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BY LARGE PRIVATE HUNTING AND FISHING  
CLUBS IN NORTHERN LOWER MICHIGAN.**

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FOREST RESOURCE USE AND MANAGEMENT BY LARGE  
PRIVATE HUNTING AND FISHING CLUBS IN  
NORTHERN LOWER MICHIGAN

By

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## ABSTRACT

### FOREST RESOURCE USE AND MANAGEMENT BY LARGE PRIVATE HUNTING AND FISHING CLUBS IN NORTHERN LOWER MICHIGAN

By

David Michael Baumgartner

Eighty-four hunting and fishing clubs, 640 acres or larger, were identified in northern Lower Michigan. Clubs were found in only 16 of the 31 counties in the study area; the highest concentration was in the northeast portion of the area.

The 84 clubs control about 185,000 acres or 288 square miles. The average size of clubs 640 acres or larger is about 2,200 acres; the median size is 960 acres. About 5,300 families belong to these clubs. The average area per membership is 35 acres.

The most important recreation facilities the clubs have are their forests, streams, and lakes, and the wildlife that inhabits them. Very few have elaborate man-made

recreation facilities. Hunting and fishing are the most popular activities, although many other outdoor recreation activities are also popular with club members.

The large clubs have been an economic source of raw material to the pulp and paper industry in the region. Over three-fourths of the clubs have engaged in commercial cutting in the past 5 years. The primary reason for cutting was wildlife habitat improvement rather than revenue gained. Forty-five percent of the large clubs are presently using forest-wildlife management plans developed by professional foresters from the pulp and paper industry, 20 percent once followed such plans, and 35 percent never had plans. By continuing to emphasize noneconomic benefits, industry should be able to bring more clubs under management in the future.

While club archery and rifle deer hunters have over twice the average success for hunters in the state, it is doubtful that their deer herds are under control. In 1967, antlerless deer comprised only one-fifth of the total club harvest, and in 60 percent of the clubs no antlerless deer were harvested. The future of deer

hunting and forestry practices in the clubs is questioned unless the natural resource professions are more successful in showing the need for deer herd control to protect the habitat.

The men responsible for managing and governing the clubs are generally married, middle-aged, and highly educated. Most are professionals or business owners or executives. Efforts by public and private agencies to promote forest resource management in the clubs must be primarily directed at these men.

The large clubs are relatively stable ownerships with large areas of forest resources. The interviewees believe their clubs will continue to operate in the future as they have in the past, but with more diversified use in some.

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## TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS. . . . .	ii
LIST OF TABLES. . . . .	v
LIST OF FIGURES . . . . .	ix
Chapter	
I. INTRODUCTION. . . . .	1
Objectives . . . . .	2
Scope. . . . .	3
Procedures . . . . .	5
II. REVIEW OF LITERATURE. . . . .	10
Clubs in the United States . . . . .	11
Northern Lower Michigan. . . . .	13
III. EXTENT AND ORGANIZATION OF LARGE PRIVATE HUNTING AND FISHING CLUBS IN NORTHERN LOWER MICHIGAN. . . . .	21
General Description. . . . .	21
Organization . . . . .	24
Operating Facilities . . . . .	29

Table of Contents.--Cont.

Chapter	Page
IV. RECREATION FACILITIES AND ACTIVITIES. . . .	34
Recreation Facilities. . . . .	34
Recreation Activities. . . . .	34
V. FOREST PRACTICES. . . . .	39
The Forest Resource. . . . .	39
Commercial Cutting . . . . .	43
Forest-Wildlife Management Plans . . . .	49
Tree Planting. . . . .	54
VI. WILDLIFE PRACTICES. . . . .	56
Deer Management. . . . .	56
Deer Hunting in Michigan . . . . .	58
Deer Hunting in the Clubs. . . . .	60
Other Wildlife Management Practices. . .	70
VII. INTERVIEWEE CHARACTERISTICS AS AN INSIGHT TO CLUB POWER STRUCTURE . . . . .	75
VIII. CURRENT PROBLEMS AND FUTURE PROSPECTS . . .	84
IX. SUMMARY AND CONCLUSIONS . . . . .	88
LITERATURE CITED. . . . .	96
APPENDIX. . . . .	100



## LIST OF TABLES

Table	Page
1. Total large private hunting and fishing clubs and sample size in northern Lower Michigan, 1968. . . . .	8
2. Date of origin of clubs sampled . . . . .	22
3. Average acres per club membership . . . . .	24
4. Types of clubs in the study area. . . . .	25
5. Club membership costs, 1968 . . . . .	28
6. Annual club dues, 1968. . . . .	28
7. Club membership turnover, 1964-1968 . . . . .	29
8. Number of people the club lodge will accommodate . . . . .	30
9. Clubs that have fences, gates, and posting. .	32
10. Percent of clubs having a caretaker . . . . .	33
11. Activity participation by club members. . . .	36
12. Commercial forest land by forest cover types in northern Lower Michigan, 1966. . . . .	40
13. Volume of growing stock on commercial forest land, by species groups, in northern Lower Michigan, 1966. . . . .	41
14. Pulpwood production by species group in northern Lower Michigan, 1967 . . . . .	42

# List of Tables.--Cont.

Table	Page
15. Pulpwood production by ownership in Michigan's Lower peninsula, 1958-1967 . . .	44
16. Reasons why some clubs had no commercial cutting, 1964-1968. . . . .	45
17. Reasons why some clubs had commercial cutting, 1964-1968. . . . .	46
18. Importance of revenue in affecting the decision to make commercial cuttings. . . .	47
19. Attitudes toward cutting oak. . . . .	49
20. Clubs using forest-wildlife management plans, 1968. . . . .	50
21. Reasons given by clubs for ending their management agreements with the pulp and paper industry. . . . .	52
22. Reasons given by the clubs contacted by the pulp and paper industry for not entering into management agreements. . . . .	53
23. Primary reasons for tree plantings by clubs .	54
24. Reasons why clubs that once planted trees are not planning future plantings . . . . .	55
25. Reasons for not allowing archery hunting. . .	61
26. Number of archery hunters per square mile on club lands, 1967 . . . . .	62
27. Deer kill per square mile by archery hunters on club lands, 1967 . . . . .	63
28. Hunter success in clubs with archery hunting, 1967. . . . .	63

List of Tables.--Cont.

Table	Page
29. Rifle hunter density per square mile on club areas, 1967 . . . . .	64
30. Area per rifle hunter on club lands, 1967 . .	65
31. Deer kill per square mile by rifle hunters on club lands, 1967 . . . . .	66
32. Rifle hunter success on club lands, 1967. . .	67
33. Total deer harvest by clubs, 1967 . . . . .	68
34. The proportion of antlerless deer in the total harvest by all clubs, 1967. . . . .	70
35. Wildlife plantings by clubs, 1964-1968. . . .	74
36. Ages of the club interviewees . . . . .	76
37. Educational level of the interviewees . . . .	77
38. Occupations of the interviewees . . . . .	77
39. Gross family income of the interviewees . . .	78
40. Length of club membership . . . . .	79
41. Number of visits by the interviewees to their respective clubs in 1967. . . . .	79
42. Longest visit by the interviewees to their clubs in 1967 . . . . .	80
43. Month of the longest visit by the interviewees to their clubs, in 1967. . . . .	81
44. First and second favorite club activities of the interviewees. . . . .	82

List of Tables.--Cont.

Table	Page
45. Current or future problems which may threaten each club's existence. . . . .	85
46. Club problems which public agency assistance could help solve. . . . .	86
47. The future of the clubs as viewed by the interviewees. . . . .	87

## LIST OF FIGURES

Figure	Page
1. Location of the large private hunting and fishing clubs in the study area, 1968. . .	4

## CHAPTER I

### INTRODUCTION

Northern Lower Michigan has plentiful forests and lakes which make it a popular vacationland. The region, once known as the "Northern Cut-Over Area," is now more appropriately called the "Northern Forest Recreation Area" (Kimball, 1969). The population is low; only 5 percent of the state's 7.8 million people reside there (Beegle et al., 1962). A good system of highways makes the area easily accessible to densely populated southern Michigan and adjoining states. The area has 7 million acres of commercial forest land (Ostrom, 1968). Two-thirds of this area is owned by 25,000 private landowners (Yoho et al., 1957).

Private hunting and fishing clubs are known to be numerous in the area. The northeast section of the Lower Peninsula is commonly known as "Michigan's Club Country." However, little has been known about these clubs, their characteristics of their forest resource use and management.

Because of the large total area that these clubs control and because our growing population is making increased demands on almost all forms of land use, it is important that these clubs, their activities, and their role in the region's socio-economic well-being progress, and development be studied and evaluated. Private forest landownerships represent a significant source of wood supply to the region; and because of the size of club ownerships, game management activities on these holdings have an effect on game populations in surrounding areas.

### Objective

The objective of this study is to provide a comprehensive analysis of the large private hunting and fishing clubs in northern Lower Michigan by studying specific characteristics of their forest resource use and management. Particular emphasis is given to timber, recreation, and wildlife.

More knowledge of these characteristics and management practices should provide information to both

public and private agencies that deal with these clubs that will be useful for policy and program formulation or revision.

### Scope

The study area is composed of the northern 31 counties of Lower Michigan (Figure 1). Economic and physiographic characteristics of these counties make them a natural study area. This region is much more heavily forested than the farmland and industrial areas to the south and has a much lower resident population.

For the purposes of this study, a club is a formally organized group using and managing a property for non-profit purposes of hunting, fishing, and/or other related outdoor activities. A club is organized so that the members have a voice in the management and use of the property, either through direct vote or through elected directors or trustees. Further, a club has provisions for new members to join, and present members to leave the club, thereby perpetuating the organization regardless of the death or disinterest of one or more of the members. A



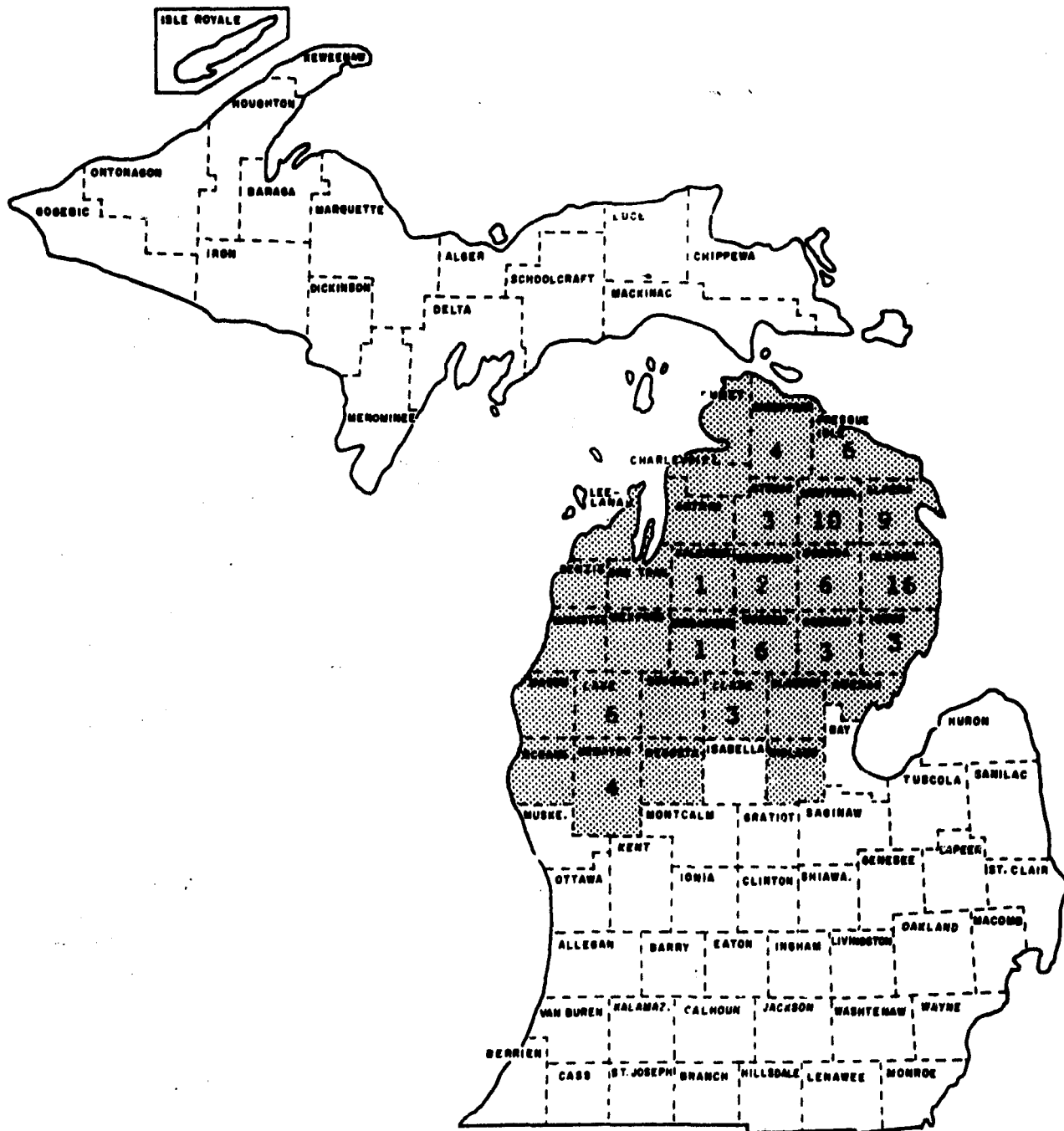


Fig. 1.--Location of the large private hunting and fishing clubs in the study area, 1968.

club is not an individual ownership with management decisions dependent upon only one person, no matter how many persons use the land or the nature of their use. And, a club is not a resort type ownership, owned by an individual or a group for profit purposes.

Available time and funds necessitated that a minimum club size be established for inclusion. It was decided that a 640-acre size minimum would best serve the objectives of the study. Also, 640 acres, or one section, is consistent with the legal land survey system.

### Procedures

#### Compilation of the Ownership List

The ownership list is based on information from county plat books. All properties 640 acres and larger were initially listed from these books. Questionnaires were sent to various county treasurers and township supervisors to clarify the nature of these ownerships and to obtain owners' addresses. County treasurers' offices in

the eleven counties thought to contain the most clubs were visited and information was taken directly from the tax rolls. Two pulp companies, Packaging Corporation of America and Abitibi Corporation, also furnished information on club ownerships. Questionnaires were also sent to district game biologists of the Michigan Department of Natural Resources and to some extension agents of the Michigan State Cooperative Extension Service. Various other knowledgeable individuals were contacted regarding club ownerships. Finally, letters were sent to individuals associated with properties which were considered to be possible club ownerships.

A constant problem throughout the early phases of the study was the definition of the study unit itself. The initial concept of a club was refined and formalized midway in the interview phase of the study. Prior to this, any property which in some manner could be considered a club was listed. Information gained during the interviews was then used to establish the formal definition. This definition was then used in conjunction with the information gained in compiling the initial ownership list to arrive at the final list of clubs.

The dynamic nature of property ownership and the exclusiveness of many private ownerships served to complicate the compilation of the ownership list. In the study area, there are many large individual absentee ownerships which are used in much the same manner as the clubs; however, the use and management of these properties is determined by the dictates of only one person, the owner. Although these properties are not controlled by clubs, they might appear to be club properties to the casual observer. Because of this, knowledgeable individuals contacted frequently designated nonclub properties as clubs. This necessitated considerable cross checking and numerous letters and telephone calls to establish the ownership list. This tendency of people to consider all large absentee ownerships as clubs leads this investigator to the opinion that clubs are commonly construed to control more land than they actually do.

### Interviews

As shown in Table 1, the population of clubs, 640 acres and larger, in the study area is 84. Interviews

TABLE 1.--Total large private hunting and fishing clubs and sample size in northern Lower Michigan, 1968.

Size Class	Total Clubs	Clubs Interviewed	
Acres	Number	Number	Percent
640- 999	45	19	42
1000-1999	23	18	78
2000-4999	9	9	100
5000+	7	5	71
Totals	84	51	61

were completed with a member from 51 of these 84 clubs. This represents a 61 percent sample. For purposes of this study, it was assumed that one member could adequately represent his club. Since the primary address source was the tax rolls, the interviewee was usually the secretary of his club or an officer in some capacity. Interviews were set up by telephone and were conducted at either the home or business place of the interviewee. A copy of the questionnaire used is in the Appendix. Selection of interviewees was on the basis of their home addresses rather than the club locations. Priority was given to the larger

clubs and an effort was made to include the largest clubs in the sample. This resulted in a 100 percent sample in the next to the largest size category, and a 42 percent sample in the smallest size category. Interviews were conducted from September 1, 1968 to November 15, 1968.

## CHAPTER II

### REVIEW OF LITERATURE

The notion of hunting and fishing clubs in this country is not new. According to Hubbard (1901b), the oldest fishing club in the world, the Fishing Company of the State in Schuylkill, was founded in 1732 in Philadelphia. Holberton (1893) reported that the New York Sportsmen's Club was started in 1844 "by a few prominent New York Gentlemen interested in field sports."

It was apparently not until after the Civil War that a general increase in wealth and leisure brought increased interest in sport shooting. Guns became better and cheaper. Railroad travel also improved and became cheaper allowing people to travel greater distances to hunt. During this time sportsmen, concerned over the decline of game, began buying land for their own private hunting (ORRRC Study Report No. 6, 1962).

In 1893, Hunter stated that

during the last ten years the increase and development of the sportsmen have been phenomenal. A decade ago (1880) only the large cities had a

gun club. Today it is a small town indeed that does not boast of its fine team.

Although there was some uneasiness about the good hunting land in private ownership, the prevailing opinion was that this was better than the complete disappearance of hunting. As early as 1888, it was said that the best duck hunting areas on the east coast and tidal rivers were controlled by wealthy clubs and hotels. In 1892, it was noted that the deer population of the Adirondacks had benefited by the large amount of land under the protection of private preserves (ORRRC Study Report No. 6, 1962).

#### Clubs in the United States

The Federal Reserve Bank of Boston (1959) published a study entitled "Sportsmen and Land--A Conflict of Freedoms." It reported that since hunting land was becoming more scarce each day, an alternative some sportsmen were taking is that of group ownership. In California, over 95 percent of the privately owned pheasant land is under lease. In Virginia, most of the larger timber tracts are under lease as are almost all of the waterfowl marshlands. In



New York's Adirondacks, approximately one half of the ownerships of 10,000 acres or more are under lease. In eastern Pennsylvania, two counties are almost entirely club controlled. In Texas, over 13 million acres of the best game land is under lease. In Colorado, more than half of the better hunting land is controlled by sportsmen's groups. The practice is common in rural states on valuable marshlands. In Iowa, marshlands suitable for hunting have been leased for over 30 years.

The report goes on to say that in New England, where group ownership was once frowned upon as a threat to the average man, there are hundreds of clubs. In a survey conducted by the Bank, 482 sportsmen's groups replied. Of these, 282 reported that they owned a total of 56,000 acres, and 72 said that they leased a total of 22,000 acres. In addition, many clubs had informal arrangements with other landowners. Data were not complete on this, but it was estimated that informal arrangements account for a much larger area than the 78,000 acres owned and leased.

Further, the report cautioned against exaggerating the importance of these groups in New England and in the

nation. In New England, only 12 percent of the licensed sportsmen belong to clubs. For the United States, the membership is 6 percent. The report concludes that in some areas, the day of public hunting may be over. The average sportsman most probably will have to spend more money and accept more limitations than he has in the past.

#### Northern Lower Michigan

The first club in Michigan was the Lake St. Clair Fishing and Shooting Club started in 1873 on Lake St. Clair in southeastern Michigan. Other clubs followed in the area, but as population grew, the quality of the hunting and fishing declined, causing many sportsmen to look to northern Michigan for new club areas. The pioneer club in that area was the Turtle Lake Club (Hubbard, 1901a).

Hubbard (1901c) described northern Michigan as a region suffering from lack of sportsmanship. Its curse was conscienceless hunters coming in for two weeks or a month in autumn from every area of southern Michigan and other states. He said that these people were far from

being sportsmen and were doing great harm to the wildlife. In his opinion, there was a great need for suppressing the raids of outside hunters during their fall invasion. He believed that private land was better than game stripped waste, and that the establishment of hunting clubs would help protect the region.

Hedrick (1934) reported that 220 hunting and fishing clubs were listed on the 1931 tax rolls in northern Lower Michigan. Hunting and fishing clubs were defined as properties whose members get recreation through the pursuit of game and fish. The 220 clubs in his study were concentrated in the northeast corner of the Lower Peninsula. In total, they occupied 169,613 acres. Thirty-two of the clubs were over 1,000 acres in size. The Turtle Lake Club, organized in 1884 in Alpena and neighboring counties, was the oldest and largest club, totaling 25,000 acres.

According to Hedrick (1934), the operation of a club in 1931 required a sizable force of men. In larger clubs, permanent caretakers, guards, and wardens were necessary. Smaller clubs employed nearby farmers or neighbors. Deer drives were common during deer season

on the larger clubs. One explanation for the existence of the large clubs was the safety that they afforded the hunter. Clubs were considered refuges for the deer to the extent that deer hunting was limited to members alone, and the game was secure from the ravages of the annual army of hunters visiting adjoining areas.

Hedrick defined combined summer resort and hunting and fishing clubs as being different from simple hunting and fishing clubs in that they received considerable summer activity and included some elaborate summer recreation facilities. Five combined summer resort and hunting and fishing clubs over 1,000 acres were listed.

ORRRC Study Report No. 6 (1962) reports some interesting findings of Paul M. Barrett of the Michigan Department of Natural Resources concerning the closure of wildlands in northern Lower Michigan. Surveys were made in 1929, 1948, 1954, and 1960 of every 40-acre tract in this area, and included all land not organized in farms or in active farming.

The total land in the study area is 11,710,080 acres of which 7,990,984 acres were classified as wildland in 1960. This was 68.2 percent of the total.

Publicly owned land was 35.5 percent of the total. Wildland posted against hunting made up 18.1 percent of the total. The rate of closure increased 121 percent from 1929 to 1948. From 1948 to 1954 it increased 38 percent. From 1954 to 1960 the increase was also 38 percent. The total increase from 1929 to 1960 was 326 percent. The percentage closure of privately owned wildland is highest in four counties in the northeast of the study area. They are Alcona, Alpena, Montmorency, and Presque Isle counties. They have 50 percent or more of the wildland fenced in. Five adjoining counties, Iosco, Ogenaw, Oscoda, Otsego, and Roscommon, have 20 percent or more closure. The closure pattern is explained by ORRRC (1962) as due to the establishment of large clubs in the area in the first quarter of the century when the deer herd was largest and the trout plentiful. At this time land was cheap and abundant; large holdings could be obtained with little difficulty or cost.

ORRRC (1962) did not view the clubs very enthusiastically as is indicated by the following statement:

In this region there are no signs that the fencing trend will be reversed. The owners of large clubs are holding their properties for

general recreation and family and group retreat from urban life and the fact that members may hunt and fish less than formerly does not reduce the value of the properties to them. Also, there is little interest in managing such properties for forest products or the deer herd. Few have industrial or State arrangements for the joint management of timber and deer, or do it themselves. One consequence is an overly large, poor quality deer herd which would be improved by a large annual kill.

The increased hunting land acreage owned or leased by hunting clubs is explained by ORRRC (1962) as a response to a number of trends, including population growth and its concomitant land uses, the increase in the number of hunters, improved mobility, the increase of posted land, the loss of huntable land to other uses, and the decline in game quality.

Westell (1956) described the beginning of cooperation between hunting clubs and the pulp and paper industry in forest and wildlife management in northern Lower Michigan. Many clubs faced a food shortage for their deer herds because the forest had matured and was producing little browse. American Boxboard Company (now Packaging Corporation of America) had started a "Club Country Program" under which the Company developed a written forest-wildlife management plan for a club. In

return the club sold pulpwood stumpage to the Company at the going rate. Cutting was done by local labor and inspected by Company personnel. The goal of this program was to improve the wildlife cover and food, boost local economy, and build a healthy productive forest which would provide a sustained supply of pulpwood to the company.

The first club to enter this program was the Turtle Lake Club which signed a long-term forest management contract with American Boxboard Company in 1955. Other clubs soon followed suit with similar programs. Westell estimated that as many as 20,000 Michigan deer hunters belonged to private hunting clubs.

Yoho et al. (1957) reported on private forest landownership and management in the northern half of Michigan's Lower Peninsula. They found that: (1) Some 25,000 private landowners hold 65 percent of the 7.5 million acres of commercial forest land in the northern half of Lower Michigan; (2) Thirty percent of the private forest is owned by farmers and part-time farmers, the rest is held by persons in many occupational groups; (3) Private forest land in northern Michigan is characterized by small tree sizes, poor tree stocking, and

small acreage volumes per acre; and (4) Most private forests are under poor management, with the best on lands under the control of professional foresters.

Yoho et al. (1957) also reported on commercial forest land ownership by owner occupation. One owner occupation in their system was a recreational group, defined as a club or organization holding land purely for purposes such as hunting, fishing, or recreational camp. Their definition of a recreational group is broader than that of a hunting and fishing club as used in this study and is more inclusive. Their major findings concerning recreational groups are as follows:

(1) They own 13 percent or 641,300 acres of commercial forest land; (2) They total 318 groups; (3) The average ownership is 2,016 acres; (4) They hold 14 percent or 3,031 thousand cords of cordwood material in the study area; and (5) They own 10 percent or 328 million board feet of the sawlog material in the study area.

Schallau (1965) studied fragmentation, absentee ownership, and turnover of forest land in northern Lower Michigan. He found that privately owned forest properties are getting smaller. In 1946, the average size of



contiguous forest tracts was 182 acres; the average in 1962 was 156 acres. Acreage of absentee ownership increased 45 percent between 1946 and 1962, and continues to increase at a fairly steady rate. Schallau concluded that fragmentation and property turnover very likely restrict the economic supply of timber; however, absentee ownership could increase it as well as decrease it. He explains this statement by the fact that many absentee owners are interested in deer hunting. Cutting usually improves browse conditions and is often welcomed as an opportunity to improve deer habitat.

### CHAPTER III

#### EXTENT AND ORGANIZATION OF LARGE PRIVATE HUNTING AND FISHING CLUBS IN NORTHERN LOWER MICHIGAN

##### General Description

The locations of the 84 clubs, 640 acres or larger, in northern Lower Michigan are shown in Figure 1 by county. Where a club extends into more than one county, it is listed in the county which contained its largest area. Clubs are located in only 16 of the 31 counties in the study area. The highest concentration occurs in the northeast corner of the study area; it is this section of the state that is known as "Club Country." Alcona County has the most clubs 640 acres or larger, with 16.

Seventy-four percent of the clubs interviewed were started between 1920 and 1949 (Table 2). The first decade to have a substantial number of clubs established was the 1920's. The land had essentially all been logged and much of it had burned over. For those who had money during this period, land was cheap. Also, the forests, which

were recovering from the fires that had been common, were very brushy and provided excellent deer habitat. Transportation was no longer a limiting factor, with a good railroad network, and automobiles and roads were improving. Thus, cheap land, good hunting, and adequate transportation, apparently were the major reasons for both the location and origin of many clubs.

TABLE 2.--Date of origin of clubs sampled.

Decade	Percent of Clubs
1900-1909	8
1910-1919	4
1920-1929	27
1930-1939	27
1940-1949	20
1950-1959	6
1960-1968	8
Total	100

The 84 clubs in the study area control 184,559 acres or about 288 square miles. The average size of

the clubs which are 640 acres or larger is 2,197 acres. The median size is 960 acres. The difference between the mean and the median results from the many clubs in the smaller size classes (Table 1), with only a few clubs in the largest size classes. The largest club is 25,000 acres and the next largest is 18,080 acres.

The total membership number for the 84 clubs is estimated at 5,288. Typically, memberships are owned by men whose wives and children also use the club properties; therefore, each membership generally represents a family rather than an individual.

By dividing the total club acreage by the total estimated number of club memberships, an average area of 35 acres per membership is obtained. Considered in this manner, the clubs come into focus as groups of people with similar interests pooling relatively small land areas together to form a larger unit for their common usage. Individual absentee ownerships, about 35 acres in area, are common in the region. Opre (1967) reported that more than 1,000 Detroit-area people own parcels of 40 acres or more in four counties in the region.

Table 3 shows the acres per membership in each club by size class. Fifty-five percent of the clubs have less than 80 acres per membership and 45 percent have between 40 and 79 acres per membership. Since each membership generally represents a family, the number of acres per member is considerably smaller than the average number of acres per membership.

TABLE 3.--Average acres per club membership.

Acres Per Membership	Percent of Clubs
39 or less	10
40 - 79	45
80 - 119	19
120 - 159	18
160 or more	8
Total	100

### Organization

Although members in most clubs take part in varied activities, the clubs tend to identify themselves

with one primary activity, either hunting or fishing.

The clubs were grouped by their primary activity. Table 4 shows that 82 percent of the clubs consider themselves deer hunting clubs, while 14 percent are fishing clubs, and 4 percent are duck hunting clubs.

TABLE 4.--Types of clubs in the study area.

Club Type	Percent of Clubs
Deer Hunting	82
Fishing	14
Duck Hunting	4
Total	100

Ninety-six percent of the clubs are organized as corporations, with the remaining 4 percent jointly owned by their members. Eighty-four percent are non-profit corporations, 4 percent are profit corporations, and 6 percent are trustee corporations. As such, these clubs come under the General Corporation Laws of the State of Michigan (Michigan General Corporation Laws, 1964). To become a member of these clubs, a person must become a

shareholder in the corporation. The business of every corporation is managed by a board of directors of at least three persons. The directors select a president, a secretary, and a treasurer, and may select other officers. Upon dissolution of a club, the members receive their proportionate share of the corporation's value.

All clubs have a limitation on the number of members allowed to belong at one time. To join a club, a person must be cleared through procedures set by the club. In many instances, the applicant has to be well-known by the members and perhaps have hunted with them. In 59 percent of the clubs, once accepted, a person buys his membership from an individual wishing to leave the club or from the family of a deceased member. In the other 41 percent of the clubs, all memberships being vacated have to be sold back to the club, and then the club resells them. Many clubs have lengthy waiting lists of prospective members.

The price of the membership is negotiated by the buyer and seller in 55 percent of the clubs. In these cases, the value of the membership tends to approximate the value of the membership's share in the property.

For example, the author discussed the value of land in the region with several real estate people, and as a "rule of thumb," they stated that club land was worth approximately \$100 per acre. Thus, if the area per membership is 40 acres, then the membership is worth about \$4,000.

In 45 percent of the clubs, the cost is set by the club itself. Often this price is considerably below market value of the equity represented by the membership. The reason for this approach is that these clubs want people to join, not for investment, but to be active members. By keeping the membership fee low, it is not a determining factor in who can or cannot join, and real estate speculation by prospective members is discouraged.

Table 5 presents the membership cost structure for the clubs at the time of the interviews. Fifty-seven percent of the clubs had membership fees under \$4,000.

The annual dues of each club generally equal expenses minus any income (from pulpwood sale, etc.) divided by the number of memberships. Sixty-five percent of the clubs have dues less than \$200 per year (Table 6).



TABLE 5.--Club membership costs, 1968.

Membership Cost	Percent of Clubs
Under \$2,000	37
\$2,000-3,999	20
\$4,000-5,999	12
\$6,000 or more	31
Total	100

TABLE 6.--Annual club dues, 1968.

Annual Dues	Percent of Clubs
Under \$100	35
\$100 - 199	30
\$200 - 299	12
\$300 or more	23
Total	100

The memberships in the clubs are relatively stable. Seventy percent of the clubs reported less than 20 percent of their memberships changed hands during the 5-year period from 1964 through 1968 (Table 7).

TABLE 7.--Club membership turnover, 1964-1968.

Percent Turnover	Percent of Clubs
0	16
1 - 9	14
10 - 19	40
20 - 29	14
30 or more	18
Total	100

#### Operating Facilities

Seventy-six percent of the clubs have a main lodge or clubhouse in which all or part of their members can stay when using the club property. Community living is viewed as very important in some clubs because of the comradeship it promotes, especially during deer season. It is believed that the objectives of the club are furthered because the members get to know each other better. Also, when many of the clubs started, a single living facility was more economical than individual housing units.

Table 8 shows the number of people that each clubhouse will accommodate at one time. This is often a critical factor in determining the number of people who hunt on the club during deer season, especially where members do not have individual cabins.

TABLE 8.--Number of people the club lodge will accommodate.

Number of People	Percent of Clubs
Under 10	8
10 - 19	38
20 - 29	23
30 - 39	10
40 or more	21
Total	100

Members have their own cabins on 41 percent of the clubs. For clubs with lodges, individual cabins are not needed. Also, some clubs prohibit individual cabins because they fear that communication between the members would be reduced, and that cabin owners would become more interested in their own cabin than the activities of the

club. However, clubs that have individual cabins do not appear to have suffered these problems according to statements by various interviewees.

Mobile homes are used on only 14 percent of the clubs. However, with the recent improvements in mobile homes, it appears that their use will become more common. Six percent of the clubs provide separate areas for mobile homes.

Only 14 percent of the clubs do not have electricity on their property, and 73 percent do not have telephone service. Lack of telephone service is often due to the remote locations of the clubs, but during the interviews, comments about not wanting phones or having had them taken out were common.

Only 8 percent of the clubs reported that some members reside the year around on the property. Twenty-five percent have members using their club as summer homes, and spending their winters elsewhere. Members using their clubs either for year-around residences or for summer homes are apparently mostly retired people. The use appears to be growing, and some clubs seem destined to become at least partially retirement colonies.

An important reason for belonging to a private club is that the use of an area is restricted to members and friends. Fences, gates, and posting are methods of insuring privacy and limiting use. Table 9 shows the percent of clubs having these features. Ninety-eight percent of the clubs have at least a partial fence defining their boundaries. The fence is often just a single strand of wire nailed to trees along the club boundary, and serves as much to keep members on a club property as it does to keep non-members off. Eighty-four percent of the clubs have gates with locks and 84 percent have their boundaries posted against hunting or trespassing.

TABLE 9.--Clubs that have fences, gates, and posting.

Protective Device	Percent of Clubs That:	
	Have	Do Not Have
Fences	98	2
Gates	84	16
Posting	84	16

The maintenance of club facilities as well as checking on resource use activities make the caretaker or

manager an important person in many clubs. Duties of caretakers often include lodge operation and maintenance, fence maintenance, wildlife feeding programs, road maintenance, patrolling against trespassers, as well as many miscellaneous functions. Twenty-eight percent of the clubs have a full-time caretaker, while an additional 31 percent have a part-time caretaker (Table 10). A caretaker's salary can be a major expense in a club's budget. Therefore, it is generally only the larger clubs or those with the most members that can afford a caretaker.

TABLE 10.--Percent of clubs having a caretaker.

Caretaker Status	Percent of Clubs
Full-Time	28
Part-Time	31
No Caretaker	41
Total	100

## CHAPTER IV

### RECREATION FACILITIES AND ACTIVITIES

#### Recreation Facilities

The most important recreation facilities the clubs have are their forests, streams, and lakes. These resources, along with the wildlife that inhabits them, were of primary importance in the founding and location of the clubs, and remain as the primary sources of recreation in the clubs today. Elaborate man-made recreation facilities, such as tennis courts, golf courses, and similar items are found in only 6 percent of the clubs. Such facilities are in clubs with large memberships which appear to be more family oriented than many of the other clubs. Many interviewees said that man-made recreation facilities would become more common in their clubs in the future.

#### Recreation Activities

As one might expect on areas with few elaborate recreation facilities, most club members find their

outdoor recreation in hunting and fishing. Table 11 shows the percent of members taking part in selected recreation activities on their club properties. Generally, the deer hunting clubs, fishing clubs, and duck hunting clubs have the highest percent of their members taking part in the activity by which the club is categorized. Other activities find varying degrees of participation among these three types of clubs.

Seventy-eight percent of the clubs report that 60 percent or more of their members are active deer hunters. In 35 percent of the clubs, all members are active deer hunters, and in only 4 percent is there no deer hunting at all. These latter clubs are fishing clubs.

The duck hunting clubs aggregating 4 percent of the total, report 80 percent or more of their members as active duck hunters. Only 29 percent of all clubs report that any of their members hunt ducks.

Upland game bird hunting and small game hunting receive some attention in many clubs. In 80 percent of the clubs, at least some members hunt upland game birds, and in 55 percent of the clubs there is some small game hunting.



TABLE 11.--Activity participation by club members.

Activity	Percent of Members Participating						
	0	1-19	20-39	40-59	60-79	80-99	100
	Percent of Clubs						
Deer hunting	4	6	0	12	18	25	35
Upland game bird hunting	20	12	47	15	4	0	2
Duck hunting	71	14	10	2	0	2	2
Small game hunting	45	22	16	12	0	4	2
Trout fishing	41	14	14	12	2	10	8
Other fishing	65	10	8	10	4	4	0
Skiing	92	6	2	0	0	0	0
Snowmobiling	37	33	14	6	6	0	4
Mushroom hunting	57	24	14	4	2	0	0
Bird watching	61	27	10	2	0	0	0
Camping	86	10	2	2	0	0	0
Riding in auto to see wildlife	10	2	2	12	14	29	31
Swimming	63	16	6	8	2	0	6
Water skiing	94	4	2	0	0	0	0
Trap or skeet	65	14	12	6	2	2	0

Fishing is popular in many clubs, with trout the fish most pursued. Eighteen percent of the clubs report that over 80 percent of their members are active trout fishermen, while in 59 percent of the clubs, at least a few members do some trout fishing. In only 35 percent of the clubs do some of the members fish for species other than trout.

Winter activity has been somewhat limited in the clubs in the past. Snow accumulation on club roads prevented access to the clubhouse or cabins on many properties, and even if members were able to get on their properties, there was not much to do in the winter anyway. The recent advent of the snowmobile is changing things. Sixty-three percent of the clubs have some of their members using snowmobiles in their clubs. The main roads as well as logging roads in many club areas are ideal snowmobile trails. It was frequently mentioned during the interviews that several members in a club were planning to buy snowmobiles. Winter fishing through the ice is practiced by some members in 30 percent of the clubs and this number may grow with the improved winter mobility provided by snowmobiles.

About 40 percent of the clubs report some of their members active in mushroom hunting and bird watching. Only 14 percent of the clubs have any camping on the club properties by their members.

Riding about a club in an automobile rivals deer hunting in popularity. In 74 percent of the clubs, this is popular with more than 60 percent of their members. This is primarily a summertime activity when a family is visiting a club. Typically a family will venture out in the early evening when the deer are starting to feed. At this time of the year, the deer are relatively unafraid of autos and a family can view them often from close distances.

Swimming is not very popular, with 63 percent of the clubs having no swimming activity. Many of the lakes and streams on club property are weedy, mucky, or too cold to be conducive to swimming. Water skiing is very limited. In only 6 percent of the clubs is there any water skiing. Some clubs prohibit the use of boats with motors in an attempt to maintain a more natural atmosphere. This severely limits water skiing on these properties.

Trap or skeet shooting is done by some members in 35 percent of the clubs.

## CHAPTER V

### FOREST PRACTICES

#### The Forest Resource

The forests of northern Lower Michigan were once known for their extensive stands of red and white pine. During the latter part of the nineteenth century, heavy logging removed virtually all of the virgin pine from the area. Following the logging, large fires were very common, sweeping through the logging slash and brush that had resulted from the logging. Generally, these fires ceased forty to fifty years ago, and much of the present forest cover in the area dates from that time.

Hardwood types suitable for pulpwood predominate. The major forest cover type is aspen-paper birch which covers 32 percent of the commercial forest area (Table 12). In combination, the next two most common types, maple-beech-yellow birch, and oak-hickory, occupy 37 percent.

Eighty percent of the growing stock volume is in hardwoods (Table 13), with softwoods making up the

balance. The largest volume is in aspen, which has 1,129 million cubic feet or about 20 percent of the total. The next largest volume is in oak, with 864.6 million cubic feet or about 15 percent of the total.

TABLE 12.--Commercial forest land by forest cover types in northern Lower Michigan, 1966.

Forest Cover Type	Area	
	Thousand Acres	Percent
White-red-jack pine	922.2	13.2
Spruce-fir	596.5	8.5
Oak-hickory	1,296.1	18.5
Elm-ash-cottonwood	630.5	9.0
Maple-beech-yellow birch	1,313.4	18.8
Aspen-paper birch	2,235.3	32.0
All types	6,994.0	100.0

Source: Ostrom, Arnold J. (1967). Forest area in Michigan counties, 1966. North Central Forest Experiment Station, Forest Service Research Note NC - 38.

TABLE 13.--Volume of growing stock on commercial forest land, by species groups, in northern Lower Michigan, 1966.

Species Group	Volume	
	Million Cu. Ft.	Percent
<b>Softwoods</b>		
Pine	394.4	7
Spruce	250.2	4
Other softwoods	483.1	9
All softwoods	1,127.7	20
<b>Hardwoods</b>		
Aspen	1,129.0	20
Paper birch	291.8	5
Oak	864.6	15
Sugar maple-yellow birch	532.4	10
Other hardwoods	1,627.3	30
All hardwoods	4,445.1	80
All species	5,572.8	100

Source: Chase, Clarence D. (1968). Michigan's timber volume. North Central Forest Experiment Station, Forest Service Research Note NC - 50.

Pulpwood Production in  
Northern Lower Michigan

Total pulpwood production in the area in 1967 was 495,691 cords (Table 14). Aspen was 52 percent of the total; pine, 23 percent; and oak 17 percent.

TABLE 14.--Pulpwood production by species group in northern Lower Michigan, 1967.

Species Group	Pulpwood Produced	
	Cords	Percent
Aspen	257,580	52
Balsam fir	3,051	1
Paper birch	5,714	1
Pine	114,811	23
Spruce	2,227	--
Oak	82,324	17
Other hardwoods	29,984	6
Totals	495,691	100

Source: Pfeifer, Ray E. (1968). Michigan pulpwood production--1967. Michigan Department of Natural Resources--Forestry Division Bulletin.

Only about 2 percent of the pulpwood produced in the Lower Peninsula comes from the southern half; therefore, in considering pulpwood production in the Lower Peninsula, essentially all of it comes from the northern half. Table 15 presents the pulpwood production for the Lower Peninsula from 1958 through 1967. Production from private lands peaked at 61.7 percent of the total in 1962, and then declined to 39.2 percent in 1967. Private ownership of commercial forest area in the northern half of the Lower Peninsula makes up about two-thirds of the total, but produced only 39 percent of the total pulpwood in 1967. The Forestry Division of the Michigan Department of Natural Resources (Pfeifer, 1968) expects pulpwood production from private forests, especially small ownerships, to decline further because management on these lands is at a low level.

#### Commercial Cutting

When asked if there had been any commercial cutting of trees on the club property within the past ten



TABLE 15.--Pulpwood production by ownership in Michigan's Lower Peninsula, 1958-1967.

Year	Volume	Pulpwood Production From:		
		Private Ownerships	State Forests	National Forests
	Cords	Percent		
1958	342,800	54.8	20.8	24.4
1959	445,938	58.3	20.5	21.2
1960	566,452	56.7	22.1	21.2
1961	489,157	59.0	20.6	20.4
1962	519,014	61.7	21.0	17.3
1963	517,128	57.5	22.9	19.6
1964	568,402	55.5	24.9	19.6
1965	573,302	52.3	28.9	18.8
1966	657,455	45.5	35.3	19.2
1967	506,713	39.2	36.4	24.4

Source: Pfeifer, Ray E. (1968). Michigan pulpwood production--1967. Michigan Department of Natural Resources--Forestry Division Bulletin.

years, 82 percent of the interviewees said yes and 18 percent said no. Within the past five years, 76 percent have had commercial cutting and 24 percent have not. Although

volume production data were not available from these clubs, it appears, based on the high percentage engaged in recent commercial cutting, that they have added considerably to pulpwood production from private ownerships in the region.

Two reasons for not cutting predominated among those clubs with no commercial cutting over the past five years. Forty-two percent reported that previous cutting had been unsatisfactory, and 34 percent said it was better for wildlife not to cut (Table 16). Further explanation

TABLE 16.--Reasons why some clubs had no commercial cutting, 1964-1968.

Reason for Not Cutting	Percent of Clubs
No demand for forest products	8
Better for wildlife not to cut	34
Don't trust pulp and paper company	8
Previous cutting unsatisfactory	42
Don't know	8
Total	100

of why cutting had been unsatisfactory revealed dissatisfaction for two rather different reasons. Some did not

like clear cutting techniques because of "ugly slashing" and lack of reproduction. Others objected because reproduction was too dense and spoiled hunting.

The two primary reasons given for commercial cutting were wildlife habitat improvement, 79 percent of the clubs, and overmature forests, 17 percent (Table 17).

TABLE 17.--Reasons why some clubs had commercial cutting, 1964-1968.

Reason for Cutting	Percent of Clubs
Mature or overmature forest	17
Improve wildlife habitat	79
Under former ownership	2
Don't know	2
Total	100

Obviously, these two reasons are closely related. It is because the forests are mature or overmature that they provide poor wildlife habitat, especially for deer, because they produce little browse. The idea that deer are brushland creatures and that the best habitat for them includes considerable area of young forest has been well

implanted with the club memberships by various public agencies and the pulp and paper companies of the region. Fortunately, many clubs have large areas of aspen, which when clear-cut, sprouts prolifically, providing excellent deer browse.

It is both interesting and important to note that in the reasons given for cutting or not cutting, economic motives were absent. Those clubs that had commercial cutting were asked to rate the importance revenue had in affecting their decision to cut. None rated revenue as very important in affecting its decision to cut (Table 18).

TABLE 18.--Importance of revenue in affecting the decision to make commercial cutting.

Rating	Percent of Clubs
Very Important	0
Important	18
Not Important	82
Total	100

Eighteen percent said that it was important, and 82 percent said it was unimportant. This does not mean that

these clubs are willing to give their trees away, but it does mean that economic motivation has had little effect. For these clubs to remain interested in cutting, and for others to become interested, they will have to have continued and improved understanding of noneconomic benefits and/or see the possibility of increased economic returns.

While commercial cutting of aspen for wildlife habitat improvement is readily accepted by most clubs, there is considerable reluctance to harvest oak. Table 19 shows that among the clubs engaged in commercial cutting, 50 percent are unwilling to harvest oak, 14 percent are willing to cut it only when necessary in harvesting other forest types, and 36 percent have no reluctance to harvest oak. The reluctance to harvest oak is based on the value the acorns have as deer food. The author was frequently told that if you cut the oaks, you lose the acorns, and thus the deer. However, acorn crops are erratic, with good crops often several years apart. It has been shown that clearcutting oak will result in abundant browse production (Gysel and Sterns, 1968). If the club properties are to add to oak pulpwood production in the future, their members will have to be shown that the deer will

benefit from increased browse that will follow oak harvesting.

TABLE 19.--Attitudes toward cutting oak.

Attitude	Percent of Clubs
Not willing to cut oak	50
Cut oak only when mixed in other types	14
No reluctance toward cutting oak	36
Total	100

#### Forest-Wildlife Management Plans

Discussions with representatives from the pulp and paper industry had indicated that many clubs engaged in commercial cutting were doing so under the guidance of industrial foresters, and were following formal written management plans much like that described by Westell (1956). Forty-five percent of the clubs reported that they are following such a plan, 20 percent had used a plan, and 35 percent said that they never had a plan (Table 20). Under such a plan, professional foresters

set up a long-term cutting program for the club, and make forest and wildlife management recommendations in return for the right to buy pulpwood from the club. On this basis, it can be said that much of the cutting on the club lands has been under the supervision of professional foresters. Yoho et al. (1957) found that private forests with the best management were under the control of professional foresters. It is logical to conclude that most clubs that are operating their cutting programs under an industry sponsored plan are under good forest management.

TABLE 20.--Clubs using forest-wildlife management plans, 1968.

Status	Percent of Clubs
Now using a plan	45
Once followed a plan	20
Never had a plan	35
Total	100

Of the clubs following a management plan in 1968, 13 percent had been under a plan for less than 5 years, 48 percent from 5 to 9 years, and 39 percent for 10 years

or more. Apparently most of the clubs willing to follow management plans were under contract to the pulp and paper industry over 5 years ago. Increased contribution to the region by the public ownerships appears to have slowed industry's desire to recruit new clubs into their cutting programs. All clubs now under management agreements believe their programs have been successful in that additional browse has been provided for the deer. Relationships between the pulp and paper industry and the clubs were viewed as good by the interviewees.

The clubs that had once used a management plan and had stopped, had followed their plans for an average of 3 years. The major reasons for discontinuance was disagreement with the pulp and paper company over the attainment of management objectives. Discussion with the interviewees led this author to the opinion that the pulp and paper companies had been unable to convey the objectives of the management programs to the club memberships, and the problems involved in meeting those objectives. This led to a misunderstanding of the programs by the clubs and disenchantment with the plans.



TABLE 21.--Reasons given by clubs for ending their management agreements with the pulp and paper industry.

Reason	Percent of Clubs
Aesthetics	22
Disagreement with the company	44
Cutting not beneficial	22
Miscellaneous	11
Total	100

There seems to be an awareness on the part of the clubs that the previous difficulties they had with their management programs might be resolved in the future.

When asked if the club would be interested in operating under a management plan again, 78 percent said they foresaw a time when it would be to their advantage to go into this type of program again.

Seventy-two percent of the clubs that never had followed a plan said that they had been contacted by industry about such a program. The reasons for not entering into such a plan included cutting arrangements with someone else or lack of merchantable timber, 31 percent; the belief that cutting would destroy the beauty of their

property, 38 percent; the idea that it was better for the deer not to cut, 23 percent; and distrust of the pulp and paper companies, 8 percent (Table 22). These reasons all lead to the conclusion that the pulp and paper companies were not very successful in explaining their programs to the clubs. About two-thirds of these clubs reported that if approached again, they might reconsider their position. Half of the clubs that had not been contacted by industry regarding a management program said that they would be interested if contacted.

TABLE 22.--Reasons given by clubs contacted by the pulp and paper industry for not entering into management agreements.

Reason	Percent of Clubs
Cutting arrangements with someone else	8
No merchantable timber	23
Don't trust pulp and paper company	8
Aesthetics	38
Cutting not beneficial to deer	23
Total	100

### Tree Planting

Tree planting has been a fairly common practice by the clubs in the past. Eighty-two percent of the clubs said that they either have or have had land suitable for tree planting. Of these, 83 percent said that they had planted trees at one time or another. Wildlife habitat and aesthetics were primary reasons for planting trees by 84 percent of the clubs, while timber production or Christmas trees were important reasons with only 16 percent of the clubs (Table 23). This is further evidence that these ownerships follow forestry practices for other than economic motives.

TABLE 23.--Primary reasons for tree plantings by clubs.

Reason	Percent of Clubs
Timber production	11
Christmas trees	5
Wildlife habitat	43
Aesthetics	41
Total	100

Of the clubs that have planted trees in the past, 39 percent said they would plant more trees in the future. The 61 percent not planning on any more tree planting, gave various reasons for their attitudes (Table 24). It does not appear that tree planting will be very common on club lands in the future.

TABLE 24.--Reasons why clubs that once planted trees are not planning future plantings.

Reason	Percent of Clubs
No more open land	27
Have enough plantings	37
Low survival rates	18
Keep openings for wildlife	9
Don't need with cutting program	9
Total	100

CHAPTER VI  
WILDLIFE PRACTICES

Deer Management

At no one time during the year do Michigan's forests receive as much use as during the last two weeks of November, the traditional Michigan deer season. In 1967, 576,523 deer hunters bought licences and 96 percent of them actually hunted (Arnold, 1968). Deer hunting brings more intensive use of the clubs than any other activity. Because deer hunting is so important to the clubs, the interrelationships between deer management and forest practices on club lands were examined.

To the average hunter, the objective of deer management is plentiful deer; the more deer he sees, the better he likes it. But there are limits to the number of deer an area can support without significant damage to the habitat. Effective deer management is a compromise between deer numbers, the hunter density, and the habitat. The goal is to maintain as many deer on an area as

possible without habitat deterioration. It calls for a delicate balance between the forest, the deer, and the hunter. A practical deer management plan includes:

(1) maintaining the best deer range possible through habitat management, and (2) harvesting bucks plus a controlled number of antlerless deer every year (Arnold, 1965).

The best tool the clubs have for habitat management is commercial cutting. When done on a continuing basis, it will keep some forest area young and producing adequate browse for the deer. Also, rather than adding a financial burden to the club, it results in revenue. As noted earlier, many clubs have engaged in commercial cutting on their properties. Other feasible habitat management methods include noncommercial cuttings, planting annual crops, and deer feeding programs.

Deer are very prolific breeders. Under ideal conditions, one buck and five does could increase to 1,000 animals in 10 years (Schick, 1964). It is essential to deer management that the population be controlled. To do this, both bucks and antlerless deer must be harvested. One buck can service many does, and the population cannot

be controlled by buck kill alone. The Michigan Department of Natural Resources annually divides the state into zones and allots a limited number of permits to hunters to harvest antlerless deer in each zone.

When the deer population is properly controlled, the habitat prospers and the deer grow bigger, healthier, and reproduce more. It is by harvesting deer, therefore, that the condition of the herd, on the whole, is enhanced. An uncontrolled deer population will inevitably destroy the quality of its own habitat; the herd, in turn, will ultimately suffer declining quality and quantity. It may appear paradoxical, but to have more and better quality deer, a considerable number of deer must be harvested.

### Deer Hunting in Michigan

There are two types of deer hunting in Michigan: archery hunting and rifle hunting. Archery hunting is usually legal during October and December. The archery hunter is allowed to harvest one deer of either sex. Since only one deer may be taken each year by a hunter

in Michigan, success in either the archery or rifle season eliminates the sportsman from further hunting. In 1967, 56,740 archery licenses were sold and 54,950 archers hunted in Michigan. Total deer kill was estimated at 2,590 for about a 5 percent hunter success (Arnold, 1968).

For the 1967 rifle season, 576,523 licenses were sold, and 553,440 people actually hunted. An estimated 104,500 deer were killed, for about a 19 percent hunter success. In the study area, 64,800 deer were harvested (Arnold, 1968). Of these, bucks totaled 40,800 or about 63 percent of the region's total harvest. The antlerless deer numbered 24,000 or about 37 percent of the region's total harvest (Arnold, 1967). The 1967 season followed a relatively mild winter and had generally good deer hunting weather. It was a fairly typical hunting season and deer harvest for Michigan.



## Deer Hunting in the Clubs

### Archery Hunting

Not all clubs allow archery hunting, nor do all those that permit it have archery hunting on them. Thirty-one percent of the clubs do not allow archery hunting. The leading reason archery hunting is not allowed is fear that too many deer will be wounded, escape the hunter, and die. In archery hunting, the kill is usually not sudden. Often the arrow does not reach a vital organ; rather, a wound is inflicted which causes the deer to bleed to death. That some deer do escape after being mortally wounded by an arrow is probably supported by the fact that only 5 percent of the state's archery hunters were successful in 1967, while 19 percent of the rifle hunters met success. Archery hunting is also more difficult than rifle hunting because the deer must be much closer for a successful shot to be taken. Fifty-seven percent of the clubs not allowing archery hunting cited too many wounded deer as the reason (Table 25), while 25 percent reported that archery hunting scared the deer, and rifle season hunters would not have a similar opportunity to harvest a deer.

TABLE 25.--Reasons for not allowing archery hunting.

Reason	Percent of Clubs
Wound too many deer	57
Scare deer for rifle season hunters	25
No interest in archery hunting	18
Total	100

Although 69 percent of the clubs allowed archery hunting, only 55 percent had any archery hunting in 1967. There is only limited interest in archery hunting on the clubs.

The number of archery hunters on the club lands in 1967 is estimated at 408. In clubs where archery hunting took place, the hunters virtually had the run of the clubs to themselves. Only 11 percent of the clubs having archery hunting had over 5 hunters per square mile for the season, while 71 percent had fewer than 3 archery hunters per square mile (Table 26).

The total archery kill for club lands in 1967 was estimated at only 41 deer. One-third of these were bucks and two-thirds were antlerless deer. It is apparent that

TABLE 26.--Number of archery hunters per square mile on club lands, 1967.

Hunters Per Sq. Mile	Percent of Clubs
Under 1.0	20
1.0 - 1.9	31
2.0 - 2.9	20
3.0 - 3.9	9
4.0 - 4.9	9
5.0+	11
Total	100

archery hunting on the club areas does not significantly reduce the size of the deer herd. Only 7 percent of the clubs that had archery hunting reported a kill of over 1 deer per square mile, and 67 percent reported no deer killed at all (Table 27).

In spite of the low deer kill, archery hunters on club lands had twice the success that archery hunters in the state had. For the state, archery hunter success was about 5 percent, while on club areas, 10 percent of the archery hunters were successful. Hunters on 67 percent

TABLE 27.--Deer kill per square mile by archery hunters on club lands, 1967.

Deer Killed Per Sq. Mile	Percent of Clubs
0	67
Under .50	11
.50 - .99	15
1.0+	7
Total	100

of the clubs with archery hunting had no success at all, so that all deer killed during the archery season came from 33 percent of the clubs, and these comprised only 18 percent of all clubs (Table 28).

TABLE 28.--Hunter success in clubs with archery hunting, 1967.

Percent Archery Hunters That Were Successful	Percent of Clubs
0	67
1 - 19	11
20 - 39	15
40+	7
Total	100

### Rifle Hunting

During the 1967 rifle season, 96 percent of the clubs had some deer hunting on them by an estimated 3,650 rifle hunters. Seventy-six percent of the clubs had less than 15 rifle hunters per square mile (Table 29).

TABLE 29.--Rifle hunter density per square mile on club areas, 1967.

Hunters Per Square Mile	Percent of Clubs
Under 5.0	8
5.0 - 9.9	29
10.0 - 14.9	39
15.0 - 19.9	14
20.0+	10
Total	100

Another approach to examining hunter density is the average number of acres per hunter (Table 30). In 1967, this ranged from 40 to 59 acres per hunter on 36 percent of the clubs.

TABLE 30.--Area per rifle hunter on club lands, 1967.

Acres Per Hunter	Percent of Clubs
Under 20	6
20 - 39	15
40 - 59	36
60 - 79	15
80 - 99	8
100+	20
Total	100

The number of deer hunters on each club is controlled by club rules and the number of members. Forty-eight percent of the clubs will allow part of a member's family to hunt, while 82 percent will allow some guests to hunt. In about half of the clubs, no women are allowed during deer season, mainly because all available sleeping facilities are taken by male hunters.

For the 1967 rifle deer season, the total kill on the clubs was estimated at 1,690 deer; about 80 percent were bucks, and 20 percent were antlerless deer. For the

northern half of the Lower Peninsula, the total kill that year was estimated by the Michigan Department of Natural Resources at 64,800 deer (Arnold, 1967); 63 percent were bucks and 37 percent were antlerless deer. The private hunting and fishing clubs accounted for less than 3 percent of the total kill in the study area in 1967.

The kill per square mile by rifle hunters was 8 or more deer on 53 percent of the clubs (Table 31). In only 14 percent of the clubs were there less than 4 deer killed per square mile.

TABLE 31.--Deer kill per square mile by rifle hunters on clubs, 1967.

Deer Kill Per Square Mile	Percent of Clubs
Under 4.0	14
4.0 - 7.9	33
8.0 - 11.9	31
12+	22
Total	100

Rifle hunters on club lands had nearly two and one half times the success that all rifle hunters had in

the state in 1967. Average hunter success on club areas was about 46 percent, while average hunter success for the state was about 19 percent. Only 4 percent of the clubs reported no hunter success in 1967, while 46 percent had 60 percent or better success (Table 32). Fourteen percent of the clubs had 100 percent hunter success.

TABLE 32.--Rifle hunter success on club lands, 1967.

Percent Rifle Hunters Successful	Percent of Clubs
0	4
1 - 19	10
20 - 39	16
40 - 59	24
60 - 79	16
80 - 99	16
100+	14
Total	100

#### Total Deer Harvest

The total harvest by all clubs in 1967 was estimated at 1,731 deer (Table 33). Rifle hunting accounted



for 98 percent of the total kill, and archery hunting accounted for only 2 percent. Bucks made up 79 percent of the kill, and only 21 percent were antlerless deer.

TABLE 33.--Total deer harvest by clubs, 1967.

Kind of Deer	Type of Hunting		Total Kill	Percent of Total
	Archery	Rifle		
	Number	Number	Number	
Buck	14	1,360	1,374	79
Antlerless	27	330	357	21
Totals	41	1,690	1,731	100
Percent of Totals	2	98	100	

Antlerless deer hunting has long been an emotional issue in many areas. Many sportsmen, neither understanding the ecological implications of an uncontrolled deer herd nor the relationship between deer and habitat, are in opposition to the harvest of antlerless deer. Many hunters are reluctant to kill an antlerless deer because they believe that the act does not carry the social prestige nor provide the test of manhood that killing a buck

does. Some sportsmen belong to groups organized for the purpose of "saving" antlerless deer through political lobbying.

In 60 percent of the clubs with deer hunting in 1967, hunters with permits could shoot antlerless deer if they wanted to, but only 40 percent of the clubs actually had antlerless deer killed that year. The reluctance to harvest antlerless deer is prevalent in many clubs and their members.

The antlerless deer kill accounted for a small percentage of the total in 1967. For both archery and rifle seasons on all clubs, 54 percent had no antlerless deer kill, and only 22 percent had a total antlerless deer kill ammounting to at least 30 percent of the total kill (Table 34).

TABLE 34.--The proportion of antlerless deer in the total harvest by all clubs, 1967.

Percent Antlerless Deer in Total Kill	Percent of Clubs
0	54
1 - 9	8
10 - 19	8
20 - 29	8
30 - 39	10
40 - 49	6
50 - 59	4
60+	2
Total	100

#### Other Wildlife Management Practices

Several practices are common on the club lands to improve the deer habitat; among these are commercial cutting, noncommercial cutting, annual plantings, and artificial feeding.

As discussed earlier, commercial timber cutting has been done in 74 percent of the clubs within the past 5 years. Sixty-five percent of the clubs are either now practicing commercial cutting according to a professionally developed management plan or have done so in the past. The new forest growth following cutting provides a considerable amount of much-needed browse for the deer.

Food is most critical for deer during the winter, at which time the total amount of available browse is most limited. Various tree and plant species differ in nutritional quality and desirability as deer food. In Michigan, northern white cedar is the best winter food (Schick, 1964). Not only does it have high food value, but with its thick canopy, it also provides winter shelter for the deer. In severe winter conditions, deer often yard in stands of white cedar. Because of the age and size of the trees, most white cedar are too high for the deer to reach. Some clubs fortunate enough to have white cedar make noncommercial cuttings in the winter when the deer are yarding. The trees are simply cut and left, so that the branches are available to the deer.

Twenty-one percent of the clubs have engaged in noncommercial cutting within the past 3 years.

To provide more food for the deer, 69 percent of the clubs planted some type of annual crops in 1968. Of these, 97 percent had planted rye, 4 percent planted corn, and another 4 percent planted turnips. The rye was usually planted on a few acres scattered about the club property. Rye has about the same nutritive value as June grass, and the deer generally feed on it in the fall and spring (Schick, 1964). Although the rye provides some food for the deer, its greatest benefit is that it attracts the deer into open areas where they may be easily viewed by club members and their families.

To counteract winter food shortages, some clubs feed shelled corn and alfalfa hay to the deer. Sixty-nine percent of the clubs have fed the deer at some time or another; only 33 percent provided feed during the mild 1967 winter. Thus, one-third of the clubs believe that even in a mild winter, the deer habitat is unable to support the herd adequately. Of the clubs providing winter feeding, 77 percent used corn and hay, while others used apples, sugar beets, and oats.

For a feeding program to be effective, it must be continued throughout the winter. Even when hay and grain are made available to deer in large quantities over the entire winter, the value of such a practice is questionable. The problems of deer herd size and habitat adequacy are not solved, and many hungry deer may still become concentrated on a small area, adding additional burden to the habitat. The solution is to control the size of the deer herd so that its demands will not exceed the carrying capacity of the habitat.

Of the clubs feeding deer, 82 percent continued the program throughout the winter, while the remainder provided food only when they thought the weather conditions warranted it. Feeding was generally spread over several locations about each club.

Deer are naturally attracted to salt. Seventy-five percent of the clubs make block salt available to the deer. The salt is usually placed in an open area where the members can see the deer using it.

Other habitat modification work by the clubs has generally concentrated on fish and duck habitats. Efforts to improve lakes, ponds, and streams for fish have been

made by 31 percent of the clubs. Twenty percent of the clubs have tried to improve conditions for ducks through floodings, planting foods desirable to ducks, or constructing artificial duck nests.

In general, stocking of wildlife is not a very common activity by the clubs. Planting trout is the most common, with 31 percent of the clubs having planted some trout from 1964 through 1968 (Table 35). A few clubs stocked fish other than trout; and turkeys were stocked by some clubs.

TABLE 35.--Wildlife plantings by clubs, 1964-1968.

Wildlife Groups	Percent of Clubs
Fish	
Trout	31
Non-trout	8
Turkeys	8
Rabbits	4
Geese	2
Pheasants	2
Partridge	2

## CHAPTER VII

### INTERVIEWEE CHARACTERISTICS AS AN INSIGHT

#### TO CLUB POWER STRUCTURE

During each interview, information about the interviewee was collected. Eighty-one percent of the persons interviewed were officers of their respective clubs, and the remaining 19 percent were either former officers or individuals recommended by club officers as being knowledgeable about club affairs. The information is obviously not representative of all club members, but it does give some insight as to the kinds of people primarily responsible for governing and managing the clubs.

All the interviewees were male, and all were over 30 years of age (Table 36). Sixty-three percent were from 40 to 59 years of age and 6 percent were 70 years or older.

Ninety-four percent of the interviewees were married, 4 percent were widowers, and 2 percent were single.



TABLE 36.--Ages of the club interviewees.

Age	Percent of Interviewees
Years	
30 - 39	11
40 - 49	26
50 - 59	37
60 - 69	20
70+	6
Total	100

In general, the persons interviewed were well-educated; ninety-four percent had graduated from high school, 50 percent from college, and 24 percent had studied beyond 4 years of college (Table 37).

The educational level of the interviewees is reflected in their occupations. Forty-two percent were business owners or executives, and 33 percent were in the professions (Table 38).

As would be expected for the occupations and educational levels of the interviewees, their gross family

TABLE 37.--Educational level of the interviewees.

Educational Level	Percent of Interviewees
Graduated from junior high school	6
Graduated from high school	24
Some study after high school	20
Graduated from college	26
Study beyond four years of college	24
Total	100

TABLE 38.--Occupations of the interviewees.

Occupation	Percent of Interviewees
Professional	33
Business owner or executive	42
Trade	9
Other business worker	6
Office worker	2
Public servant	4
Retired	4
Total	100

incomes were high. Eighty-three percent had gross family incomes of \$12,000 or more (Table 39).

TABLE 39.--Gross family income of the interviewees.

Gross Family Income	Percent of Interviewees
\$3,000 - 4,999	2
\$5,000 - 7,999	4
\$8,000 - 11,999	11
\$12,000+	83
Total	100

Sixty-five percent of the interviewees have been members of their clubs for less than 20 years, and 48 percent have belonged to their clubs from 10 to 19 years (Table 40).

About one-third of the interviewees own a personal cabin while the remainder do not, but use the club's lodge when on the property.

Most interviewees are very familiar with their clubs, and use them frequently. In 1967, more than one-fourth of the interviewees visited their clubs 20 or more

TABLE 40.--Length of club membership.

Length of Membership	Percent of Interviewees
Years	
Under 10	17
10 - 19	48
20 - 29	20
30 - 39	11
40+	4
Total	100

times, while three-fourths of them visited their clubs 5 or more times (Table 41).

TABLE 41.--Number of visits by the interviewees to their respective clubs in 1967.

Number of Visits	Percent of Interviewees
Under 5	26
5 - 9	26
10 - 14	13
15 - 19	9
20 - 24	11
25+	15
Total	100

The longest visit any of the interviewees made to his club in 1967 was 14 days (Table 42). Only 17 percent made a visit longer than 12 days to their clubs, but 88 percent made a visit of more than 2 days in that year.

TABLE 42.--Longest visit by the interviewees to their clubs in 1967.

Longest Visit	Percent of Interviewees
Days	
1 - 2	12
3 - 4	26
5 - 6	12
7 - 8	24
9 - 10	9
11 - 12	0
13 - 14	17
Total	100

November was the favorite month for most interviewees to make their longest visit to their clubs in 1967 (Table 43); 55 percent made their longest visit in that month, which includes the rifle deer season. The

summer months of June, July, and August totaled 27 percent of the longest visits. These are not only popular months for fishing, but also for various family activities.

TABLE 43.--Month of the longest visit by the interviewees to their clubs in 1967.

Month of the Longest Visit	Percent of Interviewees
January	2
May	2
June	5
July	12
August	10
September	2
October	12
November	55
Total	100

The two most popular activities of the interviewees when they are at their clubs are deer hunting, 44 percent, and fishing, 20 percent (Table 44). A total of 71 percent said their favorite activity is either

hunting or fishing. It is significant to note that the favorite activity of 29 percent of the interviewees was neither hunting nor fishing, but included walking, game watching, and similar activities. Hunting and fishing were the second favorite activity among 45 percent of the interviewees.

TABLE 44.--First and second favorite club activities of the interviewees.

Activity	Ranking	
	First	Second
	Percent of Interviewees	
Deer hunting	44	21
Other hunting	7	15
Fishing	20	9
Walking--Game watching	15	21
Fellowship	0	13
Conservation	4	2
Cabin--Family	4	13
Snowmobile	2	4
Other	4	2
Total	100	100

A composite of a typical person of authority in the clubs indicates that he is married, middle-aged, highly educated, a professional or a business owner or executive, and has a high gross family income. He has belonged to his club for several years and visits it frequently, with the longest visit coming in November. His favorite activity in his club is hunting or fishing, although other activities are also important.



## CHAPTER VIII

### CURRENT PROBLEMS AND FUTURE PROSPECTS

Each interviewee was asked if there were any current problems that his club was having or problems that he could foresee in the future which might pose as obstacles to the continuing existence of his club. More than half said that they could not think of any such problem (Table 45). Twenty percent thought that increasing population might influence the government to either tax the clubs out of existence or simply condemn them some day in the future as large parcels of land needed for public use. Approximately one-fourth of the persons interviewed saw problems of a more immediate nature. Twelve percent believe their members may want to sell the club property for a profit, and 10 percent think that increasingly serious trespassing and vandalism may force their clubs out of existence. All of the problems stated to this point are related directly or indirectly to population growth and increased demands on land use. The

remaining 4 percent of those interviewed are concerned over personality clashes among the members or poor resource management.

TABLE 45.--Current or future problems which may threaten each club's existence.

Problem	Percent of Interviewees
No problems	54
Growing population may influence government to condemn for public use	20
Sale of property for profit	12
Vandalism or trespassing	10
Personality clashes among members	2
Poor resource management	2
Total	100

Each interviewee was asked if he could think of any problems his club was having or that he could foresee in the future which state or federal agencies could help in solving. Fifty-seven percent of those interviewed said that their club either did not need help or that they did not want governmental help (Table 46). Many who

responded this way added that they were afraid public help would have "strings" attached which would eventually force the club to allow public use of its property. Sixteen percent of the interviewees believe that there are activities in which technical advice from appropriate public agencies would help. Ten percent believe that some governmental aid in resource management activities such as stocking wildlife, feeding deer, or prescribed burning would be beneficial to their clubs. Eight percent see a need for changes in hunting or fishing laws, and 6 percent want stronger action by law enforcement agencies against trespassers.

TABLE 46.--Club problems which public agency assistance could help solve.

Response to Possibility of Public Agency Help	Percent of Interviewees
Don't need or want help	57
Technical advice would be beneficial	16
Resource management activities could help	10
Want change in hunting or fish- ing laws	8
Need stronger trespass laws	6
Other	4
Total	100

The question of each club's future was put to all interviewees. Their responses indicate that the clubs are rather stable, and most should be in existence for some time (Table 47). Sixty-five percent believe that their clubs will continue in the future much the same as they have operated in the past. Twenty-seven percent, perhaps having more foresight, believe that use of their clubs will increase, become more diversified and have more family use. Only 4 percent foresaw the eventual sale of their clubs and 4 percent did not venture an opinion on their club's future.

TABLE 47.--The future of the clubs as viewed by the interviewees.

Future Club Status	Percent of Interviewees
Will continue as in the past	65
Will become more diversified and have more family use	27
May be sold eventually	4
No opinion	4
Total	100

## CHAPTER IX

### SUMMARY AND CONCLUSIONS

The total area controlled by the large private hunting and fishing clubs in northern Lower Michigan is relatively small, about 185,000 acres, when compared with the total area of the region, nearly 12 million acres. The common conception of the large clubs controlling a much larger area is erroneous. There has been a tendency for people to consider much of the fenced or posted land in the region as large club land, while in actuality many of the properties are owned by individual absentee owners.

About 5,000 families belong to the clubs. When the average area of about 35 acres per membership is considered, the clubs come into focus as groups of people with common interests, pooling relatively small land areas to form a larger unit for their common use. The cost to join a club is about what it would cost an individual to buy land equal to the membership share in a club, but, by joining a club, the person has the opportunity to use a much larger total land area.

The number of clubs appears to be relatively fixed; less than one-fifth were started in the past two decades. Rising land costs and lack of large available tracts of land will most likely prohibit the formation of many new large clubs.

The most important recreation facilities that the large clubs have are their forests, lakes, and streams. These resources along with the wildlife that inhabits them are the primary sources of outdoor recreation in the clubs today. Very few have elaborate man-made outdoor recreation facilities.

The most popular outdoor recreation activities in the clubs are hunting and fishing, although they are not the only popular activities. Riding in an automobile to view wildlife is very popular. Winter activities appear to be increasing with the rapid development of the snowmobile. Activities such as bird watching and mushroom hunting are popular with many club members.

Although many club members take part in outdoor recreation activities, it is important to note that many do not. This suggests that the clubs are more important to many members as a retreat from urban living rather

than as a place to hunt and fish. In years past, travel was more difficult and a trip to the north was a rigorous ordeal. The few trips many members made probably had hunting or fishing as their objective. Today, with easier travel, the less hardy can belong to clubs and visit them just for rest and relaxation. Hunting and fishing may well decrease in importance to the club members in the future, while the importance of the clubs as a sanctuary from the pressures of modern life may well increase.

The future of commercial cutting and forest management on the large club lands appears bright. About three-fourths of the clubs have engaged in recent commercial cutting, and almost half are presently following industry guided forest-wildlife management plans. The pulp and paper industry has played an important role by providing both a market for timber products and professional advice to the clubs. Industry's willingness to emphasize and manage for wildlife benefits has induced many clubs to enter into management agreements.

The fact that most clubs have not been economically motivated to cut timber is very important. The clubs are but a small segment of the total absentee

ownership of the region. It is possible that many other absentee owners can be induced into management agreements through noneconomic motivation. Perhaps with other types of absentee ownerships, aesthetics, or some other factor is the key to management rather than wildlife. Most absentee ownerships in the region are probably not held for timber production, and only through very high market prices or through increased noneconomic motivations will the total absentee owned area within the region be an important source of timber products.

The hunters of the large clubs enjoy a much higher deer hunting success than the deer hunters in the state; twice the archery success, and two and one half times the rifle success. The fact that these people belong to clubs indicates that many are dedicated, experienced deer hunters. The hunters know the land, often having hunted the same area for many years. Much of the land is managed for deer through commercial cutting and other methods, and the number of hunters can be controlled.

Unless natural mortality and kill by trespassers or neighboring hunters accounts for a high number of deer the herds of the clubs cannot possibly be under control.



Antlerless deer comprise only one-fifth of the total deer harvest on club lands, and this cannot be adequate to control the deer population. Considering also that in 60 percent of the clubs, no antlerless deer were killed in 1967, the present and future condition of the deer habitat must be in jeopardy. It is most likely that the recent commercial cutting in some clubs has temporarily increased the carrying capacity of the habitat, but an uncontrolled deer herd will eventually destroy the habitat. Therefore, the future of deer hunting and forestry practices on these lands must be questioned unless a more adequate deer harvest is made.

The need for a larger deer harvest in the clubs is evident, but current situations in many clubs and long ingrained misconceptions regarding forest resource management make an increased deer harvest difficult to implement. The total kill could be increased if the clubs would allow more people to hunt on their lands, but one of the main reasons for belonging to a club is to have limited hunting competition and a high chance for hunting success. Many club members would think that they were

defeating their purpose in belonging to a club by allowing more hunters.

Many club hunters are very safety conscious and increased hunter density would likely decrease hunter safety. The number of sleeping accommodations in each club also limits the number of hunters that can use a club. Also, many clubs have provisions in their constitutions or by-laws which limit the number of hunters. So, even if the clubs recognized the need for a higher deer kill, it would not be a simple matter for them to accomplish.

The people with authority in the clubs are generally highly educated, successful men, who visit their clubs frequently. Efforts by public and private agencies to communicate the problems and solutions of forest resource management are usually directed at the "typical" layman. The people in authority in the clubs are not "typical" laymen; their high educational level and their success in the professions and in the business world indicate high intellectual capabilities. Those people in the natural resource professions dealing with the clubs, should strive to present the best possible professional

image; they should not undersell the complexities of forest resource management, and in dealing with problem situations, they should present scientific documentation used within the natural resource professions. The people with authority in the clubs are capable of understanding the complexities of forest resource management; if they do not, it is an indication of the inability of the natural resource professions to communicate effectively.

According to the interviewees, the clubs will continue for many years to come, but with more diversified use in some. Although the clubs do not appear threatened by any serious immediate problems, there is some fear of the effects of increasing population. There is an air of independence regarding public agency assistance; part of this comes from fear by some clubs that public agency assistance would have "strings" attached. It would seem that public agencies can best serve this sector of private forest resource users with pertinent technical advice.

The large private hunting and fishing clubs in northern Lower Michigan are comprised of groups of individuals providing forest-oriented recreation for themselves. The clubs are not single-use oriented, but rather

their members take part in a variety of activities. Many forest resource management activities in the clubs are purposeful endeavors following professional advice. Many clubs face future problems with their forest resource unless they take actions to control the size of their deer herds. The clubs should remain as an economic source of raw material for the pulp and paper industry of the region through noneconomic motivations.

## **LITERATURE CITED**

## LITERATURE CITED

- Arnold, David A. (1965). Some answers to important deer management problems. Michigan Department of Natural Resources, Game Division Bulletin.
- \_\_\_\_\_. (1967). The 1967 deer season--a preliminary report. Michigan Department of Natural Resources, Game Division Report No. 2620.
- \_\_\_\_\_. (1968). Deer in 1968. Michigan Department of Natural Resources, Game Division Information Circular No. 151.
- Beegle, et al. (1962). Michigan population 1960--selected characteristics and changes. Michigan Agricultural Experiment Station Special Bulletin No. 438.
- Chase, Clarence D. (1968). Michigan's timber volume. North Central Forest Experiment Station, Forest Service Research Note NC - 50.
- Federal Reserve Bank of Boston. (1959). "Sportemen and land--a conflict of freedoms." New England Business Review, July: 1-4.
- Hedrick, Wilbur O. (1934). Recreational use of northern Michigan cut-over lands. Michigan Agricultural Experiment Station Special Bulletin 247.
- Holberton, W. (1893). "The supply of game: influence of clubs and private preserves." Harper's Weekly, Volume 37.
- Hubbard, Leonidas, Jr. (1901a). "Sportsmen's clubs of the middle west." Outing, Volume 37, No. 4, p. 451.

- \_\_\_\_\_. (1901b). "An angling democracy--the oldest fishing club in the world." Outing, Volume 37, No. 5, p. 520.
- \_\_\_\_\_. (1901c). "Where the pine trees grew--in the lumbered region of Michigan." Outing, Volume 37, No. 6, p. 677.
- Hunter, Alexander. (1893). "The increase of the sportsmen." Harper's Weekly, Volume 37, p. 167.
- Kimball, William J. (1969). "A changing Michigan." Land use in Michigan. Michigan State University Cooperative Extension Service Bulletin No. 610, Natural Resources Series, pp. 2-4.
- Opre, Tom. (1967). "Do you own vacation land?" Detroit Free Press, September 20.
- Ostrom, Arnold J. (1967). Forest area in Michigan counties, 1966. North Central Forest Experiment Station, Forest Service Research Note NC - 38.
- Pfeifer, Ray E. (1968). Michigan pulpwood production--1967. Michigan Department of Natural Resources, Forestry Division Bulletin.
- Schallau, Con H. (1962). Fragmentation, absentee ownership, and turnover of forest land in northern Lower Michigan. Lake State Forest Experiment Station, Forest Service Research Paper LS - 17.
- Schick, Charles. (1964). Deer management on private lands. Michigan State University Cooperative Extension Service Bulletin No. E - 427, Resource Development Series.
- U.S. Outdoor Recreation Resources Review Commission. (1962). Hunting in the United States--its present and future role. Study Report No. 6.

Westell, C. E., Jr. (1956). "Deer, club country, and industry." Michigan Conservation, Nov.-Dec.: 12 - 15.

Yoho, James G., Lee M. James, and Dean N. Quinney. (1957). Private forest landownership and management in the northern half of Michigan's Lower Peninsula. Michigan Agricultural Experiment Station Bulletin No. 261.



## **APPENDIX**

**HUNTING CLUB QUESTIONNAIRE**

1. Interview number \_\_\_\_\_
2. Club number \_\_\_\_\_
3. Date of interview \_\_\_\_\_
4. Time interview started \_\_\_\_\_
5. Time interview ended \_\_\_\_\_
6. Club name \_\_\_\_\_
7. County (s) where club located  
\_\_\_\_\_  
\_\_\_\_\_

8. Club mailing address  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Interviewee.**

9. Name \_\_\_\_\_
10. Club status \_\_\_\_\_
11. Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
12. Phone \_\_\_\_\_

## I. CLUB CHARACTERISTICS

### Club history and ownership

1. How many acres does your club own?

\_\_\_\_\_ Acres

2. How many acres does your club lease?

\_\_\_\_\_ Acres

3. In what year was your club started?

\_\_\_\_\_ Year

4. Could you please tell me something of the history of your club, how it was started, and how the original property was obtained?

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5. Who is the legal owner of the property?

1. \_\_\_\_\_ Non-profit corporation

2. \_\_\_\_\_ Individual owner \_\_\_\_\_

3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

6. How is your club governed?

1. \_\_\_\_\_ Board of directors

2. \_\_\_\_\_ Individual owner sets rules

3. \_\_\_\_\_ Other (explain) \_\_\_\_\_

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Membership

7. How many members belong to your club?

\_\_\_\_\_ Number

8. Does the immediate family (wife and children) of a member enjoy the same privileges in using the club property that the member himself enjoys?

1. \_\_\_\_\_ Yes

2. \_\_\_\_\_ All but deer hunting

3. \_\_\_\_\_ None of the privileges, must be a member

4. \_\_\_\_\_ Other (explain) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

9. Who other than members or their immediate family are allowed to use your property or facilities?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

10. What is the limit on the number of memberships?

1. \_\_\_\_\_ Membership limit

2. \_\_\_\_\_ Other (explain) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

11. How does a person become a member of your club?

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

12. How much would it cost to become a member of your club at the present time?

\$ \_\_\_\_\_ Initial cost

13. How is this initial cost determined?

1. \_\_\_\_\_ Buyer-seller relationship

2. \_\_\_\_\_ Set by club

3. \_\_\_\_\_ Other (explain) \_\_\_\_\_

14. In addition to the initial cost of joining your club, about what total yearly amount might a member expect to pay to the club in dues, assessments, and fees?

\$ \_\_\_\_\_ Per year

15. Over the last five years, what has been the turnover in memberships in your club?

\_\_\_\_\_ Turnover

Residence facilities

16. Does your club have a clubhouse or lodge?

\_\_\_\_\_ Yes \_\_\_\_\_ No

17. If yes in 16, about how many people can be accomodated overnight?

\_\_\_\_\_ People

18. About how many total cabins are there on your property?

\_\_\_\_\_ Cabins

19. What restrictions are there on cabin location?

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20. About how many house trailers and other vehicle campers do your members use on your club property?

\_\_\_\_\_ Housetrailers                      \_\_\_\_\_ Other vehicle campers

21. What restrictions are placed on the location and use of housetrailers and other vehicle campers on your property?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

22. Does your club have electricity?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

23. Does your club have telephone service?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

Residence on property

24. About what percentage of your members use accommodations off of the club property when they use the club?

\_\_\_\_\_ Percentage

25. Do any of your members make their permanent place of residence on the club?

\_\_\_\_\_ Yes                      \_\_\_\_\_ No

26. If yes in 25, about how many?

1. \_\_\_\_\_ Retired  
2. \_\_\_\_\_ Work in area  
3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

27. About how many of your members use your club as a summer home?

\_\_\_\_\_ Members

Caretaker-manager

28. Do you have a caretaker or manager?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, complete the remainder of this section.  
If no, skip to the next section.

29. If yes in 28, is he fulltime or part-time?

\_\_\_\_\_ Fulltime \_\_\_\_\_ Part-time

30. What are your caretaker's main duties? \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

31. Does your caretaker reside on your property?

\_\_\_\_\_ Yes \_\_\_\_\_ No

32. If caretaker is part-time, when does he work?

\_\_\_\_\_

33. If caretaker is part-time, what is his other occupation?

\_\_\_\_\_

II. RECREATION

Facilities

Of the following facilities which I will read off, please tell me which, if any, your club has on its property that are available to your members.

1. \_\_\_\_\_ Clubhouse or lodge

2. \_\_\_\_\_ Golf courses

3. \_\_\_\_\_ Picnic grounds

4. \_\_\_\_\_ Boat marina

5. \_\_\_\_\_ Swimming beach

6. \_\_\_\_\_ Swimming pool
7. \_\_\_\_\_ Tennis court
8. \_\_\_\_\_ Airplane landing strip
9. \_\_\_\_\_ Horseback riding trails
10. \_\_\_\_\_ Snowmobile trails
11. \_\_\_\_\_ Ski slope and tow
12. \_\_\_\_\_ Skeet or trap tange
13. \_\_\_\_\_ Rifle range
14. \_\_\_\_\_ Camping sites (number of) \_\_\_\_\_

Do you have on your property any other recreation facilities other than those just mentioned?

15. \_\_\_\_\_  
\_\_\_\_\_

### Activities

I will read a list of activities. Please tell me the approximate percentage of your members, as closely as you can estimate, that took part in each activity at least once during the past year on your property.

Key:	1 = 0%	5 = 60 - 79%
	2 = 1 - 19%	6 = 80 - 99%
	3 = 20 - 39%	7 = 100%
	4 = 40 - 59%	

1. \_\_\_\_\_ Deer hunting
2. \_\_\_\_\_ Upland game bird hunting
3. \_\_\_\_\_ Hunting migratory waterfowl
4. \_\_\_\_\_ Small game hunting
5. \_\_\_\_\_ Trout fishing
6. \_\_\_\_\_ Other fishing
7. \_\_\_\_\_ Ice fishing
8. \_\_\_\_\_ Smelt dipping
9. \_\_\_\_\_ Skiing



10. \_\_\_\_\_ Snowmobiling
11. \_\_\_\_\_ Mushroom hunting
12. \_\_\_\_\_ Bird watching
13. \_\_\_\_\_ Camping
14. \_\_\_\_\_ Driving to see wildlife
15. \_\_\_\_\_ Swimming
16. \_\_\_\_\_ Water skiing
17. \_\_\_\_\_ Golfing
18. \_\_\_\_\_ Dancing
19. \_\_\_\_\_ Skeet or trap shooting
20. \_\_\_\_\_ Tennis

What other recreation activities are popular with your members?

21. \_\_\_\_\_  
\_\_\_\_\_

### III. FOREST MANAGEMENT AND USE

#### Area and type

1. Of the total acreage of your club, about what percent is forested?

1. \_\_\_\_\_ 76 - 100%
2. \_\_\_\_\_ 51 - 75%
3. \_\_\_\_\_ 26 - 50%
4. \_\_\_\_\_ 0 - 25%

2. What are your 3 major forest types by approximate percent of total forest area?

%

1. \_\_\_\_\_ Aspen
2. \_\_\_\_\_ Jack Pine
3. \_\_\_\_\_ Oak

4. \_\_\_\_\_ other (specify) \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

Commercial cutting

3. Have any trees been cut and sold from your property in the last 5 years?

\_\_\_\_\_ Yes \_\_\_\_\_ No

If yes, go to question 5.

If no, go to question 4.

4. If trees not sold in last 5 years, why not? (If more than one reason rank in order of preference).

1. \_\_\_\_\_ Price too low
2. \_\_\_\_\_ Holding timber as reserve for unexpected contingencies
3. \_\_\_\_\_ No demand for forest products
4. \_\_\_\_\_ Aesthetic or sentimental
5. \_\_\_\_\_ Stands too poor
6. \_\_\_\_\_ To keep for deer food - acorns, etc.
7. \_\_\_\_\_ Keep for wildlife cover
8. \_\_\_\_\_ Other (specify) \_\_\_\_\_

Go to question 14.

5. If yes from question 3, why? (If more than one, rank)

1. \_\_\_\_\_ Revenue gained
2. \_\_\_\_\_ Timber stand improvement
3. \_\_\_\_\_ Wildlife habitat improvement
4. \_\_\_\_\_ Immediate deer browse from tops.
5. \_\_\_\_\_ Other (specify) \_\_\_\_\_

6. Would you rate revenue gained from the sale of trees as  
1) very important, 2) important, or 3) not important in  
your decision to make commercial cuttings?

\_\_\_\_\_ Rating

7. What was the year of your most recent sale?

\_\_\_\_\_ Year

8. What price did you receive from the most recent sale?

\$ \_\_\_\_\_/unit (specify) \_\_\_\_\_

\$ \_\_\_\_\_/unit \_\_\_\_\_

\$ \_\_\_\_\_/unit \_\_\_\_\_

9. About what amounts or volumes have been sold over the last  
5 years?

<u>Year</u>	<u>Pulpwood (cords)</u>	<u>Sawtimber (m bd. ft.)</u>	<u>Acres</u>
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1967

1966

1965

1964

1963

10. How was the most recent sale started?

1. \_\_\_\_\_ Club contacted buyer

2. \_\_\_\_\_ Buyer contacted club

3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

11. Who was the buyer?

\_\_\_\_\_ was the buyer

12. Does your club allow the harvest of oaks?

1. \_\_\_\_\_ Not at all

2. \_\_\_\_\_ Only scattered trees mixed in other types

3. \_\_\_\_\_ Yes

4. \_\_\_\_\_ Other (explain)

13. If 1 or 2 in 12, why does your club have this policy?

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Management plans

14. Is your property now managed or has it been according to a formal written management plan which outlines a long term cutting program for your property?

1. \_\_\_\_\_ Now following such a plan
2. \_\_\_\_\_ Once followed such a plan
3. \_\_\_\_\_ Never followed such a plan

If 1, go to 15

If 2, go to 20

If 3, go to 26

15. Who prepared this plan?

\_\_\_\_\_ prepared this plan

16. In what year was management under this plan started?

\_\_\_\_\_ Year

17. Please describe any notable successes or failures with the program.

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18. Please describe the current relationship or feeling between your club and the persons with whom the plan was initiated.

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19. What do you foresee as the future of this cutting program?

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If 2 in 14, do 20 through 25

20. Who prepared this plan?

\_\_\_\_\_ prepared this plan

21. In what year was management under this plan started?

\_\_\_\_\_ year started

22. In what year was management under this plan stopped?

\_\_\_\_\_ year stopped

23. Why was management under this plan stopped?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

24. Do you think your club would ever be interested in operating under such a plan again if some circumstances were changed?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

25. If yes in 24, under what circumstances?

\_\_\_\_\_  
\_\_\_\_\_

If 3 in 14, do 26 through

26. Were you ever contacted about such a program?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If Yes in 26, do 27 through 31

If No in 26, do 32

27. Who contacted you?

\_\_\_\_\_

28. In what year were you contacted?

\_\_\_\_\_ Year

29. Why weren't you interested?

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

30. Do you think your club would ever be interested in operating under such a plan again if some circumstances were changed?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

31. If yes in 30, under what circumstances?

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32. If no in 26, would you be interested in such a plan and why?

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Tree planting

33. Do you or have you owned any open land suitable for tree planting?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If no, skip to next section

If yes, go to 34

34. Have you planted any trees on your land?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If no, do 35, then go to 40

If yes, do 36 through 38

35. If no, why haven't you? \_\_\_\_\_

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36. If yes, how many acres by species and years?

Acres planted by years

Species'							

37. If yes, what was the purpose of your planting?  
(If more than one, rank in order of importance)

1. \_\_\_\_\_ Timber production
2. \_\_\_\_\_ Christmas trees
3. \_\_\_\_\_ Wildlife cover
4. \_\_\_\_\_ Aesthetic value
5. \_\_\_\_\_ Erosion control
6. \_\_\_\_\_ Other (specify) \_\_\_\_\_

38. If trees were planted, do you plan to plant more in the future?

\_\_\_\_\_ Yes \_\_\_\_\_ No

39. If no in 38, why not?

1. \_\_\_\_\_ No more open land
2. \_\_\_\_\_ Too much damage from (select one) deer, insects, disease
3. \_\_\_\_\_ Discouraged because of low survival rate
4. \_\_\_\_\_ Planting too hard work
5. \_\_\_\_\_ Planting costs too high
6. \_\_\_\_\_ Have enough
7. \_\_\_\_\_ Other (specify) \_\_\_\_\_

#### IV. WILDLIFE USE AND MANAGEMENT

##### Club interests

1. Considering the hunting and fishing activities and wildlife interests of your members, please rank the following wildlife groups in order of importance to your members.

1. \_\_\_\_\_ Large mammals (deer)
2. \_\_\_\_\_ Fish
3. \_\_\_\_\_ Small mammals (fox, rabbits, etc.)
4. \_\_\_\_\_ Upland game birds (grouse, pheasants, etc.)
5. \_\_\_\_\_ Migratory waterfowl (ducks, geese)

Deer hunting

2. Is bow hunting for deer allowed on your property?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If yes in 2, do 3,4,5, and 6

If no in 2, do 7

3. How many people bow hunted on your property last year?

\_\_\_\_\_ People

4. How many bucks did they harvest?

\_\_\_\_\_ Bucks

5. How many antlerless deer did they harvest?

\_\_\_\_\_ Antlerless deer

6. How many total deer did they harvest over each of the last five years?

1963

1964

1965

1966

1967

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Do 7 only if No in 2

7. Why don't you allow bow hunting?

1. \_\_\_\_\_ Wound too many deer

2. \_\_\_\_\_ Scare deer for rifle season

3. \_\_\_\_\_ Other (explain) \_\_\_\_\_

\_\_\_\_\_

8. How many people hunted deer during rifle season on your property last year?

\_\_\_\_\_ People

9. How many bucks did they harvest?

\_\_\_\_\_ Bucks

10. How many antlerless deer did they harvest?

\_\_\_\_\_ Antlerless deer



11. How many total deer did they harvest over each of the last five rifle seasons

1963          1964          1965          1966          1967

\_\_\_\_\_

12. Does your club allow your hunters to harvest antlerless deer if they have permits and want to?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If Yes in 12, do 13

If No in 12, do 15

13. Was there ever a time when antlerless deer kill was legal and your hunters did not harvest them?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

14. If yes in 13, what was it that influenced your members to harvest antlerless deer?

\_\_\_\_\_  
\_\_\_\_\_

15. If no in 12, was there ever a time when antlerless deer kill was legal and your hunters did harvest them?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

16. If yes in 15, what was it that influenced your members to stop shooting antlerless deer?

\_\_\_\_\_  
\_\_\_\_\_

17. Who may hunt deer on your property?

1. \_\_\_\_\_ Members only, both male and female

2. \_\_\_\_\_ Members only, male only

3. \_\_\_\_\_ Members and their families

4. \_\_\_\_\_ Non-member taking a member's place

5. \_\_\_\_\_ Guests

6. \_\_\_\_\_ Paying hunters

7. \_\_\_\_\_ Other (specify) \_\_\_\_\_

18. Considering all of the people who hunt on your club, do any also hunt deer on property other than your club?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If yes in 18, do 19 and 20

If no in 18, do 21

19. What percentage of your members would you estimate hunt on other property?

\_\_\_\_\_ Percent

20. Whose lands do these people hunt on?

1. \_\_\_\_\_ State forests

2. \_\_\_\_\_ National forests

3. \_\_\_\_\_ Other clubs

4. \_\_\_\_\_ Other private

5. \_\_\_\_\_ Other (specify) \_\_\_\_\_

6. \_\_\_\_\_ Don't know

Deer feeding

21. Did you put out salt blocks for the deer last year?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

22. If yes in 21, how many salt blocks were used?

\_\_\_\_\_ Salt blocks

23. Does your club feed deer?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If Yes in 23, go to 26

If No in 23, go to 24

24. Did your club ever feed deer?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

25. If yes in 24, why did you stop?

\_\_\_\_\_  
\_\_\_\_\_

If Yes in 23, do 26 through 29

26. What did you feed the deer last year?

Amount fed last year

1. \_\_\_\_\_ Hay \_\_\_\_\_
  2. \_\_\_\_\_ Corn \_\_\_\_\_
  3. \_\_\_\_\_ Other (specify) \_\_\_\_\_
- \_\_\_\_\_

27. How many feeding locations were used last year?

\_\_\_\_\_ Feeding locations

28. Who does the feeding?

1. \_\_\_\_\_ Caretaker
2. \_\_\_\_\_ Members
3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

29. How often do you feed?

1. \_\_\_\_\_ Only in bad weather
  2. \_\_\_\_\_ Periodically over winter (specify) \_\_\_\_\_
- \_\_\_\_\_
3. \_\_\_\_\_ Other (specify) \_\_\_\_\_
- \_\_\_\_\_

Habitat improvement

30. Did you plant any annual crops for wildlife use last year?

\_\_\_\_\_ Yes \_\_\_\_\_ No

31. If yes in 30, what was planted?

Acres

1. \_\_\_\_\_ Rye \_\_\_\_\_
2. \_\_\_\_\_ Vetch \_\_\_\_\_
3. \_\_\_\_\_ Turnips \_\_\_\_\_
4. \_\_\_\_\_ Other (specify) \_\_\_\_\_

32. Have you made any non-commercial cuttings in your forest to improve the wildlife habitat?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If yes in 32, do 33 and 34

If no in 32, do 35

33. In what year was the last cutting made?

\_\_\_\_\_ Year

34. What was the predominant forest type in which the most recent cutting took place?

Acres

1. \_\_\_\_\_ Aspen \_\_\_\_\_

2. \_\_\_\_\_ Oak \_\_\_\_\_

3. \_\_\_\_\_ Coniferous swamp \_\_\_\_\_

4. \_\_\_\_\_ Other (specify) \_\_\_\_\_

35. Has any effort been made to improve your wildlife habitat other than those items just discussed?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

36. If yes in 35, what has been done? (ask for acres)

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

4. \_\_\_\_\_

5. \_\_\_\_\_

Wildlife stocking

37. Have you in the last 5 years planted or released any fish or wildlife on your property?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

38. If yes in 37, complete the following:

<u>Species released</u>	<u>Number released</u>	<u>Year</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____
_____	_____	_____

Special regulations

39. Does your club have any special rules or regulations regarding hunting and fishing on your property that are in addition to the state regulations?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

40. If yes in 39, what are your special regulations?

1. \_\_\_\_\_ No bow hunting

2. \_\_\_\_\_ No antlerless deer shot

3. \_\_\_\_\_ Hunt only deer

4. \_\_\_\_\_ Hunt only deer and predators

5. \_\_\_\_\_ Hunt all game except for a few (list)

\_\_\_\_\_

6. \_\_\_\_\_ Other (specify) \_\_\_\_\_

\_\_\_\_\_

Fences and posting

41. Is your property fenced?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

42. Do you have gates with locks at the entrances to your property?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

43. Is your property posted?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

44. During deer hunting season, do you have gateskeepers or guards at the entrance to you property?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

45. During deer hunting season, do you have hired non-members who act as patrolmen against trespassers?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

46. If yes in 45, how many patrolmen?

\_\_\_\_\_ Number

47. Are poachers or trespassers a problem to your club?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

48. If yes in 47, in what way are they a problem?

1. \_\_\_\_\_ Kill wildlife

2. \_\_\_\_\_ Vandalism

3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

\_\_\_\_\_

#### V. MISCELLANEOUS LAND USES

1. Of the following land uses, which if any are practiced on your property?

1. \_\_\_\_\_ Farming

2. \_\_\_\_\_ Grazing

3. \_\_\_\_\_ Dairy cattle

4. \_\_\_\_\_ Oil production

5. \_\_\_\_\_ Mining

6. \_\_\_\_\_ Other (specify) \_\_\_\_\_

7. \_\_\_\_\_

8. \_\_\_\_\_

2. Could you describe the extent of the above activities to me?

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VI. WATER RESOURCE

1. Does your property contain or border on any lakes or streams, man-made or natural?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

2. If yes in 1, how many?

1. \_\_\_\_\_ contains \_\_\_\_\_ lakes

2. \_\_\_\_\_ contains \_\_\_\_\_ streams

3. \_\_\_\_\_ borders on \_\_\_\_\_ lakes

4. \_\_\_\_\_ borders on \_\_\_\_\_ streams

5. \_\_\_\_\_ contains \_\_\_\_\_ man-made lakes

3. Have you had special problems affecting the use of your lakes, streams, or drinking water?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

If Yes in 3, answer 4 and 5

If No in 3, go to next section (Rank in importance)

4. 1. \_\_\_\_\_ pollution of lakes

2. \_\_\_\_\_ pollution of streams

3. \_\_\_\_\_ pollution of drinking water

4. \_\_\_\_\_ low lake levels

5. \_\_\_\_\_ heavy weed growth

6. \_\_\_\_\_ other (specify) \_\_\_\_\_

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5. Could you please elaborate on these problems and tell me what remedies, if any, have been attempted to solve these problems?

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**VII. SPECIAL PROBLEMS AND THE FUTURE**

1. Can you think of any special problems that your club is having now or that you foresee in the future which may pose an obstacle to the continuing existence of your club?

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2. Can you think of any special problems that your club is having now or that you foresee in the future which state or federal agencies could help you in solving?

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3. What do you foresee as the future of your club?

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VIII. CLUB FINANCES

Revenue

1. What are your club's major sources of revenue or operating funds by approximate percentage or dollars? If possible use 1967 for example.

1. \_\_\_\_\_ Dues, assessments, fees
2. \_\_\_\_\_ Sale of forest products
3. \_\_\_\_\_ New memberships
4. \_\_\_\_\_ Fund raising projects (specify) \_\_\_\_\_  
\_\_\_\_\_
5. \_\_\_\_\_ Miscellaneous
6. \_\_\_\_\_ Other (specify) \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

2. What was your club's approximate total gross revenue last year (1967)?

\$ \_\_\_\_\_

Expenses

3. What are your club's major expenses by approximate percentage or dollars? If possible use 1967 for example.

1. \_\_\_\_\_ Taxes
2. \_\_\_\_\_ Caretaker or manager's salary
3. \_\_\_\_\_ Wildlife feeding and habitat
4. \_\_\_\_\_ Roads
5. \_\_\_\_\_ Club officers' fees and expenses
6. \_\_\_\_\_ Other (specify) \_\_\_\_\_
7. \_\_\_\_\_
8. \_\_\_\_\_

4. What were your club's approximate total gross expenses last year (1967)?

\$ \_\_\_\_\_

**IX. INTERVIEWEE**

**Club use**

1. What is your present status or position in your club?

1. \_\_\_\_\_ Member
2. \_\_\_\_\_ Officer (specify) \_\_\_\_\_
3. \_\_\_\_\_ Other (specify) \_\_\_\_\_

2. How long have you been a member of your club?

\_\_\_\_\_ Years

3. About how many miles is your permanent residence from your club?

\_\_\_\_\_ Miles

4. About how many hours does it take you to get from your permanent residence to your club?

\_\_\_\_\_ Hours

5. Do you own your own cabin?

\_\_\_\_\_ Yes

\_\_\_\_\_ No

6. About how many times did you visit your club last year (1967)

\_\_\_\_\_ Times

7. About what was your longest visit to your club last year (1967)?

\_\_\_\_\_

8. During what month (s) was your longest visit?

\_\_\_\_\_

9. Tell me in order of preference what your five most favorite activities at your club are.

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

Socio-economic characteristics of interviewee

1. Sex? \_\_\_\_\_ Male \_\_\_\_\_ Female

2. Age?

1. \_\_\_\_\_ Under 30
2. \_\_\_\_\_ 30-39
3. \_\_\_\_\_ 40-49
4. \_\_\_\_\_ 50-59
5. \_\_\_\_\_ 60-69
6. \_\_\_\_\_ 70 years or over

3. Marital status?

1. \_\_\_\_\_ Single
2. \_\_\_\_\_ Married
3. \_\_\_\_\_ Widow or Widower
4. \_\_\_\_\_ Other

4. Education (check only one)

1. \_\_\_\_\_ Less than six years of school
2. \_\_\_\_\_ Graduated from grade school
3. \_\_\_\_\_ Graduated from junior high
4. \_\_\_\_\_ Graduated from high school
5. \_\_\_\_\_ Graduated from a trade school
6. \_\_\_\_\_ Some study after high school
7. \_\_\_\_\_ Graduated from college
8. \_\_\_\_\_ Study beyond four years of college
9. \_\_\_\_\_ Other (specify) \_\_\_\_\_  
\_\_\_\_\_

5. What is your main occupation?

1. \_\_\_\_\_ Housewife
2. \_\_\_\_\_ Farmer
3. \_\_\_\_\_ Professional (doctor, lawyer, teacher, etc.)
4. \_\_\_\_\_ Trade (carpenter, plumber, mechanic, etc.)
5. \_\_\_\_\_ Business owner or executive
6. \_\_\_\_\_ Other business worker (salesman, wholesaler, etc.)
7. \_\_\_\_\_ Supervisor or foreman
8. \_\_\_\_\_ Factory worker
9. \_\_\_\_\_ Laborer
10. \_\_\_\_\_ Office worker
11. \_\_\_\_\_ Military Service
12. \_\_\_\_\_ Public servant (policeman, fireman)
13. \_\_\_\_\_ Retired
14. \_\_\_\_\_ Unemployed (but not retired)
15. \_\_\_\_\_ Student
16. \_\_\_\_\_ Other (specify) \_\_\_\_\_

6. What was your gross family income for 1967?

1. \_\_\_\_\_ Under \$3,000
2. \_\_\_\_\_ \$3,000 - 4,999
3. \_\_\_\_\_ \$5,000 - 7,999
4. \_\_\_\_\_ \$8,000 - 11,999
5. \_\_\_\_\_ \$12,000 - 19,999
6. \_\_\_\_\_ \$20,000 or more