably own land or whatever, and I'd want people to respect me the same way. If somebody told me no, then I just got in my vehicle and left. If they told me yes, I went down in there and tried to get it. But I've had a lot of people get out and don't even ask. They just go in there and start huntin and stuff. That's when it really upsets you, when they do that." (L7)

We expect Insider Landowners and Insider Hunters to feel a sense of community where they live, or they at least recall a time when they were hunters within such a community.

"... back when I was a kid, every place around, everybody knows everybody. It isn't quite like today ... in the farm country its like that today, but I mean, everybody knew, all the farm people knew everybody's kids and knew everybody, so. I had free roam of any of the land, wherever I lived." (L9)

"Back in those days, you didn't have all this traffic and things around. If a car went by, why, you knew who it was. Cause there wasn't any cars going by. ... very seldom did you see a stranger. [Do you think there's still a sense of community down here?] "I think it's changing. Heck, you used to know all your neighbors by their names. Now, a lot of these new people moving in, you don't know. They don't know you. ... but you got to go back a number of years to get it like it used to be ...." (L7)

[...sometimes I wonder if people even know where to go, who to ask. ...did you know some of those people or know who owned a particular piece of land?] "I've lived down around here all my life and born up and over that hill, and stuff like that, and like, a lot of my friends live up there on the hill. And usually, if I saw a deer or something like that, lot of times it was on my friends land or something like that. Usually, like, if I saw a deer in a field I'd stop at the nearest house and ask em if they owned it. If they didn't they normally could tell you where to go." (L7)

We expect Insider Landowners to be interested in access as it affects the members of their community.

"... I worry about two things. And they're both opposites. On the farmer's side, I worry about having confidence to let people come in that won't raise cane with your property. There's just less and less regard for people's property today, unfortunately. And we've not done a very good job in our generation raising you're generation to be sensitive about things like that. So I worry about the farmers from that side, cause that's gonna alienate and polarize them. On the other hand though, I'm just as sensitive about having adequate space so that young people without a lot of money -- anybody with money can go huntin -- so that people without a lot of money can go enjoy and hunt. That's a real concern." (L8)

"... I'm interested in the patterns of what's going on [with land use]. I have a real love for rural New York State." (L8)

Rule-Making Paradigm:

Insider Landowners relate to Insider Hunters almost exclusively within a social/cultural paradigm. Relatives and longtime friends are most likely to be allowed to hunt. Often, these Insider Hunters do not even have to ask permission to hunt because the land is considered
"theirs," too. Systems of reciprocity and permissive trespass to other insiders are the mark of an Insider Network. Insider Landowners acknowledge that Insider Hunters also know the land and respect it through their long-time association with it, and the Insider Landowners agree that a part of the Insider Hunter's identity is produced from that land.

The Insider Landowners' social relationships with Insider Hunters is not based primarily on the notion of private property, even though the land is legally owned by only one or a few individuals. With regard to hunting, the land is not seen as being owned exclusively by one individual because the land contributes to the identity of the many insiders who are associated with it. The land is regarded as communal with respect to hunting by insiders.

**Control over Insider Hunters:**

Insider Landowners control Insider Hunters primarily through a set of cultural rules. Cultural rules are based on things like norms and meanings that are defined and shared by all members of the Insider Network. Insider Landowners usually have a set of informal policies related to access.

Some Insider Networks take the form of landowner-sportmen clubs. Although these clubs may have formal policies, group norms and peer pressure seem to be used to enforce standards of behavior. Group norms are sometimes codified as bylaws of a club and some clubs impose sanctions on members who deviate from group norms. Generally, new members are sponsored by landowners already in the club, so everyone in the group is known by one or more members before they are allowed to join. In general, each owner retains control over access decisions (one landowner reported leaving a club because the club didn't allow him to let nonmembers hunt on his own land). Club members recognize that hunting on another member's land is still a privilege, not a right. In one club, members could be asked not to come back if a landowner voiced a problem.

"If a member gave a farmer a hard time, there would be no problem because he would very quickly just have his card disposed of. I mean, they would take him out of there. . . . the
members would basically police the members, is what they did. You didn't go in and trash somebody's property. You didn't go across a piece of property you didn't have access to. You didn't use roadways that you weren't supposed to, or whatever. It did work very, very well." (L4)

Reciprocity and social sanction are important means of control in smaller networks, too.

"... I guess that's why I say I like control of what's happening. I don't have control of hunters, when they're gonna be out there, but I know it's my group or people that I know, and they kinda let me know. That's the nice part about neighbors. They'll say, hey Don, are you gonna be out there tomorrow? Are your boys gonna be out? Where they gonna be at? We'd like to go to the back side of your lot, or this or that. But it's just a matter of knowing who's there and keeping control. I suppose that's the biggest thing on most landowners. Especially if you are hunting out there, to know who's out there and know what they're doing. Or somebody'd be gettin crazy and pushing this way and shootin toward the house, or somethin like that."

"We have real good control. Even the neighbors that don't have much property look out for your property too. They know that I let them hunt, so they keep good control." (L22)

Insider Landowners rely on informal understandings rather than formal regulations, or agreements to achieve desired access policies.

"... since I let him hunt up here, why, he lets us go over part of my western border. There's a nice deer hunting area that's just a few hundred yards in there. If we don't go way over, you know, where he's gonna be, or, we don't put on big drives in there. We go down into that area a little bit. So that's how I get along with [name]. I figure if I let him come up here and his guys are gettin turkeys every year up here, he isn't gonna say much if we go over on that western border a little bit that he's got leased from the farmer. Cooperation. It's been good around here. That's why I like this here."

"... on the most part, year after year its the same people who hunt here. It's just kinda taken for granted that they can hunt, most of em... Once in a while somebody will bring somebody you don't know... but we usually know everybody." (L12)

Insider Landowners rely on one another more than laws or regulations to control hunters.

"I think the main thing is that people know. Know the area. That's why the cooperation is good, you know. Cause if somebody [a stranger] was up here and did something, most someone would probably know." (L10)

"You knew them pretty well [neighbors years ago] and you usually felt that they knew what they were doing and were careful. And that was the main thing. You didn't have to question them. They were careful." (L17)

"... They [acquaintances he hunts with] sort their people that they bring down so we don't have any problems... They make sure they bring down decent people. If a person's not good, they definitely won't bring um a second time. He might come down a first time and they'll curtail him as much as possible, but he won't make it down a second time." (L2)
Insider Hunters recognize that Insider Landowners expect to be shown respect, which includes recognition of the owner’s status as the rule-maker on their own land. They also recognize that social sanctions may result if they deviate from the landowner’s expectations.

"... there's people that you know, acquaintances, there's people that you know that you can hunt on. You ask and you get permission. You ask if you can bring in a group of people. Some people don't like gang hunting. So, I don't want to go onto somebody and irritate um. You don't need to get a bad rep. out of it, and a, like I say, I live around here year round and I like deer hunting, but I'm not that, it isn't worth getting a bad reputation over it or getting people irritated at you. No, there's a number of open areas around that we use, and I study it out and make sure they're there and where we can hunt and like that."

Insider Hunters may not receive explicit verbal instructions from Insider landowners. They are often expected to understand the landowners’ unspoken expectations and behave accordingly.

[Do they have any specifications or restrictions for you?] "A, not really. See, I tend to hunt where they aren't. I try to stay, give them, I mean it's their property. So, I don't go marching through their backyard, kinda deal. There happens to be a pipeline that goes up behind my house here, and I keep nearer that than right in their backyard. And I'm on more or less the border of their property, and I respect their property and I don't go romping through there. It's kinda, ... if I were them, I wouldn't want the next-door neighbor romping right through my backyard either. You know? So I give them a pretty wide birth and don't abuse the privilege they've given me of never even questioning whether I should go on there or not. The owner of the property and me, he and I have come upon each other in the woods, and it's 'how ya doin' and 'good luck' kinda conversation, versus 'what are you doing here and who are ya?' kind of thing. So if you know the neighbor by sight, it makes a difference on whether they appreciate you being around." (H7)

Insider Landowners expect Insider Hunters to learn appropriate behavior during the course of informal social interaction, as this landowner describes.

"See, they're smart enough, because they've hunted with us and they know how we hunt and they know what we want, and they abide by it ... they started huntin' right with us ... but see, most of these guys, most of em, they hunted around here, and they kind of like ganged up with us, more or less. [put on drives together]." (L16)

What about control of outsiders?

We hypothesize that Insider Landowners are concerned about allowing outsiders to hunt because they anticipate an associated loss of control.

"I mean, I think posting, the main reason is to at least, it keeps most people off and the ones that want to hunt will at least ask you. So at least you know who's out there. You know, I don't like to have 50 people out there when there probably hadn't ought to be over 5 or 6."

(L17)
"If there is a stranger, I turn em away, yeah. Cause, a lot a times . . . somebody comes to the
door and asks to hunt, and you say OK. Well, you figure one guy's gonna hunt, or maybe there's
two guys if another guy is in the car with him, but gee, you find out later maybe he's brought in
another 4 or 5. Well, to me, I don't like that. I like to least know who's out there and have some
idea who they are . . . ." (L17)

"We post it so we know who's hunting where. Because we go out, and we know every nook and
cranny. 'Alright, you go to this point here, and I'll go over on the window knob, I'll go down to the
back point,' so we know where everybody is. That's why we post it." (L20)

"If a guy comes in and asks you to hunt, you wouldn't mind it, but then, the other thing is that he
asks you and then brings in 5 guys, you know. . . . we posted to keep certain people off. We
don't want any problems." (L21)

". . . I kind of control who hunts . . . I used to let a lot of hunters in, but it always seemed like
when you let one come in, then the next thing, he's got a friend out there and then that friend's
got another friend, and the next thing is you have no control over who's in your woods. (L22)

Insider Networks form to insulate and protect groups from outsiders. Insider Networks
have cultural (symbolic) boundaries that are real for the group members, but hard for outsiders
to see. For example, even though the following landowner was socially connected to family,
friends, and neighbors, he still perceived a sense of separation from most of the people in his
immediate area.

"I don't know a lot of people around. I pretty much stay right here. [son interjects] If they're not
on the hill we don't fraternize with 'em much." (L12)

Cultural rules may not be enough to exclude all Outsider Hunters. If approached
directly by Outsider Hunters, we hypothesize that the Insider Landowner will shift to a
political/economic paradigm to protect his autonomy and the hunting interests of the Insider
Network (i.e., the landowner will emphasize their private property rights). This shift is
necessary because Outsider Hunters operate mostly in the political/economic paradigm.
Outsider Hunters generally do not recognize the social rules of Insider Landowners, and this
threatens the Insider landowner's personal identity as decision maker within the social/cultural
paradigm. It also threatens the community identity of which Insider Landowners are a part
because that community identity is based on acknowledgment of certain social rules that guide
who can and who cannot hunt on a given tract of land.
Each Insider Network defines outsiders in a different way and may react to outsiders differently, too. Within some networks, Insider Landowners draw a cultural boundary between themselves and “city” people or “down state” people.

[Is there a difference between downstate and upstate hunters?] "I think so. I really do. I think upstate hunters in general, I think they are alot more careful. Will ask people to hunt, and things like this, and the downstater’s, especially the nearer you get to the city, I don't think they do. I think they think they can go anywhere and do anything. That's one reason why we post it. We don't want these city fella's [Ithaca, Binghamton] comming up here and they don't know what they're doing" (L20)

Within other Insider Networks, members don't draw the same cultural boundary between local residents and people who move to the area from other places, or come from other places just to hunt.

[Are there differences between local people and people who live somewhere else?] "... this area here is probably no different than in your area. We have so many people that have moved in here from New Jersey and New York City because the property is so much cheaper. ... down here, property value has been low and we have all kinds of New Jersey and New York City type people down here. And you might just as well, you can tell um when they talk. But most of um aren't really bad people once you get to know um." "... same kind of difficulty with everyone. " (L2)

[Are the people who move here from New Jersey different than the local people?] "People who come up here from New Jersey are as good of citizens as any..." (L8)

"You know how it is when you live in a small town. They all say, city folks — they shoot cows and fawns and all that. I don't believe that. ... I think most of those city hunters are half-way decent now, ya know? That's what I think. ... there's slobs in all of em [all groups]. I used to teach hunter training, so ethics is one of the things I used to stress. ... think these local backwoods guys probably take more illegal game than the city people would. It's just, I think the city people just have a tendency to not be respectful of the property owner or the property, you know what I mean? Tromping around and cutting fences and opening a gate and leaving it open, you know. Driving out in fields or lawns, or shootin too close to the property or things like that..." (L10)

The cultural boundary that separates insiders from outsiders may not preclude all hunting by outsiders. Insiders are wary of these individuals, but they may allow them access privileges at times when they don’t interfere with the activities of the Insider Network.

"... sometimes people just come along and ask me ... one guy, he was from Pennsylvania and he'd been salmon fishin up off Lake Ontario [in October] and he had some salmon, he had a little freezer in there [in his motorhome]; he was a real congenial type. He came in the barn and introduced himself, and said, Geez, I'm lookin for a place to hunt, do you let people hunt, and I said well yeah, sometimes, and we got to talkin ... he said could me and my wife go up and look around and see if we could find a place to hunt here? And I said yeah, sure. Before he left he gave me a couple of big salmon steaks that were probably 5-pounds a piece or more; god, he was a nice guy! He came back, too. During the first week of season, and he parked his
motorhome up by the barn and we let him plug it in to the electricity." . . . he sent me a Christmas card that year." (L12)

"The hunters that come in are our friends, and they hunt with the family. And we don't stop people from hunting. We have signs up, posted, but we don't stop 'em from hunting. We like to know where they are in case, especially when she [his wife] is huntin or the family is huntin [wife: "cause sometimes I go out alone and just wander around you know?] . . . that's the reason for not letting people hunt. We don't stop 'em huntin. They come and ask us and we tell 'em: The first three days, no. And then, if you go, come and tell us where you will be located, so if we decide to go huntin . . . outside of that, no. It's posted. We don't believe in posting, but it's only done for the precaution of it." (L20)

Cultural boundaries are permeable. Thus, we hypothesize that people who begin as Outsider Hunters can eventually cross cultural boundaries to become Insider Hunters. For example, L2 describes a set of 8 people who started out as acquaintances. He invited a business associate to hunt and that man sent a group of hunters down from Watertown. After one season, these people became friends with the landowner. Now, that group of people stay on his land in campers, they sometimes use his shower or telephone, and he put in an outhouse specifically for their use during that single annual trip during firearms deer season.

". . . Yeah, they're people I've, I didn't even know 'em when they came down. They were acquaintances. I had a friend from the Gouverneur area, this old lady, and I told her son-in-law . . . he was an older guy and all they talk about up there is deer hunting, and they had no deer at the time. . . . plus, we used to pick up cheese in Gouverneur . . . and we had some people from the cheese plant and some of the people that we knew up there had come down, but I told this gentleman to come on down. Well, he didn't come down that year, but he sent two of his son-in-laws and about 6 other people, and I mean. And he did come down the next year and he was a great guy . . . they've been coming down for over 15 years now."

Based on our model, we expect Insider Landowners to treat Outsider Landowners the same as Outsider Hunters. They may be neighbors geographically, but they do not share the same identity and do not interact with the same set of social rules that Insider Landowners and Insider Hunters do. Outsider Landowners threaten the identity of Insider Landowners because the outsiders operate almost exclusively within the political/economic paradigm. Outsider Landowners may also threaten Insider Landowners as they purchase more and more land and restrict common use of that land. An influx of Outsider Landowners can fragment Insider Networks.
Outsider Networks:

Structure of Outsider Networks:

Outsider Networks are created when Outsider Landowners provide access to Outsider Hunters. We hypothesize that most Outsider Networks are small and tightly controlled, because Outsider Landowners tend to think of their land primarily as a commodity that they own exclusively. Outsider Networks may involve just one owner and a few hunters. In contrast to Insider Networks, lands held by Outsider Networks are often closed to strangers. Outsiders are less likely to allow hunting by strangers, even at times when such use would not interfere with their personal hunting. The structure for a typical Outsider Network might be described as fragmented or isolated, with only a few connections radiating from a landowner to hunters (Figure 3).

Among younger landowners, the smallest networks are associated with Outsider Landowners who own the parcel for exclusive use as a place of residence and a hunting preserve. These owners do everything within their power to insulate themselves from intruders. They may even isolate themselves from neighbors.

Outsider Landowners often establish an exclusive access policy. However, they may bring new members into their exclusive fold over time.

"... If I trust somebody, and I know them to be a wise head, a steady head, I'd consider it, allow them on my land. Like these two old guys [that he lets hunt]. They're retired and they know what they're doing. They're very careful people and wouldn't dream of shooting in the direction of my house... One of them was an avid gardener with a place a couple of miles down the road, and he has a grape, a line of grapes along the road. And I would commute from here on my bicycle, and when I would get to that spot... I would just start munching on this guys grapes!... [the first time he needed something to eat because of a blood-sugar problem. Later, he stopped just because it was pleasant. He eventually contacted the landowner and told him what he had been doing. He thought the landowner was really nice and they had things in common.] "Really a decent old guy"... "he was originally from New York and he loves it out here as much as I do."... "he's a fountain of information, he grows all kinds of stuff... just a wonderful old guy" "and the other guy is a neighbor of his, a friend of his who's a retired sheriff, and a, well, a retired sheriff and... [I assume he will be safe]." (L13)"
Although Outsider Landowners may admit more hunters to their network over time, their networks remain small. Like Insider Networks, Outsider Networks tend to become smaller as landowners age.

![Diagram of Outsider Network]

Figure 3. Example structure of an Outsider Network.

**Strength of Network Ties:**

Outsider Landowners tend to consist entirely of one or two strong ties to other landowners or hunters. They tend not to form weak ties or reciprocal hunting agreements with local neighbors. Outsider Landowners who own their land primarily for hunting form network ties that are based on kinship or sentiment. Outsider Landowners who own land primarily as
an economic investment are more likely than Insider Landowners to form network ties based on an exchange relationship (e.g., exchange of goods, services, money).

** Outsider Hunters: **

It is common for Outsider Hunters to form one strong connection to an Outsider Landowner (e.g., a friend from work, a parent, an in-law). That one connection accounts for most of their hunting participation. Outsider Hunters with such a connection tend to make little effort to establish hunting opportunities on additional private lands.

With the exception of a few family or friends who own land, the Outsider Hunter doesn't hold strong sentiment relationships with landowners.

"... Actually, it was another person that knew him, that took us on that land. Yup. And then we hunted with him, and then we got to know the people, and then every year we would ask. This other person kinda stopped hunting there. Well, no, he's off and on huntin. We didn't hunt with him, just on occasion we hunted with him. And then, we hunted a little more than he did. So we got permission for ourselves, and throughout the years, its just, we ask permission every year and we keep permission to hunt on their land ... It's not a real personal friendship, but just, we hunt their land, we get permission and go on it. We respect their land. They're farmers, and we respect that." (H6)

We believe that Outsider Hunters frequently lose access to private land because of a weak connection to the landowner. This may result in reduced or discontinued hunting participation because the Outsider Hunter is not usually part of an extensive access network.

"... And over the years, I've learned to, when possible, concentrate on public lands, because you can count on it. Sometimes you make some inroads with a property owner and you can gain access to a piece of property. And then, either it changes hands, or someone builds a house, ... finding good grouse/woodcock cover is a time consuming endeavor. And once you find one, it's difficult to lose it [hard to take], but it happens very frequently." (H1)

"I found out through someone I had an association with at work that had bird dogs and was a grouse/woodcock hunter, told me about a location to hunt. It was private land, not posted, no one lived there. No one even lived on the road. And I assumed there were various parcels along there, but none of it was posted. And as I said, no one even lived there. It was a dead-end. And the cover turned out to be great. And as time went on, I learned more and more about it and explored further. I swear, it was the best piece of grouse/woodcock cover in Broome County. ... One day, through my job I was doing a helicopter fly-over of a powerline and happened to go right near this spot and happened to look down and saw some construction going on. And a, I couldn't imagine what was going on, and went and investigated, this was during the summer, and somebody was putting in sand filters for septic systems. And they ended up putting in, well there were sites there for five trailers. And the sand filter was put in a spot, I bet I killed 50 woodcock there. I mean it was right in the prime woodcock cover. Now the area I hunted there was probably hundreds and hundreds of acres, but that was, it just broke my heart
to see that development sitting right there. I still go to that location, but I have to stay away from that spot." (H1)

"... Then further down the road, about three years ago, I came across new poster signs. Fortunately, they were hunting by permission only signs, so I took down the person's name and address. And the guy's been great about it. He bought the land strictly for hunting, mostly big game hunting, and I told him I had no interest at all in hunting big game there, but it was good grouse and woodcock cover. And a, I make maple syrup, so every year I send him a quart of maple syrup, ask for another card to hunt, and so far its worked out well. Occasionally I run into him and things seem to be going fine. But some of the other properties... seem to have changed hands, or are about to, so I wouldn't be surprised if a lot of that becomes 'out-of-reach zones.' Its not a static thing. People are buying and selling all the time." (H1)

"I just haven't had the time, to be honest with you, to go out and look for new pieces of hunting land, whether it was by permission from a farmer, or somebody that owns a tract of land, and scout it out, like I should... I've got two kids now, two boys. If they were old enough to hunt today, I'm not sure where I'd take 'um. Cause with the property I hunt on, there's already two or three of us hunting it. That'd be two more bodies added to it. I'm not sure where I'd post them, to be safe... and we don't see the deer we used to see on these small segments of land, and we don't have permission to hunt on the bordering properties. So I don't know. They would lose interest if they went out two or three years and didn't see a deer." (H9)

**Sense of Community:**

We hypothesize that Outsider Hunters have a weak sense of community identity because they have few ties to the local area or people. They tend to be relatively isolated from their neighbors and may become in effect, little islands of land maintained for the exclusive use of the owner.

"One neighbor, they're from New York City. They come up with a bunch, they run their four-wheelers all over. You make your statement, you know, don't run em, if you want a run em, run em on the roads, don't run em through the fields and all that. Cause you do, you tear em apart. Other than that, we just stay right away from em. That way you don't have any confrontation with em or nothin'. They're up there on theirs and we're down here on ours, and everybody's happy." (L3)

Outsider Landowners are not local and they know they are not accepted by locals.

[... do people still think of you as somehow different than a local?] "Oh yeah, my wife and I are upstanding people, we have our children, they go to the school, people get to know us, but there's an element of, in some places with some people, not so much in T-burg, but I remember in Cincinnatus, you could be there for years and you'd still be a stranger... didn't matter how long you were there." (L13)

"In the summertime when I'm biking, ... I've had people yell out 'Nigger, get off the road!' cause I've got my helmet on, and I'm dark-skinned. That kind of thing tends to lend itself to being careful, defensive, more guarded." (L13)

"... Some of the concern I feel probably has something to do with the prejudice I feel that there is around here. There are also people out there who would like to have an accident, I think [would like to shoot him], you know, because of who I am, and I'd hate to meet an untimely end
that way." [laughs]. "Maybe some of it is that, or maybe its just that I'm from New York. Maybe I'm a bit more cynical than your average upstater." (L13)

"I'm pretty much a visitor wherever I go or wherever I live. And I enjoy it because of the perspective that it allows. And I can't really do anything about it because when you've lived in a whole bunch of places, you're kind of always on the outside." (H9)

Rule-making paradigm:

We hypothesize that Outsider Landowners who allow hunting relate to Outsider Hunters mostly in the political/economic paradigm. If hunters want access to Outsider Landowners' private land, they must first ask permission. With a few exceptions, friends, family, and strangers are treated more or less equally with regard to access. We expect kinship and hunting experience level often have little bearing on the Outsider Landowner's decisions about access. Identity endowed through the social/cultural paradigm has no meaning, so Insider Hunters and Outsider Landowners perceive access decisions differently, and sometimes come into conflict. Outsider Landowners and Outsider Hunters are less likely to come into conflict because they operate within the same political/economic paradigm. Outsider Hunters expect Outsider Landowners to require them to ask for permission, or perhaps pay a fee to hunt, because those are the rules within the political/economic paradigm.

How do they control hunters?

Outsider Landowners want to retain control over their land and how it is used by hunters. They hope to control the same things that insiders do -- hunter behavior, hunter numbers, and property damage. We saw some examples of such concerns during discussions about participating in state-sponsored access programs with what we believed were Outsider Landowners.

"I don't know . . . if the government does anything [goods or services], it opens it up to everybody and you can't control it. . . . you can see it up in the Salmon river and places like that where they have access . . . so you don't have any control, that's the only thing I feel about it." (L4)

"The way I look at that is, again, if the state provides anything, then you lose access to your property. Like I say, I don't mind if people come in the property if they ask and stuff like that. But if you open it up like you're saying, what's gonna happen? It's state land. That's my opinion
of it. ... I like to know who's out there on the property. If I walk out there, I know I'm not gonna be shot." (L4)

Like Insiders, they set up boundaries to protect themselves from others. But Outsider Landowners rely more on legal boundaries and political and economic rules (e.g., regulations, laws, and market forces) to achieve control. They are more likely than insiders to use things like law enforcement and patrolling to protect their rights of ownership and exclusive use. They may establish imposing physical boundary markers to establish control over access.

**Law enforcement:** Outsider Landowners are likely to use threats of legal action to help maintain exclusive use.

[Did you see them go across your land?] "Oh yeah. Well the first year I figured, look. If I tried to post it that first day [bought land a week before deer season] all I'm gonna do is get trouble. And they're all gonna scream - 'Hey, we've always hunted here.' But frankly, when I hear we've always hunted here, I get pissed off now. A year later, I think I said, look, after the first week, hunt and do what you want, but I want a quality first week. 'Oh yeah, sure, sure.' Monday afternoon, they're driving. You just can't get deputies in the woods quick enough." (L14)

"... I still have people coming on. I catch em on the land. That's continuous. That goes on every year. They wait until I'm gone to come on. Neighbors, what happened is, last year they were coming on and then I had my neighbors check the license plates. And I tracked em. I found out who they were and I called em up. One guy denied it, one guy admitted it. I says can't you read the signs, I says what the hell's the matter with you. I says next time you're gonna get turned in. So people have the gall... one was from Windsor, the other person was from Endicott. So he must of been familiar with the area. The locals do come on, I know it. Cause I've chased them off. After a while, word gets around that you're gonna chase em off. What you probably should do is turn em in... I hesitate to do that... some people are weird. They'll do damage to your property, so you think about it... it makes for an uncomfortable situation." (L15)

**Patrolling:** Outsider Landowners patrol their property to exclude Outsider Hunters, as this passage illustrates.

"One of the other problems I find in searching is that, it seems like a lot of land here in the southern tier is absentee owners. Not only do people not live on the property, but they don't live in the area. And it's not often times very easy to find out or to contact these people... Its quite an effort. And some of the experience that I've had with people who live out of the area is that quite often they're not very receptive to other people hunting on their property, whether they're hunters or not. Seems that if they're hunters, they're afraid to share it with someone else, and if they're not, they're opposed to hunting. I had a situation last year, this would have been in Chenango County. There's a lot of public land in Chenango County, and I've spent a lot of time over there looking for grouse and woodcock cover. And I was on public land, I was on state forest land hunting grouse and woodcock, and I had a young dog. And I knew that the adjacent property had changed hands, and there were a lot of poster signs. And I think I knew at the time that the people were from downstate and I said to myself I'm gonna be careful here. My dog got out a ways from me, got out across the line. I run the dog with a bell on, so I knew she was
across the line . . . I gave her a call, she didn't come right in, so I said, well I'm gonna go over and get her, but I put my gun down. I unloaded my gun and I leaned it against a tree. When I stepped across the property line, I didn't have my gun with me. And I'll be damed. I didn't get very far over there and this guy was yelling at me, way back on this hill. An he was yelling at me about the dog, and I said, look, I'm just trying to get the dog, I don't even have a gun. The guy didn't want to hear anything. He just kept yelling at me to get off. And he was hunting . . . those are the kinds of things that make me want to stick with the public land as much as possible." (H1)

**Physical boundaries:** Outsider Landowners sometimes go to extraordinary lengths to demonstrate that their property lines are intended to be physical barriers that exclude outsiders.

"My borders, I got em posted. I had my land surveyed. I had my property surveyed; it cost me $1,600. and they marked the trees. I go, every year, I go down with another can of paint, with fluorescent orange markers. Right down through there, on the bushes, all the way around. Fresh, it's all done every year. To go on my property, you got to be short of a complete idiot. You cannot come on me and say that I didn't know it, unless you parachuted in on the middle of it. So you come across that border, you're tellin me so many words, screw you Mr. ------. Boy, we're gonna get into it . . . yes, I have to protect myself, and I will. But it's still a risk factor on your property." (L23)

". . . A friend of mine started acquiring properties specifically for hunting. . . . he's got about a hundred acres now in one spot . . . and another hundred acres [in another location] . . . more or less controlled just for hunting. But I think I've seen the other extreme there. He's so possessive of that land that he spends 12 months out of a year just trying to make it a preserve, between posting it continually and cutting trails through the woods for the deer to go, and planting special clover for them, and everything else that he can possibly do for the deer . . . it might be July, and I'll say 'Hey Carl, let's go fishing.' 'Oh no, I got to do some work -- I gotta build a new treestand.' . . . when somebody is so possessed with hunting twelve months of the year, its sort of a turnoff then. [Has he been able to control access?] "He's been able to control it really well. He's got everything really posted right down to the nth degree. Plus a lot of signs in the middle. And a, people just know that he will prosecute anybody that's there . . . He's interested in posting everybody else's property, too. So he's not only concerned about his property, but then he's going out and he's getting other landowners, asking them if he can post their property. Some are adjacent to em, and some are not even adjacent to him. So he gets that land all posted up. And then he's concerned about keeping other hunters off of there, and he doesn't even want the landowners to let other hunters on! And, he's always hunting on somebody else's property as opposed to his own property. So, a, it's that kind of attitude that you see going on. And I see it not only with him, but I see other people out in our town that have hunted a long time try to get places and post them all up. And "how many places can I post up to keep everybody else off. And they're not even the landowners, you know. They just happen to be people in the area that hunt and want to post up all the property that they can. And I don't even think that they pay the landowners anything to do that . . ." (H5)

**Protecting an investment:** Outsider Landowners who are hunters treat their land as private property from which other hunters should be excluded. They exclude others because
they want to reserve the hunting opportunity for themselves, or they feel other people are a threat to their investment in the property.

"I run into folks coming in hunting. . . . one person I caught shot the deer right on the land, I know he did, and he says, well, I was tracking him. . . . I says, well, ok. Get the deer and move it out. So, he did, his buddies come over and they dragged it out. That same afternoon, I went down to another portion of my land. I look down and here's this guy hunting on my land. I said, what are you doin'? I just saw you up there, I told you its posted and I let you have the deer. So I asked the person, give me your license and all of that. But the guy wasn't a kid. I said, what the hell's the matter with you. You're not a kid. I says, don't you know any better? I says get the hell out of here. I says, geez, I should turn you in. I didn't, you know, but I told him that. but I've had these things happen. People are just, for some reason, they take the chance. And after that I says, I'm not gonna be bothered with this. People tell me they want to hunt, I says no way. . . . you run into these experiences and it makes it difficult. You have to protect your investment." (L15)

**Rights of ownership:** Outsider Landowners also express their relationship with the land as something to be owned exclusively through their relations with the State. For example, Outsider Landowners expect the state to enforce their right to legal exclusivity by arresting trespassers. They look to the State as a guardian of private property within the political/economic paradigm. However, Outsider Landowners do not want too much State regulation because they want to be able to minimize the costs of ownership, or maximize the productivity and profit from the land.

Outsider Landowners have a strong sense of exclusive ownership rights, and they believe that their rights as owners should be respected.

". . . Rockland County was getting . . . it got to the point where I just had to get out of there, someplace, somewhere, so I did . . . the reason I bought it [his rural land] was I wanted to be able to say its mine. And next month this place is gonna be mine. Free and clear." (L4)

". . . people just don't have any respect. If some guy owns a corner lot in the city, you walk across his lawn, he's gonna holler like hell, right? . . . If a guy out here's got a 100 acres, they figure they can come just about do anything they want. We're not hurtin anything, having a picnic or something. We'll leave all our papers and garbage out here, but that's all right. But you do it on his property in the city, and I don't think he'd like that either!" (L3)

". . . Landowners tend to accept each other and not like the rest of the people too much [laughs]. . . . I think that's fairly normal in most places. Because, the landowners, at least my attitude is, it costs me the interest on the money, plus taxes every year, so its probably costing me a, $2,000 a year to have this place. And then you go out and spend time clearing trails, and keeping it cut down. That's 3-4 days a year. And after that, you can go out hunting, right? And do some other things, too, but. Somebody thinking they have a right to just to walk on there is not a very welcome person." (L14)
Outsider Landowners believe the State should enforce wildlife laws and private property laws to uphold their rights to exclusive ownership and relief from hunter problems.

"... myself, I would rather have more people in the Conservation Department. I welcome guys comin up, a game warden. I've talked with em, they came up years ago, I haven't seen em lately, but I seen em come up and I talk to em, and they ask me how's things goin. It's nice to see these people because someone who's trying to sneak in on your land is gonna say, hey, somebody's patrolling. So I don't think most landowners have a problem with game wardens. I never did. You do things legally, why should you? ... I thinks he's helping you out. He's helping out the landowner. Landowner, in turn, is helping out the general public, because he's supporting the deer herd." (L15)

"... I blame the state [for poor hunter behavior], because they're the one's in control of the laws. I can't control the laws. You've got to slow things down [make them think before they shoot.] You gotta get laws in place to make the guy stop and look before he kills it [the deer.] You gotta get away from this -- the guys use the term -- if it's brown, shoot it down. That guy's thinkin wrong to start with. And he's armed with a gun. That's ridiculous." (L23)

**DISCUSSION, PART 3: HYPOTHESES ABOUT PROGRAM ACCEPTANCE**

Our fourth study objective was to develop hypotheses about how different types of landowners and hunters would respond to new access incentive programs. In the previous section, we proposed a conceptual model of two landowner-hunter networks in New York State. In this section, we assume for purposes of discussion that later studies will verify the elements of our model. Given that assumption, we have several hypotheses about how people in insider and outsider social networks will respond to access incentive programs sponsored by DEC.

**Insider Networks**

We hypothesize that incentive programs will be rejected by most Insider Networks. Incentive programs are political and economic by design, so incentive programs will be threatening to Insider Landowners, who make access decisions based on social and cultural criteria. Insider Networks are based on cultural rules. Incentive programs have the potential to
contradict the cultural rules of the Insider Network, and thus erode the cultural bonds that hold
the group together.

Insider Landowners operate within either the political/economic paradigm or the
social/cultural paradigm depending on which group they are relating to at any given time. They
operate within both paradigms when interacting with the State, but often use the
political/economic paradigm as a way of reinforcing their autonomy within the social/cultural
paradigm. Insider Landowners are threatened by State intervention. They do not like the
State regulating use of their privately owned land because they believe State regulation
conflicts with their social/cultural base of power and autonomy.

Conflict arises because Insider Landowners believe they know what is best for their
land and believe they treat the land better than the State could. Insider Landowners believe
they know the land better than the State does because their family livelihood is (or was) tied to
that land, and they have usually lived on that land for a long time. Their base of power and
autonomy is tied to their system of social rules which guide their relations with other Insider
Landowners and Insider Hunters. That base of power and autonomy is eroded, in fact denied,
by the political/economic paradigm in which the state operates.

Liability Protection:

We hypothesize that liability protection will be attractive to Insider Landowners, but it
will not be effective as an incentive to allow additional public access. There are at least two
reasons why additional liability protection will be ineffective. First, liability control is a
secondary concern to insiders, even those with first hand legal experiences.

[On liability issues] "That's scary. Yes it is. . . . That is one thing that seems to bother people,
because people seem to be quite sue crazy right now. I'm getting sued now, twice, so, I'm quite
familiar with it. That's one of the reasons that I haven't posted. Cause I figure that they've
already, they're suing me now, it really isn't gonna make any difference." (L2)
Second, Insider Landowners believe that the informal control mechanisms of the Insider Network are more likely than a law change to protect them from personal risk.

"I'm not real familiar with all the laws. I feel like if I control the way I do, I reduce my liabilities, you know? That's one thing. By having posted signs up you are showing that you don't give just open permission to anybody to go on it. So you're not gonna be liable, or, to my way of thinking. Like I said, I'm not that familiar with the law... I think, too, by knowing the people you have on there, the type of people you have on there, some people are gonna sue you over anything and some people they'd never sue you. They know they go on there under their own responsibility. I think that should be understood. If a person goes on your property, they're on their own, too. You should never be liable, for anything. I just don't feel it's fair for anybody to be liable for access to your land... I don't know what you could really do [to change the law]." (L22)

Goods and Services:

Insider Landowners are comfortable with permitting hunting access to other insiders who give them goods and services.

"... that huge farm on the right as you came onto [name] road? There's a group that have that accessed. They just post it. They don't lease it, they just post it. Ninety-five percent of those landowners and farmers are happy that their land is posted and they know who is going on it. And its usually neighbors, you know." (L10)

"... the farmer that was here for 20 some years, I always used to give him a quarter of a venison every year, so, you know, I wanted to get along with him so I could hunt on his land. You know, I didn't want to have any problems. He lets me use his tractor to haul out firewood and stuff. I give him venison, I give him firewood. I think probably alot of em [hunting clubs] do that too. I shouldn't say alot, but, I imagine some people do things like that..." (L10)

However, we hypothesize that Insider Landowners are not likely to participate in state-sponsored programs that provide goods or services to landowners who allow additional public access. Insider Landowners will be reluctant to participate in such programs because they will be concerned about losing control over access decisions.

"... my basic property is all open, but if I had to put 'public access -- open to all hunting' with no restrictions, I don't know as I'd do that..." (L2)

"... a lot of landowners probably feel like once they did that [accepted services], then they'd lose control of their own land... I tell, ya, this access to your land goes back a long ways because they've made alot of mistakes, you know? [provides examples of fishing access that went wrong.] "Sometimes when you give access [when the state does], no matter how good the intent was, ... it made it worse, because they didn't take care of what they hadn't planned on. So that's where you get a little scared when you say, alright, I'll let them [DEC] do this, ... and then all the sudden you have no control over it." (L22)
Monetary Payments:

We hypothesize that insider Landowners will reject state-sponsored programs that involve permitting public access for hunting. Insider landowners may allow access to many people, but they are generally unwilling to trade their informal access policy, and control, for a monetary exchange relationship, where they feel they have less control.

[W]ould cash payments help? [ ] "No, because the landowner himself would not be, you wouldn’t be in control of who is hunting there . . . people are still gonna want some say." (L2)

Comments by Insider Hunters support the assertion that Insider Landowners generally reject offers to create an exchange relationship for hunting.

"Well, I wouldn’t propose going to a farmer and offering him $50 to hunt on his property. That kind of leaves something to be desired in the relationship. Problem is, it’s not a monetary issue . . . it’s merely boiled down to money, I think both people are going to lose. The hunter isn’t going to respect the landowner, and vice versa, if it’s strictly money. I think you need some kind of rapport with the landowner. And why wouldn’t you want to establish a rapport?" (H7)

I don’t think that’s a key revenue source for farmers, nor do I think that it’s gonna be kind of an attractive means of persuading farmers to open up the land to hunters. I think its far better to get to know somebody.* (H10)

On the other hand, we found evidence that some Insider Landowners might have interest in a program that tied hunting access to tax relief, if such a program didn’t remove landowner control over land use and didn’t interfere with cultural hunting activities.

" . . . I think a lot of em are dropping out of the club because they’re going to that lease thing. . . . people don’t have to pay the taxes on the land then. To a lot of people that helps. I think our taxes are almost $500. You got somebody come in and pay your taxes to let em hunt on it, a lot of people think that’s a pretty good idea . . . . that’s why a lot of people are goin to it. I think before long, that’s basically what its gonna come down to. Everybody’s gonna be leasing, and if you don’t have a lot to lease, I don’t think you’re gonna have a place to hunt, unless you own your own land. (L7)

"It would be alright for me if they let me hunt there too. But a lot of people, if they lease it, they don’t even want you to hunt it. Myself, if I was gonna lease 500 acres, I wouldn’t want the owner in there huntin too. . . . but if I didn’t have to pay that $500 taxes, that would be great for somebody to come in there and lease it cause then if I could go in there and hunt it, that would be a plus to me." (L7)

"...I think if the farmers could get their taxes down to where is wasn’t bad, they could afford em themselves, they wouldn’t lease the land out. But like I say, I mean, if they have somebody come in and lease half their land and pay half their taxes, that’s a big plus to a lot of em. " (L7)

"If there were a tax incentive . . . I would put up those access by permission only signs or something then." (L27)
A number of Insider and Outsider Landowners identified the tax burden on landowners as an important force that is and will continue to affect access to private lands.

"The problem is, your gonna start losing a lot of landowners. Taxes are ungodly. ... I don't know how you'd come up with anything on that though [a way to pay landowners, that is] ... within the next 20 years, this will be all building lots ... I don't know what's gonna happen. I'm gonna retire in another 3-4 years. I don't know if I'm gonna be able to afford this land. You sell it off and make building lots and you've lost it forever. It's kind of sad too. I don't know what they're gonna do about taxes ...

Unfortunately, what I'm starting to see happen though is a lot of the land's getting leased out ... I went up to one of my favorite places and I see it all posted by White Oak Hunting Club or some hunting club that's gone in and leased a block. And you're seeing more and more of that.

... I understand what's gonna happen. Farmers can't pay the taxes. You know, there's tax problems and they're gonna lease their land. If you asked the question, what would I do if that happens, well, fortunately, in my case, I have enough friends, so you know, farmers and friends that I can hunt on, that I'd have places to hunt. But you can see that its getting restricted." (L22)

... I worry about the indifference sometimes of people. And then what happens, as farmers have it harder economically, they're gonna be more sensitive to things. As they have it harder, they're gonna be more sensitive to affluent people walkin all over their land. On the other hand, they're gonna be more sensitive to leasing and getting more income out, because of the tax structure. ... 44% of the net income of farmers in New York State, it now goes to property taxes. This is a recent study just done by the Farm Bureau. The rest of the country, 6% of net income goes to taxes. Average. Now that's a scary figure. That tells you that the pressure on landowners is becoming so severe, its gonna cause some exacerbations of other things. Even though its not hunting, it causes things to happen, indirect, you know what I mean? So I'm really concerned about some of those phenomenon." (L8)

Hunter Training:

We hypothesize that changes in hunter education will have little influence over Insider Landowners' decisions about hunting access. Insiders place little confidence in hunter training as a means to change hunter behavior.

"People will either treat em right or they won't. And an hour's training isn't gonna make a bit of difference." (L27)

[Some people think more hunter education would improve hunter behavior and hunter access.] "I don't think so. ... I think these guys are just these guys because that's they way they want to be. I mean that one kid I was telling you about, that threatened me. He was a trouble maker. ... he finally moved out of the area and he got into trouble in the next town. And he's in jail now. That's the kind of person he is. ... you worry about it. ... I don't think education classes [would help]. I might be wrong." (L16)
Insider Landowners place their faith in group norms and socialization as a means of controlling hunters’ behavior. Even though changes in hunter behavior wouldn’t influence their access decisions, Insider Landowners would appreciate state efforts to make respect for land and landowners a greater part of the formal education process for youth.

[can anything be done with tax or liability laws to increase access?] "Well, I don't know. Obviously education if possible is still the best way. Trying to teach young people who hunt to be sensitive to other people. I still think that’s the best. It’s hard to legislate things of this type. Especially now, after last November. The home rule mentality is just the rage... and that tells you you can’t legislate a lot of things. But I think education. I think schools should build it into their curriculum if possible... and we should try to weave the landowner sensitivity in there, and why its important to cultivate long-term relationships with landowners, and not just I pop in today and I'll see ya — if I get something, good. If I don't, I won't be back. You know what I mean? And try to build it into a more integrated use system as opposed to just a hunting system. You know what I mean? I think people have interest in that. I think people, if you have an integrated entertainment. I see that with my grandkids. They all live in developments and boy, I take em up to the [hunting] camp and they go crazy. They just love that because its so new. So some integrated system... I think you're gonna see the best thing that can happen is education and to constantly look at this thing as a system, as opposed to just hunting." (L22)

"I personally feel that most of it starts as a youngster. I would say most of the background people get is when they're real young. I feel that there should be more available for younger kids getting out in camps and so forth... I feel young people are the one's you've gotta influence, for safety and everything else. You can't teach an old dog new tricks, but you can teach a young one." (L22)

**Outsider Networks**

We hypothesize that Outsider Networks are more likely than Insider Networks to adopt programs that involve incentives to provide hunting access. Outsider Landowners already make access decisions based on political and economic rules, so they will not be threatened by incentive programs, per se.

**Liability Protection:**

Outsider Landowners believe that the State exists to protect their individual rights, including the right to exclusive ownership and use of land. Outsider Landowners are concerned about limiting all personal liability associated with land ownership. In keeping with these beliefs, Outsider Landowners would favor laws and regulations that further protect them
from liability for hunters' injuries. However, we hypothesize that addressing landowner liability will have little influence on Outsider Landowners’ decisions about public access. Most will continue to maintain exclusive or restrictive access policies.

**Goods and Services:**

We hypothesize that most Outsider Landowners will be disinterested in programs that provide goods or services to owners who permit public access. Moreover, Outsider Hunters are generally unwilling to participate in programs that would entail significant time commitments. Outsider Hunters believe it would be impractical for them to spend enough time to help landowners manage their land. In general, Outsider Hunters are reluctant to seek out access to private lands and would like the state to broker access on private lands near populated areas.

**Monetary Payments:**

Many Outsider Landowners in DMU 78 are dual income, middle class professionals. They own rural land as part of a “country” lifestyle that, for some, includes exclusive rights to outdoor recreation. These landowners are disinterested in monetary incentives because they have the financial ability to pay for the land and associated taxes. Moreover, their properties are often small and include safety zones around their homes. They are too concerned about privacy and safety to have any interest in public access programs.

Nevertheless, there are Outsider Landowners (e.g., agribusiness owners, industrial forest owners, land speculators) who are likely to enter an exchange relationship with the state or some other party, if the price is right. There are some existing programs that pay landowners for taking particular actions and some of the owners we contacted participated in those programs. For example, one Outsider Landowner (L1) participates in an “SRP” program
(Soil Reserve Program), through DEC. He was paid about $40 per acre to mow his 20-acre field, $15 per box to put up blue bird boxes, and $65 to thin his woodlot. DEC staff assessed his land and recommended management procedures.

One landowner suggested that taxes plus $2 an acre would be a fair price to lease rights for hunting access. He estimated that that people in his area were paying $12-15 per acre in taxes on land classified as woodland (i.e., this suggests a lease rate of $1,400 - $1,700 per 100 acres leased). That landowner did not find the idea of access leasing objectionable, but he didn't believe anyone would pay what he would want to make it worthwhile.

Outsider Hunters deal primarily in the political/economic paradigm. Many are willing to participate in exchange relationships with landowners, but may not be able to financially.

[what do you think about fee hunting?] "I wouldn't have any problem with that at all, if that's what it took to maintain access." (H1)

[One of the other topics I often talk about with people is fee hunting, situations where people pay to have access for a certain kind of hunting. What do you think of those kind of activities?] "We'd love to hunt other places, for say geese, cause where we do it [hunt], we can't really hunt geese. And we've come across so many people who just charge a horrendous amount to lease the land for hunting. And a, I have no problem with that. Its some extra money people can have. But some of these fees are astronomical, what some of these people are asking. But thing is, people come from the cities, or rural areas and stuff. You know. They need places to hunt and they're going to pay for it. I mean, if the fees aren't too unreasonable, I really have no problem with it. You know. If you were going to go to some of the state parks, you'd have to pay a fee to go there. I don't think that's very unreasonable." (H2)

"... I think its becoming more accepted that people don't seem to mind paying if they know that they're getting in a controlled environment, and you know, if the person's got 500 or a thousand acres and you go and you pay... and access is restricted, I don't think people have a problem with that. And it's kind of like up at the coop. A lot of the locals, when that first started, they did not like to see their rights denied, that they can't go hunting on that because its part of the coop. But I think over the years, where they see that its controlled... I think it's becoming more and more acceptable." (H5)

"That might be a good idea if it'll keep more lands open, or if it will give us more access. I'd like to see some game, and that would be a matter of releasing birds. " (H6)

"One of the things that's really frustrating in just about anything that you want to get into is just the shear number of little fees and costs. You know, I want to go hunting and I discover that OK, I got to have a license that's gonna cost me... suddenly on top of that its deer tags, suddenly on top of that now is access fees... it seems overly complicated to then charge fees to get on land. Why not incorporate that into the fee system that is already existing and then distribute those funds [to landowners]?" (H9)

"There's a lot of benefit in going out and hunting your own food for those who are inclined to do that sort of thing. And if you're living on the margin, as I have for the majority of my life, having
Outside Hunters understand why Outsider Landowners expect monetary compensation for hunting access, but they may expect the state to provide the funds for such a program. Outside Hunters would favor other state programs (e.g., a tax incentive program for landowners) over a program where they were asked to provide goods, services, or payments, and many would participate in access arrangements brokered by DEC.

"... it's starting to become too expensive for the average person. So I think it's almost gonna have to be something where if the hunters have to pay more than they're paying, it won't work. But at the same token, I think if the landowners knew they were getting safe persons on the property that were well trained for hunting, and there were some incentive, like a tax break of some type, that might be more appropriate." (H9)

"I'm a little shy, so for me to ask a person, 'can I hunt on your property?', I find that difficult to do. To drive up to a road, with a bunch of dogs comin out after ya, and say, 'Hey, could I hunt on your property?' You know, and they look at you like who are you? Unless I'm introduced by someone, so to me it would be easier if the state went up, you know, a DEC Officer in a uniform, who they respected, right? And say, 'Hey Mr. Jones, you know, we see you have 400-500 acres over in this property and it's posted. Would you agree to have certain hunters if they were certified by the state, for a tax break, or you know, I don't know if you could get into, like personal services. That might be difficult. But possibly you would receive some of the meat, or the hunter would agree to give so many pounds to a charitable contribution, plus he's certified, blah, blah, blah. And whatever that costs the state to do that, in the areas that they think haven't been hunted enough, um. And then for me to be certified, I'd have to maybe go to a class. I don't really like big government, but I think that's where government would have to help out. Sort of direct it." (H9)

Hunter Training:

We hypothesize that changes in hunter training will have little affect on Outsider Landowners' decisions about hunting access, unless those programs are integrated with other incentives (e.g., monetary payments, goods and services, free wildlife damage reduction). They don't believe additional training will reduce hunter problems, and many maintain exclusive use policies that are not based on hunter behavior.
Outsider Hunters are generally reluctant to endorse calls for additional hunter training. Even Outsider Hunters who are willing to complete additional hunter training don’t believe this alone will affect landowner decisions about access.

Would more training help? "I think it would be pretty hard for hunters to accept. I think right now they can accept the training for the first time through to get their license, but then it seems that anybody who’s been out for one or two or three years thinks they’re the expert. There isn’t anything for them to learn and there isn’t anything to teach them. And I think its very hard for them to come in on any kind of basis to get more training on that. I just don’t think it will happen." (L5)

[would hunter training improve access] "You can put doctors and lawyers out there who’ve been trained for years. The guy is either gonna respect the farmer’s land and treat it right or he’s gonna do something stupid, like drive all over the place, or something like that. [doesn’t think hunter training would help] I personally don’t think that’s gonna change the landowners opinion of a hunter. . . . another course . . . isn’t gonna go over big [with landowners]." (H6)

". . . there may be a time when if I want to be a hunter, I may have to go to a state certification program, where maybe I go to school for 80 hours. And I’m qualified to hunt with shotgun, rifle, bow and arrow, crossbow. And with that, the state may say, hey, here’s a list of hunters you can contact if you want your property hunted. And they’re certified. Here’s their number, you know? . . . I actually would go to them . . . I wouldn’t want to pay a lot of money for it, but if you said, well Tommy, if you sign up for this 40 or 80 hour course, and your qualified to hunt archery, shotgun, maybe that shows you’re proficient. You know how to tear the gun down. You know how to shoot it. You have a certain level of marksmanship. And you know property rights and this type of thing. And you gave me a certificate that was good for five years or whatever, I think I’d almost say, you know, people might say well you’re being liberal about it, but I might even go for that." (H9)

**DISCUSSION, PART 4: IMPLICATIONS FOR DEC**

If our hypothesized model of landowner-hunter relationships is found to be accurate, this has a number of implications for DEC staff as they design and implement access incentive programs.

1. **Urban/Rural Transition Zones Should be Targeted for Programs**

   There are several reasons why DEC should target urban/rural transition areas as locations for access programs. One reason is that most hunters stay close to home. Some hunters have traditions that involve overnight travel, but for many, deer hunting does not involve an overnight trip. Consequently, access becomes difficult for some as it becomes less
available close to home. Interview comments are consistent with our assumption that access problems may become more acute on the fringe of population centers. The presence of Outsider Landowners who rely on formal mechanisms of access control, and Outsider Hunters with an interest in local hunting on the urban fringe create unique challenges and opportunities for access program initiatives in those areas. The number of hunters who live in urban population centers create a high demand for the limited hunting lands close by. If the State has the interest and resources to effectively compete for public access in the marketplace, there are unique opportunities for it to do so with Outsider Landowners near urban centers.

2. Develop Programs in Counties Where Outsider Networks are Common

DEC access programs will be most effective, for several reasons, if they target Outsider Landowners. First, Outsider Landowners and the State operate in the same decision-making paradigm (i.e., the political/economic paradigm). Operating in the same decision-making paradigm is a prerequisite for effective dialogue that does not necessarily exist between the State and Insider Landowners. Second, our findings suggest that some Outsider Landowners would participate in an exchange relationship with hunters or the State.

We believe access pilot programs are most likely to succeed if they are sited in counties where Outsider Networks are common. Table 10 represents our best estimates of the prevalence of Outsider Networks in New York State. We developed the following equation to assign prevalence ratings to counties:

\[ \text{Prevalence of Outsider Networks} = \text{Constant} - (\text{Insider Landowner estimate}) - (\text{Insider Hunter estimate}) + (\text{Outsider Hunter estimate}) \]

\[ \text{Constant} = 100 \]

\[ \text{Insider Landowner estimate} = \text{Proportion of land in the county composed of farms of 50 acres or more (based on the 1992 Census of Agriculture for New York)}. \]
Insider Hunter estimate = Proportion of hunters in that DEC administrative region that fit into Enck's (1996) definition of a "community hunter" identity type.

Outsider Hunter estimate = Proportion of hunters in that DEC administrative region that fit into Enck's (1996) definition of a "Tourist Hunter" identity type.

The equation starts with a constant (100). From the constant, we subtract a number that represents the proportion of Insider Landowners in the county. Insider Landowners are usually people with a direct economic connection to the land, so we used the proportion of land in the county composed of farms of 50 acres or more (based on the 1992 Census of Agriculture for New York) as our indicator. The second factor was an estimate of the proportion of hunters in that county that Enck (1996) would place in the identity type "community hunter," an identity type that we believe is associated with Insider Networks. The third factor was an estimate of the proportion of hunters in that county that Enck (1996) would place in the identity type "Tourist Hunter." We used this estimate as an indicator because we believe tourist hunters are typically associated with Outsider Networks.

We calculated a rating for each county and used the ratings to partition the counties into four equal quarters. We assigned the labels "very low", "low", "medium", or "high" with regard to prevalence of Outsider Networks. Our calculations indicate that regions 4 and 8 have relatively low proportions of Outsider Networks. We estimated that Regions 3, 5, 6, 7, and 9 contain counties with a medium to high prevalence of Outsider Networks.

Our calculations suggest that Regions 3 and 9 would be the best locations for access pilot programs. Both have relatively high proportions of Outsider Networks, and they are close to urban centers that create a demand for hunting access opportunities. Regions 5 and 6 also appear to hold a high proportion of Outsider Networks, but given the prevalence of public land
Table 10. Estimated prevalence of Outsider Networks in New York State, by county and Department of Environmental Conservation (DEC) administrative region.

<table>
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<tr>
<th>DEC Region</th>
<th>County</th>
<th>Constant</th>
<th>% of land in farms &lt; 50 acres</th>
<th>% &quot;Community&quot; hunters in region</th>
<th>% &quot;highly dependent&quot; hunters in the region</th>
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Source: 1992 Census of Agriculture for New York; Source: Enck (unpublished data); Source: Enck (unpublished data)
in those regions, we believe they should be regarded with lower priority as potential locations for access pilot programs.

3. Do Not Implement Access Programs Where Insider Networks are Common

By our estimates, the prevalence of Insider Networks is highest in Regions 4 and 8. We believe DEC should choose not to implement access pilot programs in those regions. Access pilot programs in those regions are likely to be inefficient, for at least two reasons. First, few Insider Landowners will accept state-sponsored programs because those programs threaten the autonomy of the Insider Landowner and the socially-constructed Insider Network. Second, Insider Landowners already provide hunting opportunities to the public, without intervention by the state. Targeting Insider Landowners is not likely to create a significant change in the total availability of hunting opportunity on private lands.

RESEARCH NEEDS

This study generated insights that DEC can use immediately to make more informed decisions about access programs in central New York. However, the study was qualitative and limited in scope, and all its findings should be regarded as tentative hypotheses. Many questions remain (e.g., Can researchers verify the existence of Insider and Outsider Networks? How common are Outsider Networks? Are they increasing? What proportion of Outsider Landowners are nonhunters or anti-hunters? Is greater mobility in society contributing to an increase in the proportion Outsider Hunters? Is mobility contributing to the decline of Insider networks? Are Outsider Networks fragmenting the access landscape, much as development of rural land has fragmented wildlife habitat? Are changes in access policies associated with increases or decreases in the proportion of Outsider Landowners?)
These are questions that must be addressed with quantitative research methods. As opportunities arise, researchers should conduct mail or telephone surveys to test the hypotheses offered here and quantify the potential effects of access program initiatives in various regions of New York State.

Key informants interviewed for this study suggested that tax relief might be effective as a strategy to maintain public hunting opportunities on farm lands. In 1996, the New York State tax code was amended to provide a reduction in property taxes for active farmers. This action creates a valuable research opportunity. DEC should consider a mail survey of farmers some time in the future to document the relationship between tax relief and access policies on private lands.

If DEC chooses to develop programs that include an exchange of fees for public access to private lands, those programs will have to overcome the barrier of landowner uncertainty about the financial outcomes of program adoption. To overcome that barrier, DEC would need to provide clear information about the financial costs and benefits landowners would face as program participants. This would necessitate additional research of two kinds: (1) research focused on hunters to determine demand (e.g., willingness to pay) for specific types of hunting access in local areas, and (2) research focused on agribusiness owners or industrial forest owners to estimate the costs associated with creating the types of hunting access experiences for which hunters are willing to pay.

LITERATURE CITED


APPENDIX A: Landowner Interview Guide
LANDOWNER INTERVIEW PART A: CONCEPTS

I. PHASE I GOAL: Develop hypotheses about the degree to which a set of economic and lifestyle incentives would encourage additional public hunting access on private lands.

II. OBJECTIVES: Identify the relationships between the landowner and the individuals who hunt on the property (identify key factors that contribute to landowner decisions about hunting access).

Develop hypotheses about how access relationships are formed and what types of economic and lifestyle factors facilitate those relationships for particular types of landowners.

Assess landowner opinions toward a set of access program options (i.e., would a given option encourage that landowner to provide access to the public, and why or why not).

Develop hypotheses about landowner acceptance of potential access programs and what types of economic and lifestyle factors are associated with acceptance of those programs.

I. CONCEPTS

A. Personal characteristics.
   1. Age.
   2. Occupation.
   3. Urban/rural background.
   4. Personal hunting background and interests.
   5. Duration of land ownership.
   6. Size of parcel
   7. Reasons for parcel ownership

B. Nature and extent of hunting access for each landowner.
   1. Access policy.
   2. Types of hunting allowed.
   3. Limitations landowner places on the hunters who use their land.

C. Landowner - hunter relationships
   1. What relationships exist between the landowner and the individuals who hunt on the property?
   2. Are landowners more willing to allow permission to a hunter if they get to know the hunter?
   3. Are there any limitations on the types of people they allow to hunt on their land (e.g., local vs. nonlocal).
   4. What key factors contribute to landowner decisions about hunting access?
   5. How do landowners define their community?
7. What role, if any, does the landowner's sense of community play in his/her decisions about access?

D. Landowner opinions toward different categories of potential access programs (i.e., explore acceptance of different types of potential access programs and what types of economic and lifestyle factors are associated with acceptance/rejection of programs in those general categories.

1. All incentives:
   a. Are landowners interested in any of the incentives identified by the access team?
   b. Is a particular incentive absolutely necessary before landowners will consider opening their land?
   c. What degree of control do landowners need to retain to participate in a particular access incentive program?

2. Programs involving payment to landowners:
   a. How much money would interested landowners want for providing access?
   b. Would interested landowners want the state to be involved in the process of collecting hunter fees?
   c. Would interested landowners be willing to collect fees directly from hunters? Do they understand the liability issues associated with accepting fees directly?

3. Programs based on additional hunter training
   a. What types of training do landowners believe hunters need?
   b. What types of hunter behaviors/attitudes bother landowners and/or hunters?
   c. What recourse do landowners want if certified hunters cause a problem.
   d. What is the landowner-preferred way for hunters who take advanced training to get increased access (e.g., work through DEC, talk to landowner, etc.)?
   e. Are landowners interested in participating in hunter education efforts? (e.g., meeting with and speaking to hunters)?

4. Programs that provide services to landowners:
   a. Which services would be attractive to landowners? Why?
LANDOWNER INTERVIEW PART B: INTERVIEW GUIDE

I. CONCEPTS

A. Personal characteristics

1. I'd like to start by learning a little bit about you as a landowner. Can you tell me more about yourself — your age, your occupation?
2. Could you give me a short history of your land ownership?
3. What is the size of your parcel?
4. How long have you owned the land?
5. What are the main reasons that you bought this land?

B. I'd like to learn more about the nature and extent of hunting access on your land.

1. Do you allow anyone to hunt on your land?
2. What types of hunting activity do you allow?
3. Do you place any limitations on the hunters who use your land?

C. I'd like to know more about the relationships between you and the people who hunt on your land (try to identify key factors that contribute to landowner decisions about hunting access; examine how access relationships are formed and what types of economic and lifestyle factors facilitate those relationships for particular types of landowners.

1. What relationships exist between you and the people who hunt on the property? (are they all relatives, friends, workmates, etc.)
2. Do you ever have complete strangers ask permission to hunt your land? Do you ever grant such permission? If so, can you tell me more about those people and how your relationship with them developed?
3. Are you more willing to allow permission to a hunter if you get to know them?
4. What key factors contribute to your decisions about hunting access?
5. What are the kinds of things that you consider when you decide whether to give a person permission to hunt on your land?
6. Does a person have to be part of your community to get hunting access?

E. I'd like to know your opinions toward different categories of potential access programs (i.e., explore acceptance of different types of potential access programs and what types of economic and lifestyle factors are associated with acceptance/rejection of programs in those general categories.)
1. Do you believe landowners should have greater liability protection (e.g., a legal defense fund)?

2. Would you be interested in a program where you received direct payments (e.g., leasing or easement arrangements) for providing access?

3. How much money would it take to make it worthwhile for you to provide hunting access?

4. Do you think additional hunter education requirements would affect landowners’ decisions about access to private lands?

5. What types of training do you believe hunters need?

6. What types of hunter behaviors/attitudes bother you as a landowner?

7. Would you be interested in providing hunting access if you received some kind of services from DEC?

8. What kinds of services would interest you as a landowner? Why?
APPENDIX B: Hunter Interview Guide
HUNTER INTERVIEW GUIDE PART A: CONCEPTS

PHASE I GOAL: Develop hypotheses about the degree to which hunters would accept actions by DEC to encourage public hunting access on private lands, and why they would accept or reject such programs.

OBJECTIVES: Determine access arrangements preferred and used by hunters.

Assess hunter opinions toward a set of access program options (i.e., would a given option encourage that hunter to deer hunt more often, and why or why not).

RESEARCH QUESTIONS:

A. Background information
   1. Age
   2. Occupation

B. Hunting Characteristics
   1. Number of years hunting experience.
   2. Active/inactive in past year.
   3. If inactive, why?
   4. Types of hunting they have done and still do (if active)
   5. Diagnostic questions related to hunter identity subgroup. (I would like to develop a set of items to place each hunter into one of the identity types hypothesized by Enck (1996). Having hunters identified in this way will allow us to continue the process of guessing about the how different groups of hunters might accept new access programs and why. All of this will be speculative, but will be very useful as a guide to develop the next generation of hunter and landowner surveys.

C. Access experiences
   1. Hunting on public and private land.
   2. Number of different places hunted.
   3. Past experiences related to fee hunting.

D. Social relationships as a hunter
   1. Hunting companions.
   2. Relationships between them and the owners of land they hunt.
   3. Sense of community or personal connection to the people and the land where they hunt.

E. Information on potential access programs that involve payment to landowners.
   1. Willingness to pay fees to participate in particular access programs.
2. Willingness to pay into potential access programs.

3. Willingness to pay access program fees to BOW or directly to landowners.

**F. Information on potential access programs that involve additional hunter training.**

1. Willingness to participate in voluntary advanced hunter training if it were linked to an access program.

2. Types of additional training hunters would be willing to complete.

3. Ways that hunters who would participate in advanced training would prefer to obtain access (e.g., through BOW, the landowner, a third party).

4. Hunter-preferred way to take advanced training to get increased access.

**G. Information on potential access programs that involve services to landowners.**

1. Experience providing services to landowners.

2. Expectations about providing services to landowners.

3. Willingness to provide services to landowners.
HUNTER INTERVIEW GUIDE PART B: HUNTER INTERVIEW GUIDE

A. Your personal background
   1. Could you tell me a bit about yourself? (your age, occupation)

B. Your background as a hunter
   1. I'd like to know a little bit about your background as a hunter. How long have you been hunting?
   2. What types of hunting do you do?
   3. Did you go hunting this year? If inactive, why?

C. Your experiences related to access
   1. Do you hunt on public and private land?
   2. Do you hunt in the same place all the time? Can you tell me about the place(s) you hunt?
   3. Did you use to hunt in any other places? Why don't you hunt there now?
   4. Have you ever paid for hunting access?
   5. Do you have any concerns about findings places to hunt?

D. Your relationships with other hunters and landowners
   1. Who else do they hunt with? (alone, family, friends)
   2. What relationships exists between the hunter and the owners of land they hunt?
   3. Does the hunter perceive any sense of community or personal connection to the people and the land where they hunt?

E. Your opinions of fee hunting
   1. Are you willing to pay fees to participate in particular access programs?
   2. How much money would you be willing to contribute to a program that gave you access to the kinds of private land where you would like to hunt?
   3. Would you be more willing to pay into a program if you gave the money to DEC, or directly to the landowner who gave you access?
F. Your opinions on hunter training experiences.
1. How many hunters would be willing to participate in voluntary advanced hunter training if it were linked to an access program?
2. What types of additional training would hunters be willing to complete?
3. How would hunters who participate in advanced training prefer to obtain access (e.g., through BOW, the landowner, a third party).
4. What is the hunter-preferred way for hunters who take advanced training to get increased access?

G. Your opinions on providing services to landowners.
1. Have they ever provided services to landowners? Do they think this is something they should be expected to do? Do they feel any obligations to the landowner?
2. Would hunters be willing to provide services to landowners?
3. What would hunters be willing to do and how much time are they willing to spend to get access?
APPENDIX C: Landowner Characteristics
## Appendix C. Landowner characteristics.

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APPENDIX D: Hunter Characteristics
### Appendix D. Hunter characteristics

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APPENDIX E: Landowner Access Relationships
Appendix E. Landowner access relationships.¹

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¹ Shaded boxes indicate the strongest connections for that landowner.
APPENDIX F: Hunter Access Relationships
Appendix F. Hunter access relationships

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| 3 | 2 | 5 | 3 |

1 Shaded boxes indicate the strongest connections for that hunter.