

A SURVEY OF NONRESIDENT LANDOWNERS
OF TEN OR MORE ACRES IN
ANTRIM AND KALKASKA COUNTIES, MICHIGAN

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ABSTRACT

A SURVEY OF NONRESIDENT LANDOWNERS OF TEN OR MORE ACRES IN ANTRIM AND KALKASKA COUNTIES, MICHIGAN

By

Robert Layman Vertrees

Nonresident (absentee) landownership in northern Michigan began with the disposal of the public domain in the last half of the 1800's. Over the years nonresident landownership has continued, but the types of nonresidents, their use of the land, and the degree of their interaction with local communities has changed remarkably. Several forest management studies have recently reported the increased nonresident ownership of forest lands in northern Michigan since the end of World War II. However, this research is the first to have studied the extent of all the diverse current uses of nonresident land as well as several other relevant aspects of nonresidency in northern Michigan.

This thesis reports the findings of a written mail questionnaire returned from 973 nonresident landowners of ten or more acres of land in two counties which are representative of a forest and resort region in northwestern lower Michigan. All 2,112 nonresident landowners of ten or more acres of land in the two counties were sent a questionnaire except for a power company with extensive holdings. The names, addresses, and number of acres owned by nonresidents were recorded from township tax rolls kept in the county treasurer's offices. Questions sought information about: (1) certain attributes of nonresidents themselves, (2) their purposes for owning land and types of land use, (3) kinds of land-use assistance or advice they had

received in the past or desired for the future, and (4) their opinions about a few selected policies, services and characteristics of the resident community near their landholdings. Answers to the questions should provide useful information to public agencies and local communities which are concerned with improved land use practices, land-use planning, and community resource development.

All nonresident landowners whose names were recorded from the tax rolls held 28.3 percent of the total land and water area of the two counties. The 973 respondents to the questionnaire owned 86,200 acres of land, which represents 12.9 percent of the total land and water area and 18.7 percent of the private rural land in the counties. Nine out of ten nonresidents resided permanently in the southern one-third of Michigan or were from out-of-state. Recreation and retirement uses were indicated most often as a land use, followed by use of land for forest products and investment purposes, and finally by agricultural and other uses. Past advice or assistance from public agencies had been received by only 150 respondents, but 608 respondents indicated their desire to receive land-use assistance and advice in the future. Replies indicated that nonresidents were generally satisfied with the services provided by local communities.

The response patterns to several questions differed between counties. It was possible to hypothesize why these differences existed due to dissimilarities between the counties in the historical patterns of settlement and land use and their resource endowments. Furthermore, different response patterns to several questions related to land use could be related to four classifications of survey townships that were grouped according to the percent of total land area of each township in towns, first class agricultural land, public land, lakes and ponds, and large nonresidential holdings.

Major recommendations include the conduct of related studies in other northern Michigan counties, continued contact with nonresidents via written

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means of communication, and the holding of educational meetings for non-residents in the cities of southern Michigan during the winter months.

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A THESIS

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CHAPTER I

INTRODUCTION

Background and Survey Objectives

This thesis reports the findings of a written mail questionnaire received from 973 nonresident (absentee) landowners of ten or more acres of land in Antrim and Kalkaska Counties, Michigan.¹ These two counties are representative of the northern part of the Lower Peninsula of Michigan. This region was originally forested with stands of pine and hardwood that were logged during the latter part of the 1800's and the early part of the nineteenth century. Nonresidential landholdings by individual or group owners for recreational, speculative, and other uses began after the forests had been cut. This acquisition of northern Michigan land by absentees has greatly accelerated since the end of World War II.

Forest ownership studies by the Department of Forestry of Michigan State University and by the Lake States Forest Experiment Station have recently given mention to some problems of forest management in Michigan that are appurtenant to absentee forest ownership.² However, there has been no research specifically directed toward quantifying the characteristics of absentee landowners in Michigan and the diverse uses they exhibit for their land. This type of research is needed for reasons including those cited by Raleigh Barlowe:

¹Refer to Map 3 for the location of the study counties in northwestern Lower Michigan.

²Studies by James Yoho and Con Schallau pertain to the northern part of the Lower Peninsula of Michigan. See Chapter II for the review and documentation of these reports as well as a complete documentation of this introductory chapter.

A better understanding is needed in many northern counties of the significance and consequences of widespread absentee ownership. Strong educational programs are needed to acquaint sportsmen and the owners of forest and recreation holdings of the possibilities, realities, and responsibilities of wildlife, forest, and recreation area management. Assistance programs are needed to help many owners better develop and manage their properties.³

This survey of the nonresident landowners of ten or more acres in the two study counties (2,111 total landholders)⁴ was an attempt to delineate (1) certain attributes of the out-of-county landowners, (2) their purposes for owning the land in the study counties and their uses for this land, (3) the types of assistance or advice to improve their property that they had received in the past or that they desired for the future, and (4) their opinions about a few selected policies, services and characteristics of the resident community near their landholdings.

Thesis Organization

The increasing importance of absentee ownership of small private commercial forest lands is not unique to the two counties selected for this study or to the northern part of the Lower Peninsula of Michigan. Accounts of forest lands from other areas portray a similar occurrence of substantial nonresidency. Parallel issues of land use have arisen as absentee forest owners shift to recreational or other ownership intentions rather than the economic harvest of forest products.

It was judged appropriate to promulgate a more complete discourse of these geographical similarities, as well as a background to the history of land utilization in Antrim and Kalkaska Counties. Therefore, highlights

³Raleigh Barlowe, Use of Land and Water Resources in Michigan, Research Report No. 52, Michigan State University, Agricultural Experiment Station, Project '80 (East Lansing, 1966), p. 14.

⁴One nonresident landowner, a power company, owned approximately 17,700 acres in Kalkaska County and was not mailed a questionnaire.

of the historical evolution of the United States' land disposal policies that fostered absentee ownership and rapid exploitation of forest resources are included in the review of related literature given in Chapter II. Summarizing Chapter II is a framework of research needs that were revealed by the literature review.

Chapter III expounds upon the methodology employed to gather information in this survey, and mentions which of the overall categories of needed research were given primary attention.

The scope of Chapter IV is a familiarization with the resources and history of the study counties. Chapters V and VI include the analysis of the findings of the written questionnaire, summarizing remarks, recommendations and conclusions.

Diverse Types of Ownership and Use

Before proceeding with the chapters to follow it would be useful to review some of the past occurrences that have led to the present diverse patterns of ownership and use of rural lands in the study counties and northern Michigan.

Early Land Disposal Policies

As the land disposal policies of the United States evolved after the Revolution and continued through the nineteenth century, one of the persistent and debated issues was whether to encourage the settlement and control of frontier lands by residents of the land, encourage this control by nonresident interests, or to encourage both. The actual land policy eventually came to be a dual policy which fostered both the settler and the absentee.

In many sections of the Lake States absentee interests gained and held the most historically important influence. Some land laws, such as the Homestead Acts, were written with the intent of promoting settlement, but a portion of the federal domain disposed of by these acts ended up in the hands of eastern nonresidents or frontier speculators. Control of new

lands put on the market was often gained by these absentees by devious methods. Land grabbing schemes were hard to regulate because the federal land offices were usually located in cities many miles from the lands being sold.

Early Nonresidency in the Northern Lake States

In the northern Lake States, much of the timber resources were removed under the direction of land and timber companies that often had gained rights of access or ownership to large holdings. By the early 1900's the pine and then the hardwoods of the region had almost entirely been exploited. Much of the cutover and burnt-over land was then offered for sale. Some of the lands were not sold, but were abandoned and left to revert to the states for nonpayment of taxes. Lands that were offered for sale were either put on the market by the timber companies themselves, or were sold to settlement or colonization companies who in turn advertised them for sale.

Many individuals bought land in the cutover country hoping to begin profitable farms, but most of these farming ventures were failures. It was painstakingly found that the agricultural values of the northern pine and hardwoods region had been grossly oversold. Distance to southern markets, poor roads, and the generally sandy soils with very low organic composition meant that only the few farms that had been carefully selected on the best agricultural lands could be supported.

The Transition Period—Early 1900's

The first two decades of the 1900's can be summarized as a transitional period in the history of northern Michigan and the northern Lake States. This was a time which marked the removal of the original forests, the resultant loss in forest-based industries, an awakening to the failure of farming on all but the best agricultural lands, and the decline of population. Other important ramifications were beginning during this same period, and they have gained momentum, with a few interruptions, until the present.

As travel by automobile gained importance and new roads were built, once inaccessible townships were opened for recreational pleasure and scenic enjoyment. Present types of knowledge and technology in the agricultural sciences were then being formulated. As the state of farming practices improved and was put to use, the workers and owners of sub-marginal and marginal farms found it necessary to move to urban areas to the south in search of employment. Agricultural yields rose faster than the demand for farm products, acres required in farms decreased, farm population and number of farms decreased, and the average size of farms increased. This migration of a sizable percent of the farm population plus the almost virtual elimination of industry dependent on forests caused the population of most northern Michigan counties to peak somewhere between 1900 and 1920—a peak which some counties have never again approached.

City jobs absorbed the released rural labor and provided higher wages and increased leisure. The states with tax reversion laws, such as Michigan, began to find an increasing amount of reverted acres coming under their control. After some initial mistakes were made in the utilization of these reverted wildlands, and after detailed inventory and study of their potentialities, public agencies in Michigan set aside state forests and parks from these cutover lands.

The Great Depression in the 1930's and World War II in the 1940's had a dampening effect on these aforementioned trends in migration and recreation. After the war's end, however, these pent-up forces were finally released to bring about their more complete impact. During the late 1940's and early 1950's and up to the present it has been evident that the salient features mentioned above, which are admittedly among a host of possibilities, have transformed the land ownership and land use patterns of the rural countryside of northern Michigan. These causal factors have continued, and have been joined by others, such as the growing dissatisfaction with crowded conditions of urban areas.

Results of Change—Diversity of Ownership

The forested northern region of the Lake States was at one time a region that had much of its non-agricultural lands owned by large companies for resource exploitation. However, up-to-date plat books of counties in the region today resemble checkerboards with parcels of various shapes and sizes. Farms remain only on the best agricultural lands. The lists of names and addresses of landowners in the local tax rolls reveal the fact that a large percentage of the owners have out-of-county residences. The state, county, and/or federal government now own the majority of some northern townships and counties. Forests on both the public and private lands have again begun to reach merchantable size, and there has been recent growth in the forest industry in parts of the region.

Recreational uses are now foremost. Even before the depression or World War II the economies of many northern townships and counties depended primarily on recreation-based tax receipts. Since World War II, this recreational potential has gained significance. Capital has been available for individual investment in land, and the rural real estate market has had former agricultural lands or the remaining lands owned by large companies coming up for sale and subdivision. Highway travel to the north has continually improved, and year-around recreation or other uses by nonresident landowners or tourists has been enhanced. It is not known whether this growth in nonresidential ownership is now reaching the latter phases of adolescence, when there are fewer lands to be offered for sale, or if it is already in the adult stage which can be characterized by the best recreational lands already sold.

Every farmer who has been forced to quit farming and look elsewhere for employment has not sold his old farmstead. Some have chosen to continue paying property taxes and hold their land for sentimental reasons, a hopeful return for retirement, for speculative reasons, or other purposes. Others have made arrangements in their wills for the farm to pass through

gift or inheritance within the family to younger generations. A few farmsteads have not been transferred by gift or inheritance, and trustees now hold these idle lands as the lengthy legal process attempts to arrive at an equitable redistribution among relatives.

The summarizing point of the above is that the "nonresident" or "absentee" owners who are mentioned more and more frequently consist of a variegated class of landowners whose individual members are surprisingly different in personal characteristics, methods and reasons for acquiring their land, and the amount of use they have for their land. The questionnaire used in this survey of nonresident landowners of Antrim and Kalkaska Counties was written to include questions and alternative check answers that encompassed important aspects of the diverse picture of present-day nonresidency.

A Beginning

This survey was looked upon as a beginning effort that could be duplicated, if desired, in other counties in northern Michigan. Since the inception of this research, several County Agricultural Extension and Natural Resource Extension Agents of other northern Michigan counties have expressed the hope that they can find answers about nonresident owners and nonresident uses of land in their counties. This thesis was written so as to facilitate any subsequent work elsewhere in Michigan.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH NEEDS

Objectives

This chapter was written with three main objectives that were intended to add historical depth or geographical breadth to the survey of nonresident landowners of Antrim and Kalkaska Counties, Michigan reported herein. The specific objectives were to gain an understanding of:

1. The importance of absentee landownership in the early history of the United States, in the evolution of land disposal policies after the American Revolution, and in the utilization of the original resources of the Lake States.
2. The changes in land ownership and use that came about after the original forest resources were removed from the Lake States, particularly in the northern half of the Lower Peninsula of Michigan.
3. The amount of land owned by nonresidents in other forested states and regions, and the types of problems created by nonresident ownership and use of these lands.
4. The needs for research pointed out in the literature.

A more specific review of the background and resources of the two study counties is included in Chapter IV.

Nonresidency: Colonization to Forest Removal

The Colonial Period

Aaron Sakolski gives an account of the importance of absentee landownership in founding the early American settlements.¹ All of the settlements along the Eastern seaboard were begun as land speculation ventures

¹Aaron Sakolski, Land Tenure and Land Taxation in America (New York: Robert Schallenberg Foundation, 1957), pp. 11-45.

by absentee interests from Britain. Some of the original colonies were founded by colonial land companies and others by proprietary grants but "absentee ownership was the rule."²

The American settlement took place after the fall of feudalism and during the growth of the enclosure movement in Britain. There emerged at this time a politically powerful mercantilistic class and a new "landless" class. The landless were economically and politically discontent, and those in the mercantilistic class were anxious to become landlords. Large estates became crowded with tenants, and individual estates were bidding against each other for use of the land. Exorbitant "rack rents" resulted from this "counterbidding between tenants . . . together with landlord greed."³ Real estate became as profitable and as alluring as any other type of investment. These forces of mercantilistic greed for land and tenant unrest were among the reasons for the colonization of America.⁴

After the first foothold had been made on the Eastern coast, settlers were given the right to acquire land. This extension of rights was granted by the original landholders for the purpose of improving the land and making the undisposed lands more valuable. The goal of the landholders to gain wealth from land sales was not achieved, however. Sakolski explains why

The fact that the original owners and promoters did not, in many cases, obtain their objectives and did not realize their wealth or income expected was primarily due to the abundance of land opened for settlement, and the inability to enforce the collections of payments and of rent.⁵

² Ibid. . . p. 43.

³ Raleigh Barlowe, Land Resource Economics (Englewood Cliffs, N. J.: Prentice-Hall, 1958), p. 168.

⁴ Marshall Harris, in his "Genesis of the Land Tenure System of the United States" (published abstract of a Ph.D. dissertation, Dept. of Agricultural Economics, Univ. of Illinois, 1945), pp. 6-8, mentions other forces which motivated colonization.

⁵ Sakolski, p. 43.

With this loss of control by the landlords, the settlers gained a sense of freedom long before the fighting of the American Revolution. "'Land hunger' became unabated, and land speculation became a prevalent disease among colonists."⁶

Marshall Harris examined the factors leading to the eventual establishment of the American land tenure system. He mentions several reasons which contributed to the tenure system that was eventually adopted. Among these reasons were:

. . . the spirit of freedom, equality, and self confidence prevailed throughout frontier America . . . the revolutionary spirit growing out of hatred for the absentee and resentment against feudal charges upon the landholder without commensurate services.⁷

The Evolution of Land Disposal Policies

The new nation was faced with a vast amount of public domain after it had gained independence. Settler ownership or absentee ownership of these lands became a vital issue. Johnson and Barlowe point out the duality that came about in the land disposal policy of the United States:

The early years of the new and impecunious nation were marked by emphasis on disposition of the public domain as a source of revenue. . . . [none of the early policy makers,] however, ignored the necessity of providing in some measure for the needs of the pioneers while considering the necessities of the treasury.⁸

⁶Ibid.

⁷Harris, p. 18. Other reasons by Harris as contributory forces that helped form the land tenure system were the laxity of enforcement of rules and weak government, dissatisfaction with local conditions, and a desire to form freer institutions than those the colonists had fled.

⁸V. Webster Johnson and Raleigh Barlowe, Land Problems and Policies (New York: McGraw-Hill Book Co., 1954), p. 34. For a summary of the land disposal policies, see Chapter 3, pp. 30-62.

These two policies of additional revenue and land settlement both encouraged and discouraged nonresident ownership of land being disposed. Revenue needs fostered absentee ownership. settler policies encouraged owner-operatorship. As time passed in the first half of the nineteenth century, the revenue motivation waned. The public lands proved to be a poor source of revenue.⁹ Nevertheless, the needs of the young nation's treasury were "sufficiently powerful to prevent a return to the homestead policies of the colonial period."¹⁰

From the time of the Revolution to the Civil War, the land disposal laws did not hinder absentee landownership. Distribution of land was primarily by sales, not by homesteading. There were no laws that put limits on the size of separate parcels being sold. The only limitation to ownership of the public lands was the buyer's ability to pay. This ability to pay was aided by various types of credit systems that were devised. The credit policies promoted speculation by absentees as well as frontier settlement, but the frontier speculation became excessive and "intensified the financial difficulties of the nation."¹¹

There were proposals given before Congress to require the purchasers of public lands to settle upon or improve the land, but until the Civil War none of these proposals became laws. Suggestions to restrict the size of sales units to single farm size were also frequent, but the Homestead Act of 1862 was the first quantification of these restrictions. Settlement interests had finally gained their first major legislative triumph with the Homestead Act. However, the letter of the law and what actually transpired in land disposal were at variance. Nonresidential speculators and resource exploiters gained control of public lands by ingenious and

⁹ Ibid., p. 35.

¹⁰ Ibid.

¹¹ Ibid., p. 37.

devious means. Frontier lands that were intended by law to encourage farmers actually gave the absentee one more way to grasp hold of additional land.

Results of Land Policies in the Midwest

Paul Wallace Gates is credited by Sakolski as having studied the land history of the Midwest more than any other scholar.¹² Gates reviews the great tracts of absentee owned lands in the Midwest prior to and after the passage of the Agricultural College Act of 1862.¹³ The western states of the early 1860's opposed this act, which was to grant each state of the union an amount of public domain equal to 30 000 acres per United States Congressman and Senator, but not to exceed 1 000 000 acres per state. The westerners did not want any further encouragement of the nonresidential ownership of their lands by eastern groups and individuals. In Indiana and Illinois especially absentee speculators had reaped the advantages of rising land values following the Depression of 1837 when there was a swift rise in tenancy and land costs. These non-residential holdings "retarded the development of some of the richest counties"¹⁴ in these two states.

In Indiana, the Ellsworths, the Yale Crowds, the 'cattle kings' in Illinois the Scullys, the Funks, and the Vanderveers, all great landed proprietors, still possessed estates which would put to shame many principalities and duchies abroad. Some of these great estates were only slightly developed, on others dwelt tenants in wretched hovels. Absentee ownership blighted great areas of fertile land, prevented the development of an independent proprietor class, introduced an un-American system--tenancy--

¹² Sakolski, p. 141.

¹³ Paul Wallace Gates, The Wisconsin Pine Lands of Cornell University (Madison: The State Historical Society of Wisconsin, 1943).

¹⁴ Ibid., p. 15.

led to the abuse of the land and early depletion of the soil, and fed the fires of sectional hatred and social discontent.¹⁵

This absentee ownership stirred up settler response. Gates explains this response:

Absentee land owners and loan sharks were both feared and hated on the frontier. True, most influential westerners, including legislators, editors, bankers and government officials, were themselves speculating in land, and many of them must have had their tongues in their cheeks when they condemned absentee speculators. The farmers paid their taxes more regularly, made some improvements perhaps, and used their profits for the development of the community, whereas the latter took their profits elsewhere and did nothing for the community.¹⁶

This "doing nothing for the community" included the ravaging of lands, particularly forested lands, that were left unattended by absentees. The absentees rarely employed any capable person to watch over their land, and these idle lands were open for disuse. Very little was added to the tax base, nor were railroads, drainage projects, or other local improvement schemes assisted by nonresidency. Those who were buying government lands to settle upon in an area that already had large acreages in the hands of absentees were forced to search widely for the remaining public lands. Scattered settlement resulted rather than a more efficient pattern of homesites. All community facilities were therefore more expensive. Roads and schools were hard to locate and were costly to support. In summary, absentee ownership in particularly the plains regions of Indiana and Illinois prior to the passage of the Morrill Act of 1862 had "by its very existence blighted the reputation and future prospects of [the] area."¹⁷

¹⁵ Ibid.

¹⁶ Ibid., p. 68.

¹⁷ Ibid. Land speculation in the mid-1830's by absentees who owned land in south central Michigan has been reported by Morris C. Taber in "New England Influences in South Central Michigan," Michigan History Magazine, XLV (December 1961), 305-36. On page 333 he writes: "The development of sites by speculators, rather than by proprietors whose purpose it was to serve as agents for group settlement, tended to attract individualistic and haphazard immigration."

Notwithstanding the problems of the Midwest that were added to by absenteeism, the Agricultural Act of 1862 was voted into law. The ownership of land in the plains of the Midwest was not affected a great deal by the new act. These regions had most of their public domain in private hands by 1862.

The Lake States, however, were greatly affected by the Act. These states were settled later than their neighbors to the south, and still had abounding public domain.

It was in the timbered sections of northern Michigan, of Wisconsin, and of Minnesota that the greatest boom occurred. Within two or three years, the rush for land threatened to exceed the 1,000,000 acre maximum to which the Morrill Act limited scrip entries in each of the public land states. To secure the scrip, lumbermen and eastern speculators rushed their selections to the land offices for entry. In 1867 the maximum was reached in Wisconsin and Nebraska. . . . [The maximum of 1,000,000 acres had been exceeded] by 397,000 acres in Michigan.¹⁸

Land Disposal in Michigan

The first federal land office was established in Michigan at Detroit in 1818.¹⁹ Early land sales were in small parcels for agricultural use in the southern part of the state. It wasn't until 1834 to 1836 that the "land rush" hit Michigan. Sales of public land were greater in Michigan in 1836 than in any other state and constituted one-fifth of the national total of public lands sold in that year.

How much of the tremendous increase in sales was due to the wholesale purchases of speculators has never been estimated to any exact degree for Michigan. Certainly the prevailing belief of contemporaries was that a very large percentage of

¹⁸Ibid., p. 30. (An amount of land equaling 1,397,000 acres is about the size of four counties in the Lower Peninsula of Michigan.)

¹⁹Information from the first part of this section was found in Douglas H. Gordon and George S. May, "The Michigan Land Rush in 1836," Michigan History Magazine, XLIII (March 1959), 1-7.

the land went to speculators and not to actual settlers. Much evidence exists to support this contention.²⁰

Sales of public land spread northward after the federal land surveys were completed. By 1840 all of the Lower Peninsula had been surveyed, and the Upper Peninsula was completely surveyed by 1848.²¹

The State of Michigan was granted control of lands through swamp land grants, the Ordinance of 1785 (which set aside a certain amount of each township for school lands), and through grants made for internal improvements and higher education. Raleigh Barlowe has described the amounts of land disposed of by the state

Around 2.5 million acres passed to private owners after 1867 by the homesteading process. But large areas also moved into private ownership through the sale of school, public improvement, and swamp lands that had been turned over to the state.

More than 12 million acres—approximately a third of the land area of Michigan—was turned over to the state by Congress for disposal and administration. Included in this total were 1,021,867 acres of Section 16 school lands, 500,000 acres granted for the promotion of public improvements, 240,000 acres for establishing a land grant college, 46,080 acres for a state university, 3,200 acres for public buildings, 45,080 acres of saline lands, and 5,680,270 acres of swamp land grants. Practically all of these lands were offered for sale, sometimes in large blocks, sometimes in small tracts.

In addition to the above-listed areas, 221,013 acres were granted to the state to help finance construction of a military wagon road from Fort Wilkins to the Wisconsin line; and 1,251,236 acres were granted to the state for construction of the St. Mary's Portage Lake and Lake Superior, and Lac La Belle Canals. An additional 3,134,058 acres was granted to Michigan and used to encourage the building of fourteen different railway lines in the state.²²

²⁰ Ibid.

²¹ "Historical Notes," Michigan History Magazine, XXIV (September 1940), 473.

²² Unpublished manuscript shown the author by Raleigh Barlowe.

James Yoho also discussed the public lands acquired by Michigan. He summarized the methods the state disposed of these lands by saying

The state disposed of the twelve million acres acquired by these means just as fast as it could and with no regard for intended usage or size of purchase. This policy proved to be very convenient for the accumulation of large private holdings and the ensuing timber exploitation.²³

At the same time that Michigan was disposing of the lands in this fashion, the Federal Government was doing likewise. There were by the 1860's federal laws that restricted the size of parcels being sold and which regulated residency and development of lands being purchased. The written law did not, however, offer much practical restraint²⁴ to the eventual ownership, or at least the eventual access to Michigan's lands by nonresidents. Fraudulent homesteading, for example, was a favorite way in which timber companies gained control over a quarter- or half-section here and there in the finest timber.²⁵

Just as residents of the states to the south had discriminated against absentee landowners, Gates reports how settlers in the Lake States "displayed much ingenuity in discrimination against and penalizing"²⁶ these landowners. New counties and towns were founded that built unnecessary schools, expensive courthouses, and almost useless roads and bridges. Railroads were given huge subsidies. And in each case [the local governments gave] the contracts to themselves and friends, knowing full well that the burden of such expenditures would rest upon non-residents.²⁷

²³James Yoho, "Private Forestland Ownership and Management in Thirty-One Counties of the Northern Portion of the Lower Peninsula of Michigan" (unpublished Ph.D. dissertation, Department of Forestry, Michigan State University, 1956), p. 11. See also D. Reynolds Early Land Claims in Michigan, Lands Division, Michigan Department of Conservation (Lansing, 1940); and A. Bliss, Federal Land Grants for Internal Improvement in the State of Michigan (Pioneer Society of Michigan, n.p. and n.d.).

²⁴Ibid., p. 13.

²⁵Ibid.

²⁶Gates, p. 86. David Ward has been referred to as the "largest and most extensive pine-land owner and operator in Michigan . . . whose career

From 1850 to the 1990's, almost all of the harvestable pine had been removed from the northern half of Michigan's Lower Peninsula. "The zenith of the lumber industries in Northern Michigan was reached in 1888,"²⁸ "Almost as fast as the timber was cut,"²⁹ the lands were sold or left vacant and unattended, with taxes unpaid. Lands began to divert to state control for tax delinquency, for in Michigan there had been a tax reversion law passed as early as 1869. Hopeful farmers bought land from the timber companies, land colonization companies, and land settlement companies that advertised the cutover region as a natural agricultural region.

After the pine was removed the hardwoods continued to increase in value, and these birch and maple forests were next to be harvested. "Timber skimmers" bought parcels within or near the hardwood lands. Some

in the state covered the entire period of Michigan lumbering and who came to be known as 'the richest man in the state'. . . ." [Charles Moore, History of Michigan, Vol. I (Chicago: The Lewis Publishing Company, 1915), p. 515.] In The Autobiography of David Ward (New York Privately Printed, 1912) p. 171 Ward discusses misuse of nonresident lands:

During some years past there has been carried on a systematic plundering of non-resident land owners under cover of taxation, so much so that the taxes in some of the towns in Kalkaska, Otsego, Antrim, Charlevoix and some other counties are oppressive and are largely confiscating such landed properties. In this way many of the shiftless, lazy, knavish, dissolute class comparatively numerous in this country manage, with the addition of timber stealing, to largely obtain their living from the non-resident land owners. Ever since the settlement of the western states this system has been practiced more or less in many of those states. But the non-resident land owners in northern Wisconsin and northern Michigan are the greatest victims as these regions seem to be a sort of paradise for the class above mentioned. Real estate is low and comparatively valueless in these regions on account of this custom of largely confiscating it by plundering taxation, yet there are some good, honest people in Northern Michigan who deplore this state of things, but they are so few!

²⁷Gates, pp. 86-87.

²⁸Perry F. Powers, A History of Northern Michigan and Its People. Vol. I (Chicago: The Lewis Publishing Company, 1912), p. 190.

²⁹Yoho, p. 13.

lands were being sold by the State Land Commission for the second time the first having been to farmers who mostly failed . and the second to the "timber scavengers." After cutting all the hardwoods on their lands , these owners once again let their lands revert back to the state for non-payment of taxes. Some had never paid taxes at all , for they had cut the timber so fast that it was removed before the time had elapsed for reversion proceedings to begin.

"By the turn of the century , the fate of much of the land . . . had become clear,"³⁰ The pines were gone and the hardwoods were rapidly disappearing in the upper half of the Lower Peninsula. Only the homesteader who had carefully selected the better land after an on-the-ground inspection was able to remain in farming. Ranching was only a limited success in certain localities

A new era was emerging.³¹ Yoho introduces it

³⁰ Ibid. p. 14.

³¹ For a complete discussion of the events of the era , including forest destruction , and attempts at farming and settlement in the Lake States , refer to a series of four publications by the United States Department of Agriculture: J. C. McDowell and W. B. Walker , Farming in the Cutover Lands of Michigan, Wisconsin and Minnesota USDA Bul. No. 425 (October 1916); J. D. Black and L. C. Gray , Land Settlement and Colonization in the Great Lake States , USDA Bul. No. 1295 (March 1925); William Sparhawk and Warren Brush , The Economic Aspects of Forest Destruction in Northern Michigan , USDA Tech. Bul. No. 92 (1929); and W. A. Hartman and J. D. Black , Economic Aspects of Land Settlement in the Cutover Region of the Great Lake States , USDA Circular No. 160 (April 1931).

Thorstein Veblen looked back upon the history of absentee ownership of all phases of America's industrial enterprise. Writing in the early twentieth century , he espoused a theory to 'remove the absentee businessmen from control of the country's industry and in their place install a bureaucracy of technicians.' Stemming from Veblen , this idea of replacing absentee control by technical control gained popularity following World War I and during the depression.

See , for instance , his Absentee Ownership and Business Enterprise in Recent Times (New York : B. W. Heubsch , Inc. , 1923) , which includes sections on "The Independent Farmer , " "The Country Town , " and "The

At about the turn of the century, land speculators found a new market for Michigan's oft-sold acres in the form of the non-resident recreationist. There appears to have been little over-optimism concerning the land's immediate value for this purpose but this market developed gradually and rather consistently except for depression years, down to the present. Since World War II, it has undoubtedly been the most salable land value in northern Michigan.³²

Early Types of Tourism and Recreation in Northern Michigan

The recreational use of Michigan's north country was not new. Summer resorts had become a familiar part of the scene along the Great Lakes' shorelines and along many of the larger inland lakes. Mackinac Island was the first of these resort areas, having become a resort prior to the Civil War and a State Park in 1895. Later on the use of steamboats for recreation flourished. Around the 1890's, the use of the steamboat reached its peak. Summer tourists enjoyed exploratory trips on the Great Lakes and on the narrow passages afforded by the waterways of the northern inland lake routes. Railroad companies organized tours and provided reduced rates to the resort regions, founded their own resorts, and cooperated with promotional agencies and colonization companies by trying to induce travel and settlement in the north country.³³ The description of early types of outdoor recreational activities of the two study counties, pages 24 through 25, gives the reader more understanding of these early recreational activities and the time of their popularity.

Timber Lands and the Oil Fields" (pp. 129-65 and 186-201).

For a critical analysis of Veblen's proposals, and their inherent shortcomings, refer to Abram Harris, Economics and Social Reform (New York: Harper and Brothers, 1958), Chap. IV pp. 156-213.

³²Yoho, pp. 14-15.

³³This outline of the early outdoor recreational activities in northern Michigan was taken from: A. Barnes, Vinegar Pie and Other Tales of the Grand Traverse Region (Detroit: Wayne State University Press, 1959), pp. 142-46; Willis Dunbar, Michigan: A History of the Wolverine State (Grand Rapids: William B. Eerdmans Publishing Co., 1965) p. 491; Wilbur Hedrick,

Nonresidency: Forest Removal
to the Present in Northern Michigan

Emergence of Modern Causal Forces of Change

After the steamboats and the railroads came the highways, and the new era of the nonresident recreationist was begun in full stead. In addition to highway construction and the popular use of the automobile, there were other important causes for the beginning of ownership patterns and land uses that have led to the present day situation. In those parts of northern Michigan that have sizable acres of state or federal lands, the manner in which these lands have been acquired, managed, sold and traded has been important. Those regions which have few acres in public ownership, such as the western fruit belt along Lake Michigan, have been less affected by the public land policies and tax reversion laws. Innovations in agricultural technology that have been reflected in land use practices have been important to such agricultural regions. Another factor has had an effect on all of the lands of northern Michigan, be they owned for agricultural, speculative, recreational or forest purposes, or be they in public or private ownership. All land use has been affected by the migrational shift during this century from rural areas to towns and cities. As this part of the literature review unfolds, these four factors—highways, state and federal land policies, agricultural innovation, and rural-urban migration—should be kept in mind as interrelated forces that individually and collectively have been among the factors affecting land use and ownership.

State Land Policies

The State of Michigan's policy regarding the use and disposal of land acquired by tax reversion has been influential to both the public and private

Recreational Use of Northern Michigan Cut-over Lands, Michigan State College, Agricultural Extension Service, Special Bul. No. 247 (East Lansing: February 1934), p. 21; and Harold Titus, The Land Nobody Wanted, Michigan State College, Agricultural Extension Service, Special Bul. No. 332 (East Lansing: April 1945), p. 13.

use of the cutover region.³⁴ The first tax reversion law was passed in Michigan in 1869, and from that time until the early 1940's tax reversion has had peak and depression periods.

There were three great periods of tax delinquency. The first period occurred about 1895 when there was a slowdown in lumbering and a resultant depression; the second occurred in the 1920's and early 1930's during the agricultural depression following World War I; and the final period was in 1939 and 1940 after the eight year tax moratoria laws of the depression were repealed.

In 1920 there were 600 000 acres of tax reverted lands; in 1932 there were 2 400 000 acres; and by 1940 there had been 2 208 975 acres added to the 1932 total. Control of these lands was originally vested in the State Land Office which was merged with the Public Domain Commission in 1909. In 1921 the Department of Conservation acquired administrative control. The Public Domain Commission had stopped selling state land in 1913 after the failure of their earlier sales policies. The Department of Conservation reopened the state lands to sale in 1921 and attempted to formulate a wise sales trade and overall management policy.

The Land Economic Survey was begun under the spirited guidance of P. S. Lovejoy in 1922. This survey was the first of its kind in any of the states. About one-half of the land area in northern Michigan was surveyed. Based on this survey the State Department of Conservation formulated its management decisions. The policy regarding sales and trades of tax reverted lands was to hold those areas that could not be used by private

³⁴ This section on state land policies was abstracted from Titus from Arthur W. Stace What Are We Going to Do With 2 208 975 Added Acres? Michigan Department of Conservation reprint of eight articles by Booth Newspapers Inc. (Lansing 1940); and from the Lands Division section of the Biennial Reports of the Michigan Department of Conservation. See also Raleigh Barlowe, Administration of Tax Reverted Lands in the Lake States, Michigan State University Agricultural Experiment Station, Tech. Bul. No. 225 (East Lansing December 1951).

owners for any enduring purpose, and to retain in state ownership those lands that were part of a large public undertaking. The state held strategic lands on water frontage, choice game areas, and lands with no private potential. Most of the early lands sold by the state were purchased by recreationists, with commercial or private hunting and fishing clubs being the major investors.

In their sales policies, the state tried to balance the tax needs of the local governments, and yet retain access to popular recreation areas for the public. This policy continued. During the Depression it was expanded to allow homesteading on state land, and from 1932 to 1942 over 200,000 acres of state land were sold to homesteaders.

In 1938 the United States Department of Agriculture launched the Land Use Planning Program that was carried out by the Land Grant Colleges and Extension Services. Local opinion was considered much more than in the Land Economic Survey, which was considered out-of-date in many respects by 1938. Local Land Use Planning Committees in all of the counties of Michigan sat with state and federal representatives. Each county's committee recommended which lands the state should retain in public hands and which should be sold to private interests. Only 17.8 percent of the state lands in the 16 northern Michigan counties that had a soil map before 1938 were considered as worthy of sale.

State land sales and exchanges continued after the Land Use Planning Program. By the early 1950's most state land available for sale had been sold. The present policy is not to sell large holdings of state land and to trade lands only in order to consolidate previous holdings. Present sales are mostly of platted lots and small parcels.

Early Trends in the Recreational Use of the Cutover Region

Hunters and fishermen began to use the cutover lands even before the second growth struggled up to recloak the banks of the major rivers and

fish-producing lakes."³⁵ Club houses and individual cabins began to appear as hunting clubs and fishing clubs were organized. These lands remained in private ownership even when surrounding areas were reverting to the state for non-payment of taxes. As mentioned above some of these recreational facilities were built on lands that had been purchased from the state.

It wasn't until the 1920's that the importance of the recreational uses of the wild lands was given close study. During this decade the southern cities were expanding and roads were being built and improved that led to the northern cutover townships.³⁶

Hedrick's recreation facility study was the first effort to specify the limits of this important recreational use.³⁷ Wilbur Hedrick led research in the northern 31 counties of the Lower Peninsula. He attempted to locate the summer resorts detached recreational properties hunting and fishing clubs and other types of recreational endeavors that were permanent taxable facilities. Field trips tax records and questionnaires to township and city officials were used to gather information. Major trends in the use of the region for recreation were

1. City residents were the main users of the recreational assets of the region.
2. In 1926 there was one mile of road for every 510 acres of land or for

³⁵ Titus, p. 13.

³⁶ During the 1920's the public became conscious of good roads and legislators responded at the state and federal level by voting into law initial road legislation. For an account of the dates and types of this highway legislation, see Dunbar, pp. 566-67.

³⁷ Hedrick, 63 pp. The magnitude of the recreational use had been spoken of by Powers in his A History of Northern Michigan in 1912. "It is estimated that no less than five million strangers annually visit this section of Michigan, either for sport or recreation." (p. 224.)

every seven permanent residents of the 31 county region. This was a greater number of roads per capita than the southern part of Michigan, which then had one mile of road per every 65 residents. Hedrick mentions that the state officials intended for the highway program in the northern region to service the interests of tourists.

3. The Houghton Lake area in Roscommon County and the counties near Lake Michigan had the preponderance of the summer resorts and a majority of the detached cottages. Of the 670 summer resorts and the 6,710 detached cottages found in the 31 counties, 472 resorts and 3,692 cottages were in the western counties.
4. Hunting and fishing clubs totaled 220 in 1931, and the great majority of these were in a five-county region in the east-central part of the northern counties. This area consisted of Otsego, Montmorency, Crawford, Oscoda and Alcona Counties.
5. The reason for these differences in the development of recreational facilities between the northeastern and the northwestern sections of the state was mentioned:

This eastern side, especially the east-central part, was more slowly settled than the fruit-belt of the west shore, has lacked good roads until lately, and has fewer towns and cities.³⁸

The remoteness of the east-central counties provided an excellent habitat for game and fish, and promoted hunting and fishing; the roads and more numerous towns of the western tier of counties provided services for the resorter. The individual cottage owners were less affected by these regional differences, and cottages were the most evenly distributed.

6. The taxes levied in 1931 were analyzed. They revealed that the following number of townships had their budgets borne by recreational

³⁸Ibid., p. 27.

facilities according to the percents shown below:³⁹

Share of budget borne in 1931 by taxes on recreation facilities	No. of Twps.	Percent of Twps.	Accumulative Percent
90 - 80.1	2	1.1	--
80 - 70.1	3	1.6	2.7
70 - 60.1	5	2.6	5.3
60 - 50.1	7	3.7	9.0
50 - 40.1	8	4.2	13.2
40 - 30.1	18	9.4	22.6
30 - 20.1	27	14.1	36.7
20 - 10.1	36	18.9	55.6
10 - 1.1	63	33.0	88.6
1 - 0.1	22	11.4	100.0

All of the townships with 50 percent or more of their budgets borne by taxes levied on recreational facilities were in western counties except for townships in Otsego and Roscommon Counties. Furthermore, townships whose budgets were dominated by recreational assessments were almost all located in the northwest counties of the Lower Peninsula. The study by Hedrick did not ascertain the number or the value of the recreational facilities that were owned by nonresidents.

Other Trends in Land Use Prior to World War II

Two other studies were vital in explaining the recreational use and the regrowth of forests in northern Michigan. One was a tax study by W. F. Ramsdell reported in 1933, and the other was an explanation of trends in land use reported by Horace Andrews and Willard Bromley in 1941.

Ramsdell's tax study gave a detailed graphical analysis of the taxes of 24 selected townships in the upper half of the Lower Peninsula and the Upper Peninsula.⁴⁰ The real property valuation, personal property valuation,

³⁹Ibid., pp. 60-63. (Percents and accumulative percents were compiled by the author.)

⁴⁰W. F. Ramsdell, Township Government and the Exploitation of Timber and Wild Land Resources in Northern Michigan (Detroit: Detroit Bureau of Governmental Research, January 1933).

and the tax rates for the period 1920 to 1931 were depicted. The 24 townships were divided into three groups based upon their real property valuation. These three groups were timberland, recreation, and mining-timber.

The timberland group was subdivided into townships with large remaining timber resources (all of which were in the Upper Peninsula), rapidly decreasing timber resources (two of nine were in the northern part of the Lower Peninsula), and exhausted timber resources (both townships in this class were in the Lower Peninsula). Three of the four recreational townships were in the northern part of the Lower Peninsula, and both of the mining-timber townships were in the Upper Peninsula.

Ramsdell's conclusions that have the most bearing and historical significance to this present study on nonresidency were:⁴¹

1. The timber and recreational values of the wild land district of northern Michigan were "the two most promising industries . . . [and] are interdependent to a very large degree."
2. Nonresident owners, using the township as the unit of residence, held most of the timber and the recreational properties.
3. "Where property values within an assessment unit are large, and mostly nonresident owned, there is almost uniformly extravagance in public expenditures and relatively high taxes." These taxes were shown, in turn, to have encouraged "the destructive exploitation of timber resources." As timber resources were reduced, taxes were forced to rise. As taxes rose, the nonresident timber owners were encouraged to cut more of what little timber remained. "Frequent bankruptcy of townships" rather than a promotion of "the timber industry by low carrying charges" was the end result of this cycle, which was completed only after all timber had been removed.

Andrews' and Bromley's research on land use trends in Alpena, Antrim, Ogemaw and Roscommon Counties compared land use in 1939 with the Land

⁴¹All quotations Ibid., p. 49.

Economic Survey of 1923-24.⁴² Only the nine townships in the eastern two-thirds of Antrim County were included in the study area because the western townships were influenced by large inland lakes and Lake Michigan and were not considered typical wild lands. Important trends and conclusions that this work in 1939 lends to this present survey were:⁴³

1. From 1923-24 to 1939, lands which were used for agriculture had increased by only 1 percent. A corresponding large increase in abandoned land indicated, however, that there was "a very heavy turnover of land to and from agricultural use." The Depression was a primary cause of bringing new or previously used agricultural lands into use. During the period, many city workers had moved to farms.
2. Effective fire protection by the State Department of Conservation had meant that forests had grown taller and denser. A remarkable increase in the number of stands from three to nine inches in diameter had occurred.
3. Permanent residences had increased only by 10 percent during the period, but there had been a four-fold increase in summer resorts from 596 in 1924 to 2,413 in 1939.
4. During the 15 year period, land was transferred from large private and corporate ownership to state and federal ownership. "Relatively fewer changes took place in the private ownership of smaller tracts of land, while the acreage owned by hunting clubs increased many times." Many owners were found to be holding their land "in the hope of being able to develop or sell it for farming or recreation use." About one-third of the wild land owned by private owners was owned for apparently

⁴²Horace Andrews and Willard Bromley, Trends in Land Use in Northern Michigan: A Study of Alpena, Antrim, Ogemaw and Roscommon Counties (Washington, D. C.: The Charles Lathrop Pack Forestry Foundation, 1941).

⁴³All quotations Ibid., pp. 30-31.

no reason at all. Only a small area was held for timber, pulp, or fuelwood.

5. A rise in the taxable value of resort and potential resort property was considered "remarkable and of very great significance in some townships, although not sufficient to offset the loss due to the dropping of private lands from the tax rolls." At this time Michigan was paying ten cents per acre to the local governments for every acre of tax reverted land in state control.
6. The population had decreased throughout most of the five county area after 1910. Some increase was made in population in the 1930's, but a continued trend was not forecast. "Possibilities for agricultural expansion seem limited, reestablishment of forest industries is still in the future, and only the recreation industry seems capable of supporting some increase in population," it was summarized.

Trends in Land Use and Nonresidency Since World War II

The prior pages have mentioned the rate of growth in recreation, the change of ownership of northern lands, and shifts in resource use and the tax base of northern counties from the time of forest removal up to World War II. Nonresident landownership had an important role in the removal of the forests, and it has been seen that completely different types of non-residential use of the cutover region has been vital. During and after World War II, absentee ownership increased even faster than in the previous decades, especially on the smaller tracts of privately owned land.

Forest owner studies have helped explain what has happened on the private lands of the northern part of Lower Michigan since the War. These research endeavors by James Yoho and Con Schallau are highlighted below.

Yoho personally interviewed a sample of forest owners throughout the 31-county area, and contacted a smaller number of owners by a written questionnaire.⁴⁴ He found that of the 4.9 million acres of privately owned

⁴⁴Yoho, "Private Forestland Ownership."

forests in the region, one-fifth was owned by farmers in the mid-1950's. Farmers represented the largest ownership group. Next in order according to acres of private forest owned were the business and professional group, the recreational group, and wage earners. All of these four occupational classifications owned over 500,000 acres.

Twenty-nine percent of the private forest area was owned by residents, about one-half of the forest area was owned by persons who lived over 25 miles from their forest, and 37 percent of the forests were owned by those who resided more than 100 miles from their property.

Outside of the 31 percent of the private forest that was owned by farmers, recreational use accounted for the next most significant use, and speculation ranked as the third most important objective of management. Speculation was given as the reason for owning about one-fifth of the forest area.

Certain occupational groups were found to be predominantly nonresident owners. Those dealing in real estate, wage earners, business-professional persons, and particularly the recreational groups were inclined to be nonresidents. Seventy percent of the forest area owned by recreational groups was owned by those who lived over 100 miles from their property.

Discounting irregularities, there appeared to be a lack of good cutting practice associated with the more distant nonresidential forest owners. Yoho's data also indicated that there was some tendency for absentee forest owners to have higher forest taxes than those who lived close to their property.

The peak of the forestland market was from 1939 to 1945:

This is probably due to a lack of other investment activity during the war years and the desire to obtain for recreational purposes. Also, it is likely the result of the 'back-to-the-job' movement from rural lands to the cities which was a result of increased economic activity associated with the war. There had been such an exodus from industrial to rural areas during the depths of the

depression that land was sometimes called 'the heritage of the underprivileged.'⁴⁵

Con Schallau's Fragmentation, Absentee Ownership, and Turnover of Forest Land in Northern Lower Michigan is perhaps the most revealing and is certainly the most up to date forest ownership study of the study region.⁴⁶ In 1962 he checked at random the county tax records and plat books of 16 counties of the 31 counties of northern Lower Michigan. He uncovered the changes that had been taking place on the private forestlands since 1946. It will be recalled that Andrews and Bromley found relatively little increase taking place in the turnover of smaller private tracts from 1924 to 1939. Schallau revealed that there had occurred a definite postwar fragmentation of forest acreages that took place primarily between 1946 and 1954.

Several large ownerships were being divided during this period. Although fragmentation has been more gradual since, it is likely to continue.

Acreage of absentee ownership increased by 45 percent during the 1946-1962 period. Unlike fragmentation, most of which occurred shortly after World War II, absentee ownership continues to increase at a fairly steady rate. Also, absentee ownership increased uniformly throughout the study area, whereas fragmentation was more prevalent in the more heavily forested counties.

The high turnover of forest properties since World War II is apparent. Only 40 percent of the forest area had just one owner since 1946; 44 percent of the area had two owners while 16 percent had three owners.⁴⁷ [Underlining mine.]

Other pertinent findings by Schallau were:

⁴⁵ Ibid., p. 117.

⁴⁶ U. S. Forest Service Research Paper LS-17 (St. Paul, Minnesota: Lake States Forest Experiment Station, January 1965).

⁴⁷ Ibid., p. 1.

1. The average size of contiguous forest tracts had dropped from 182 acres in 1946 to 156 acres in 1962.
2. The more dramatic 1946-1962 shifts in the size of forested tracts were associated with changes in large forest ownerships. But smaller properties also were broken up into still smaller sizes.⁴⁸
3. Because of hunting and outdoor recreation opportunities, landownership in the study area had become popular for nonresidents. This purchasing by nonresidents had led to fragmentation and the higher cost of land. Increased forestland costs led Schallau to doubt that wood using firms would buy more land, but he predicted "that fragmentation will continue to determine the trend in size of contiguous forest blocks seems a safe assumption."⁴⁹
4. The study area of the 12 sample counties within the northern part of Lower Michigan was divided into five zones depending on the percent of forestland based on the 1955 Forest Survey data. The following trends in absentee ownership was determined for each zone.⁵⁰

<u>Zone</u>	<u>Percent of Land Forested</u>	<u>Absentee-owned Acres per Section of 640 Acres</u>		
		<u>1946</u>	<u>1954</u>	<u>1962</u>
1	40-55	42.5	53.3	67.2
2	56-65	79.8	102.0	132.9
3	66-75	93.2	111.3	133.0
4	76-85	71.5	82.4	107.9
5	86 plus	185.3	220.1	249.0
All		100.0	120.0	144.2

⁴⁸Ibid., p. 5.

⁴⁹Ibid.

⁵⁰Ibid., p. 9.

5. Schallau's analysis revealed that the areas which already had absentee acreage in 1946 were definitely areas which continued to lure nonresidents.⁵¹

This research by Schallau is complemented by Raleigh Barlowe's Project '80 report.⁵² This report summarizes the situation in land use since World War II for the state. It mentions interlinked factors that have brought about land use and ownership changes during this period.

Rural-urban migration had taken place with the result that about 90 percent of the population in Michigan now lives in urban or suburban communities. In 1960, 91 percent of Michigan's population were living in the southern part of the state, and 54 percent in Genesee, Macomb, Oakland and Wayne Counties.

Changes in farm land acreages meant that the farm population in Michigan dropped to 440,937 in 1960 from a high of 844,499 in 1920. The number of farms in northern Lower Peninsula decreased by 56 percent from 1940 to 1960; acres in farms in this region fell 34.7 percent; and acres of harvested cropland fell 33.4 percent. In the rural regions of Michigan, most of the land that left farming shifted to "lower uses through abandonment and idling."⁵³

Small forest holdings in the northern part of Michigan's Lower Peninsula were important. Of the 7,508,000 acres of commercial forests in the region, there were 4,903,000 acres in private hands and 2,605,000 acres in public ownership in 1965. Of this 65 percent of the forest land in private hands, 940,000 acres were in farms, 279,000 acres were in other holdings of over 5,000 acres, and 3,684,000 acres were in other holdings of 5,000

⁵¹Schallau considered a forest owner as an "absentee" if he lived at least 15 miles from his forest land. He assumed this to be the minimum distance affecting timber sale negotiation.

⁵²Barlowe, Use of Land Water Resources in Michigan.

⁵³Ibid., p. 8.

acres or less. Seventy-five percent of the privately owned forests were therefore in holdings other than farms and under 5,000 acres.

Barlowe noted that two "major developments affecting forest lands greatly complicate tabulations for forest land use in Michigan."⁵⁴

These factors involve: (a) the changing attitudes of forest land-owners concerning the adoption of forest management practices, and (b) the recent upsurge of interest in the use of forest lands for outdoor recreation. The first of these factors suggests the need for classifying Michigan's forest land by levels of management; the second calls for classification by major purpose of ownership.⁵⁵

A look into the future land use problems in Michigan was given by Barlowe. Among the problems of urban sprawl; keeping lands reserved for future agricultural use; soil conservation and mapping; coordination of public and private objectives in the development of the recreation industry; improvement in planning, zoning, taxation and other public control measures; and qualitative and quantitative water requirements was mentioned the problems and needs that are identified with "widespread absentee ownership."⁵⁶

Nonresidency Present Status Elsewhere

The Small Forest Owner

Other states and regions have similar trends toward widespread absentee ownership of their non-agricultural lands. Three pilot studies of forestland ownership have been completed under the sponsorship of the American Forestry Association.⁵⁷ Work was completed in California in

⁵⁴ Ibid., p. 9.

⁵⁵ Ibid.

⁵⁶ Ibid., p. 14. See entire quotation on page 2 of this thesis.

⁵⁷ Samuel Trask Dana and Myron Krueger, California Lands: Ownership, Use, and Management (Narberth, Pa.: The Livingston Publishing Co., 1958); Samuel Trask Dana, John Allison and Russell Cunningham, Minnesota Lands: Ownership, Use, and Management of Forest and Related Lands (Narberth, Pa.: The Livingston Publishing Co., 1960); and Kenneth Poneroy and James Yoho, North Carolina Lands: Ownership, Use and Management of Forest and Related Lands (Narberth, Pa.: The Livingston Publishing Co., 1964).

1958, in Minnesota in 1960, and in North Carolina in 1964. These three states were selected because of their differences in forest ownership: California has complex land management problems due to intermingled ownerships, and has 52 percent of its commercial forests owned by the Federal Government; Minnesota has a unique ownership pattern of county and state lands; and North Carolina represents a state where the small, private, non-industrial forest owner predominates.

Selected quotes from these three reports are intended to point out the amount of fragmentation and non-residency of the private, commercial forest lands of these states and the similarities in forest management problems that are created.

1. California:

Progress will be facilitated by adjustments in the present, often illogical, pattern of ownerships.⁵⁸

Small owners, with nearly a third of the commercial forest area of the state in private ownership, comprise a highly important group. They include a wide variety of types which are found throughout the range of areas in this class size, from a few up to the maximum of 4,999 acres. In some cases, the forest land is part of an operating ranch; in others, it is separate from the ranch proper but is still rancher owned. A large number of the properties undoubtedly belong to absentee owners. As a group, this class of ownership, by sheer force of numbers, is difficult to analyze.⁵⁹

2. Minnesota:

State, county, federal, industrial and other private lands are so intermingled as to greatly hamper effective administration and management. Boundary adjustments and consolidations of ownership are an urgent need.⁶⁰

Present state and federal programs of cooperation with small private owners of commercial forest land give little promise of increasing its production to anything like its potential capacity,

⁵⁸Dana and Krueger, p. v.

⁵⁹Ibid., p. 109.

⁶⁰Dana, Allison, and Cunningham, p. v.

particularly in the case of small woodlands. Of the total area in private ownership, 6,867,000 acres (86.4 percent) is in ownerships of less than 100 acres.⁶¹

Average figures are greatly influenced by the situation in the northeastern region, which contains 58 percent of all the commercial forest land in the state, with only a third of the area in farm ownership.⁶²

3. North Carolina:

Securing better conditions for the production of wood is complicated by the large number of separate properties and the small size of most tracts. Three-quarters of the 225,600 private, non-industrial forests are less than 50 acres each in size. Only a few are cared for scientifically.⁶³

North Carolina has long been known in forestry circles for its many small forest holdings. According to Timber Resources for America's Future it is second only to Pennsylvania in terms of the number of forest owners.⁶⁴

In terms of area, a large share of North Carolina's non-industrial forest land is held by owners who do not reside on the property (60.0 percent); in terms of owners themselves, the majority (two-thirds) are residents. . . . It seems clear that relatively few owners involving very little forest land live great distances from their property in North Carolina.⁶⁵

In 1958 the United States Forest Service launched a nationwide campaign to improve the situation regarding the low productivity of small woodlands. When launching this program the Chief of the Service stated that small woodlands "make up over half of the nation's commercial forest area."⁶⁶ He further stated that "there is need to pursue much faster a cooperative course of action between private owners and State and Federal governments in order to bring these lands into full productivity."⁶⁷

Marion Clawson, R. Burnell Held, and Charles H. Stoddard summarized the findings of forest ownership studies in Mississippi, Louisiana, Arkansas,

⁶¹Ibid., p. 294. ⁶²Ibid., p. 203. ⁶³Pomeroy and Yoho, p. v.

⁶⁴Ibid., p. 281. ⁶⁵Ibid., p. 290.

⁶⁶Dana, Allison, and Cunningham, p. 294. ⁶⁷Ibid.

the Lake States, and New England.⁶⁸ Among their conclusions were:

Studies in recent years have given some insight into the nature and conditions under which nonfarm 'other' forest lands are owned and operated. The central theme running through much of the information is along the following lines:

1. Nonresident owners are generally middle income people with a wide variety of occupations who have held their land for more than a decade.
2. Objectives of ownership vary widely; in the South investment for income is an important factor; in the northern Lake states and New England recreational use leads by a margin; in all regions considerable areas are held for no clear reason, although speculation and sentiment are found to be influential.
3. The average length of time owners hold their lands varies widely; in most forest regions the majority of nonresidents had owned their lands ten to fifteen years.⁶⁹

Other conclusions by these authors pertain primarily to the poor management given forests by owners who live at a distance from their lands.

Other Literature About Nonresidency

Other than the forest studies, two additional aspects of nonresidency have been given detailed study. Both of these other areas of study, however, deal with the use of agricultural lands. They are therefore of limited application to the nonresidential ownership of forested regions such as the region encompassing the two study counties.

Nearly any textbook of agricultural economics, land economics, or farm management mentions the absentee ownership of farm units, and the importance of landlord-tenant agreements. Textbooks on world economic and agricultural development are almost certain to mention the need for land reforms in the early stages of improvement programs. Land reforms

⁶⁸Land for the Future (Baltimore: Johns Hopkins Press, 1960).

⁶⁹Ibid., p. 351.

have been a means of redistributing the land of many countries from inefficient large holdings of absentee landlords to peasants.

Pertinent studies and information appear to be lacking with regard to the recreational use of private rural lands. Clawson, Held and Stoddard mention that this lack of knowledge about the recreational use can be explained, in part, by the fact that most lands owned for recreation have another primary use. "Men may own forest tracts for recreation purposes yet their land will ordinarily be classed as forest. The same is true of many farms."⁷⁰

Chronological Summary

This chapter has traced the evolution of nonresident landownership from the time of the American settlement to the present in northern Michigan. American colonies were founded by nonresidential interests. However, to bring in finances and to encourage the use of the vast frontier, settlers were soon granted landownership privileges. Inability of the mercantilists to enforce rules and collect payments enabled "land hunger" to flourish long before the American Revolution. The colonists developed a disliking for the absentee landholder. This feeling stemmed from the past experiences in Europe during the fall of feudalism and the new sense of confidence and freedom of landownership in America strengthened this initial experience.

After the winning of independence, however the United States' land disposal policies fostered absentee landownership. Purchase of land by absentees for speculative purposes was a means to increase the flow of funds to the new nation's treasury. Settlement policies and monetary policies both existed from the conception of our land disposal system, and absentee speculators had the first private controlling interest to much of the disposed public domain.

⁷⁰ibid., p. 125.

Absentee use or non-use of resources in the Midwest and Lake States was often alien to the desires of the local citizenry. People of areas where absenteeism was prevalent took visible or discreet measures against nonresidential landholders. Rapid use of the natural resources was accelerated by the ownership of land by absentees, and by settler reaction. Absentee owned lands also disrupted the settlement patterns of the frontier, and caused dispersed and costly public facilities.

In the Lake States, the pines were cut and then the hardwoods. By the early 1900's the hardwoods were rapidly vanishing. At this time a new type of absentee owner appeared—the nonresidential recreationist. Technologic and other forces of change have gained momentum during the twentieth century that have resulted in increased fragmentation of once large holdings, with nonresident ownership of a significant percent of these tracts.

The popularity of the private automobile, highway construction, increased amounts of land under state and federal management, the regrowth of forests, and changes in the attitude toward leisure time have been some foremost factors influencing land utilization in northern Michigan. These all contribute to the present pattern of fragmented and intermingled lands of the public, of residents, or of nonresidents. This ownership assemblage creates problems for types of use such as the economic harvesting of forests which require large blocks of land under one unit's control.⁷¹ It has been shown by selected references that other forested regions from the east coast to the west coast of the United States have witnessed changes resulting in analagous patterns of forest land ownership and use.

⁷¹Difficulties of acquiring a block of land of sufficient size for beef cow herds in northern Lower Michigan are another example of problems created by the pattern of small ownerships. Refer to L. J. Maish and C. R. Hoglund, The Economics of Beef Cow Herds in Michigan, Research Report No. 58, Agricultural Experiment Station (East Lansing: Michigan State University, 1966), p. 14.

It has been noteworthy in the literature reviewed and in this chronological summary that American colonists developed a disliking for the absentee landholder and that visible or discrete measures were taken against nonresidential landholders in the Midwest and Lake States. The degree of this ill feeling and lack of rapport between residents and nonresidents is not well known today. This survey of absentee landowners in Antrim and Kalkaska Counties does give some indication of the present state of affairs between residents and nonresidents. Use of lands for outdoor recreation by nonresidents has not been given the detailed study that has become a necessity if our society has a goal to understand what is the highest and best use of rural lands

Summary of Research Needs

The studies cited in the literature review point out important aspects of nonresidential ownership that are potential fields for future research.

1. Yoho found that there was an apparent lack of good cutting practice associated with the more distant forest owners.
2. Yoho also found that there was some tendency for absentee forest owners to have higher forest taxes than those who lived closer to their property.
3. Schallau revealed that purchasing of land by nonresidents from 1946 to 1962 in northern Lower Michigan had led to fragmentation of ownerships and to higher land costs. These increased land costs were forecast to possibly prohibit wood using firms from buying more land in the area.
4. Barlowe summarized statistics which pointed out that 65 percent of the forest land in northern Lower Michigan was privately owned and that 75 percent of this private forest land was in holdings other than farms and under 5,000 acres. He discussed the changing attitude toward the adoption of forest management practices of nonresidents, and the tendency in recent years for an upsurge of interest in the use

- of forest lands for recreation. He concludes with the need to classify Michigan's forest land by management levels, and by major ownership purposes. Furthermore, he recognized that widespread absentee ownership had created the need for educational and assistance programs to acquaint nonresidents with principles of wildlife, forest and recreation area management and to help them achieve these principles.
5. A series of three books published by the American Forestry Association on forest land ownership explained the forest land use in California, Minnesota and North Carolina. Conclusions mentioned that the ownership pattern in all three states was often illogical insofar as forest management was concerned, that a large number of acres of the private forests were of small size, and that absentee ownership was significant.
 6. The Chief of the United States Forest Service stated in 1958 that over one-half of the commercial forest area in the United States was in small woodlands. A cooperative course of action between private owners and government at the state and federal level was his recommendation about the manner in which the productivity of these woodlands could be increased.
 7. Clawson, Held and Stoddard reviewed several studies of nonresidency in the eastern part of the country. They add to the above summary points by reemphasizing the fact that nonresidential use takes place on rural lands that are classified as farm land or forest land, and that this classification does not reveal the primary use of the land.

In addition to the suggestions for needed research abstracted from the literature review and given above, this researcher discovered other research needs mentioned in several conference proceedings on land tenure or land economics.

1. Agricultural Land Tenure Research, sponsored by the Interregional Land Tenure Research Committee in 1955,⁷² cites the requirement to know

⁷²(Chicago: Farm Foundation, October 1955). See pp. 25-26.

more about the effects that non-farmers and non-operators, who are buyers and sellers, have on the price of land, and the need for an understanding of how subjective measures of value are attributed to satisfactions from land ownerships.

2. Land Tenure Research Workshop, sponsored by the Interregional Land Tenure Research Committee in 1956,⁷³ includes mention of land abandonment with retention of ownerships, and farmers migrating to towns and then moving back to their country lands for retirement with new urban based demands.
3. Land Economics Research, sponsored by The Farm Foundation and Resources for the Future in 1962,⁷⁴ states the need for private outdoor recreation information due to the fact that public recreation areas will not be able to handle all of the future recreational demand; mentions the possible requirement for new institutions between landowners and land users, especially for recreation and forest uses; asks how better management units can be encouraged without necessarily changing the land ownership pattern, and what are the roles of private landowners, governmental units, and organized groups representing the recreationists; and cites the additional understanding required about the relation of ownership and use of natural resources to regional and national growth and the effects of resource development to economic activity.

An attempt is given below to integrate the topics of required research mentioned in this literature review into a useful framework. Primary references follow each topic in parentheses.

- I. There exists a need for studies about the nonresidential users of

⁷³(Chicago: Farm Foundation, 1956). See pp. 127-29.

⁷⁴(Washington: Resources for the Future, 1962). See pp. 11, 16, and 253.

natural resources, rather than about the resource they are using. (Barlowe, 1966; Clawson, Held and Stoddard, 1960.)

A. How are subjective measures of value attributed to the satisfactions from land ownerships? (Agricultural Land Tenure Research, 1955.)

II. There exists a need to evaluate the public and private institutional setting, particularly those involved with land tenure, educational, and assistance programs affecting nonresidency. (Land Economics Research, 1962.)

A. How can absentee forest owners be encouraged to harvest their timber crop, when other uses are involved? (Barlowe, 1966; Clawson, Held and Stoddard, 1960.)

B. How can wood using industries and agricultural enterprises such as beef cow ranches be facilitated in the face of increasing fragmentation and land costs rising due to nonresidential buying? (Schallau, 1965.)

C. How can lands formerly classified as forest or farm, but now increasingly used for recreational purposes, be redesignated according to managerial and ownership objectives? (Barlowe, 1966; Clawson, Held and Stoddard, 1960.)

D. Can better management of rural lands be effected without changing ownership patterns? Are new institutions required? What is the role of private and public effort? (Land Economics Research, 1962; Dana, Allison and Cunningham, 1960.)

E. Are nonresident owners being treated differently than local owners insofar as tax rates are concerned? (Yoho, 1956.)

F. What are the intricacies of the market for land that has non-residential and non-operator activity? (Agricultural Land Tenure Research, 1955.)

III. There exists a need to evaluate the trends in nonresidential ownership with past and present forces. (Land Economics Research, 1962.)

A. What is the relation of trends in private outdoor recreation and the demand for public recreation facilities? (Land Economics Research, 1962.)

B. What social forces cause changes in the demand for recreational use of private lands? (Land Tenure Research Workshop, 1956.)

C. How can local communities better cope with the needs of nonresidents, such as those needs created when nonresidents retire in the local rural area with urban based demands for facilities? (Land Tenure Research Workshop, 1956.)

IV. There exists a need for understanding how nonresidential ownership contributes to planning and development efforts of communities. (Barlowe, 1966.)

A. How does absentee ownership and use of rural land and water resources effect local, regional and national resource development efforts and overall economic development endeavors? (Land Economics Research, 1962.)

CHAPTER III

METHODOLOGY

The Relation of Survey Objectives to Questionnaire Construction

The objectives of this survey have been listed on page 2. They are repeated in Table 1 on page 45. Table 1 relates the four survey objectives with the 13 questions included in the mail questionnaire. In addition to the information gathered from answers to the questions, the township (or townships) where each nonresident's land was located was written in the upper right corner of the questionnaire prior to mailing, and the home address of each respondent was recorded from the return envelopes. See Appendix A for a copy of the questionnaire and the accompanying introductory letter.

When the questionnaire was constructed, the framework of research needs (pages 41-43) was not yet formulated. Even if the overall outline of profitable research areas had been conceptualized prior to writing the questionnaire, the financial and personal resources available for this specific study would not have allowed all research needs to have been considered. However, it appears that some aspect of all four promising areas of needed research have been included to some extent by the objectives of this survey in Antrim and Kalkaska Counties.

Reasons for Selection of the Two Study Counties

It was ascertained from Overall Economic Development Plans or Comprehensive Plans for each county that a substantial percent of the private lands were owned by absentees. Prior knowledge of the northern 31 counties of Lower Michigan led to the choice of Antrim and Kalkaska Counties. Even though the two counties are adjacent they have pronounced differences in

Table 1. The Relation of Survey Objectives to Questions or Information Contained in the Mail Questionnaire

Survey Objectives	Question Number	Question or Information ¹
1. To understand more about the nonresident himself	- 1. 2.	Home address from postmark. Individual or group owner? ² Profession or occupation of individual owners?
2. To understand more about trends in nonresident ownership and land use and to try and relate these trends with local resource patterns.	- 3. 4. 5. 6. 7. 8. 9.	Township written on first page. How many acres are owned? How many acres are fenced or posted? What was the method of acquiring title? How many acres were acquired by each method? If any land was purchased, why was it bought in the study counties? How many days are spent on the land during each quarter of the year? When was title to the land acquired? What are the past, present, and planned future uses of the land?
3. To understand what type of assistance nonresident landowners desire, what types they have received in the past, and from what agencies.	10. 11. 12.	What types of assistance are desired? Is the nonresident a Cooperator with the local Soil Conservation District? What types of assistance have been received in the past? From what agencies?
4. To understand more about nonresident opinion toward the local community.	13.	What is the opinion toward local taxes, cooperation with nonresidents, roads, snow removal, police protection, professional services and retail businesses?

¹Ample space was given on the last page for the respondents to write general comments. Upon analysis of these comments, it was apparent that they pertained to all four survey objectives.

²Husband and wife ownerships were included in the individual owner category.

their land and water resources that allow for a comparison between the counties. The wide range in combinations of water, public lands and private lands seem to be representative of the overall northern region. (Map 3 gives the location of the two study counties in the northwest part of the Lower Peninsula.)

Chapter IV furnishes a background of the counties selected for this study, but a summary of their resource characteristics is included at this point to emphasize the reasons for their choice.

The western six townships of Antrim County are in the fruit belt that extends along Lake Michigan. Several large lakes lie just inland from the Grand Traverse Bay shoreline. The lands most suited for agriculture in the counties are also in these six western townships, as are the majority of the towns and villages of both counties.

The eastern two-thirds of Antrim County and almost all of Kalkaska County lie outside of the climatic influence exerted by Lake Michigan and the large inland lakes. These eastern townships and Kalkaska County have only a fraction of the amount of water in lakes and ponds that the western part of Antrim County holds. Almost all of the state forest land and other public land in the two counties is located in the eastern part of Antrim County and in Kalkaska County. In the northeastern corner of Kalkaska County there lie several sizable lakes that are in close proximity to state forest land. Other parts of the counties have agricultural lands interspersed in close proximity to public land.

The combinations of agricultural lands, public lands, large and small bodies of water, and population concentration mentioned above reveal possible situations where the ownership intentions and types of land use by nonresidents would differ. The mixes of resources in the study counties are found elsewhere in the northern region. Hopefully, these resource similarities would allow findings of the questionnaire analysis to be compared with studies that might be undertaken elsewhere in surrounding counties.

Analysis of Questionnaire Construction

Choice of the Mail Questionnaire

This survey relied completely on the responses to a written questionnaire that was mailed to all nonresidents of ten or more acres of land. The fact that absentee landowners have home residences dispersed over a wide geographic range precluded an interview method at their homes. It was also out of the question for the scope of this study to conduct interviews when nonresidents were visiting their rural landholdings in the study counties. Absentees visit their land at different times of the year, if at all, and it would have been difficult to contact many owners by interviewing them on their land. Some studies have been conducted by contacting local township supervisors and asking them about the land ownership and land use within their township. This procedure appears to be more appropriate when physical facilities built upon the land are being studied that are assessed for taxes, or when less specific information about the owners' uses for their land is being sought than was desired for this survey.¹ A case study of a small area with certain types of nonresidential lands or of a small geographic region such as a township would be useful. This research did not include such case studies, however, for it was judged that the broader picture of nonresidency afforded by a written questionnaire sent to all owners would establish a bank of knowledge from which subsequent case studies could be oriented.

Choice of a Survey

After it was decided to send a mail questionnaire, the decision was made to send it to all nonresidents rather than to a sample of landowners. This survey was a study of absentee landownership from the land use standpoint. By recording the township (or townships) in which each

¹Hedrick's recreational facility study, summarized on pages 23-25, and Yoho's forest ownership study, reviewed on pages 28-30, are examples of research conducted by contacting local township supervisors.

nonresident owned land in the upper right hand corner of the questionnaire, the researcher insured that he could relate every returned questionnaire to the land. It was desired that as many acres of nonresident owned land as possible be represented by the questionnaire returns. Reports of other studies that gathered information by written questionnaires being sent to landowners seemed to indicate that somewhere in the vicinity of a 20 to 30 percent response could be expected. It was concluded that if land use information was desired which could be related to combinations of resources in a small area, then a complete survey of all landholders rather than a sample mailing was best. Furthermore, the difficulties involved in choosing a sample that would be representative of the many types of nonresidents would have been no less than the effort spent in the complete survey technique.

Factors Emphasized in Construction

The following factors were emphasized in the questionnaire construction

1. Shortness of length of individual questions and the entire questionnaire.
2. Easily understood instructions and means of answering the questions.

It was judged that most nonresidents would not want to delve into their personal files to find out information they did not know off-hand.

3. Provision for respondents to comment in ample space about anything they desired.
4. Professional appearance in the introductory letter and the questionnaire.
5. Explanation that the questionnaire would not be used to reveal personal information. The introductory letter made a particular effort to mention that the purpose of the questionnaire was to study overall land use problems and trends as an effort to improve assistance programs and other endeavors.

Assistance Received in Construction

Assistance was asked for and received from the County Natural Resource Extension Agents, Soil Conservation Service Technicians, County Treasurers, and Agricultural Stabilization and Conservation Service personnel

of the two study counties. These persons were especially helpful in advising what questions among a large group of possible questions were the most important insofar as the objectives of this research were concerned. They also gave valuable aid in reviewing proposed questions and giving suggestions for improving the construction and terminology. Questions 5, 6, 9 and 10 had a format which included check answers to alternative ways of acquiring property, reasons for buying property, ways of using the property, and types of assistance desired. Space for a follow-up free answer was given after the check list of answers for each of these four questions. The county personnel gave outstanding support by advising if the check lists adequately covered all the significant alternatives without overlapping.²

Definitions

"Nonresident" and "Absentee": General Discussion

The terms "nonresident" and "absentee" landowner are used interchangeably in the literature, and have been used in this report in the same manner. It perhaps could be debated that of the two terms "absentee" has more of a connotation that a person is away from a place where he should be in actuality.³ Even though the title of the questionnaire used in this survey and the title of this report purposely used the term "nonresident," no distinctions between the two terms have been consciously made in the text.

²The principles of questionnaire construction were based on Claire Selltiz, Marie Jahoda, Morton Deutsch and Stuart W. Cook, Research Methods in Social Relations (rev. one vol. ed.; New York: Holt, Rinehart, and Winston, Inc., 1964).

³Webster's Third New International Dictionary (Springfield, Mass.: G. & C. Merriam Co., 1961) defines an "absentee" as "one that is absent or that absents himself (as a pupil from school or a worker from a job); specif A proprietor that lives elsewhere--often used disparingly . . . ' and a "nonresident" as one who is "not residing in a particular place or a place referred to by implication; specif having one's permanent residence away from one's benefice, charge, or estate. . . . '

Research reports on "absentee" landlords have mentioned three ways in which a person can be considered as "absent" from his land. These are a spatial or geographic sense, a supervisory sense, or an ethical sense.⁴ This study in Antrim and Kalkaska Counties only considered the geographic sense of the word.

When a landowner is spoken of as being an absentee or a nonresident in the geographic sense, it is necessary that an actual or a conceptual boundary be established to determine when the landowner is "on" or "off" of his land.⁵ In the literature mentioning nonresidency that was reviewed for this study, this "boundary" between residency and nonresidency differed between studies.⁶

Definitions Used in This Survey

The names, addresses, and number of acres owned by each nonresident were copied from the tax rolls of each political township that are kept in

⁴Randall Klemme, "'Absentee' Landlords," Current Farm Economics, XVII (Stillwater: Oklahoma Agricultural Experiment Station, October 1944), 137-43. If a person does not physically reside on his land, he could be considered absent in a geographic sense. If a person, who may be living on or off of his land in the geographic sense, is not exercising proper supervision over any potential use of his land, he could be considered as absent in a supervisory sense. Finally, any interest of a landowner that is alien to the interest of the best social use of the land (assuming this best use could be determined) causes the owner to be an absentee in the ethical sense. Perhaps this above classification taken from Klemme is purely academic, but it is included to emphasize that the geographic sense is the only sense intended herein.

⁵A farmer could own five plots of land that were not contiguous, and have his home located on only one of these five plots. In the strict sense of the word, he would be an "absentee" to the four plots that did not seat his home. But normally he would be considered as a "resident" of all five plots if they were within reasonable distance of each other.

⁶Schallau considered any forest owner that did not reside within fifteen miles of his property to be an absentee. He "assumed this to be the minimum distance affecting timber sale negotiation." His classification, therefore, joined the supervisory as well as the geographic sense of the term "absentee." (See Schallau, p. 9.)

the County Treasurer's Office of each study county. The procedure in which these names were recorded had a bearing on where the "boundary" between residency and nonresidency was placed.

A list was compiled for each county of the post offices that had mail delivery routes within that county. Any individual or group landowner whose address was other than these post offices on the list for each county was considered as an absentee landowner from that county. For all practical purposes, therefore, the reference line to delimit nonresidency for each study county was its political boundary. In actuality, a few residents of adjacent counties who lived on a post office route that extended into one of the two study counties did not have their names recorded as nonresidents even though they owned land in one of the study counties. For the great majority of the cases, however, nonresidents and out-of-county residents are synonymous.

One final distinction had to be made in setting the conceptual "boundary" between residents and nonresidents. A few questionnaires were received that indicated the owner of land in the study counties spent about one-half of the year outside of Michigan and the other one-half on his land in Antrim or Kalkaska Counties. These questionnaires were disregarded for the purposes of this study. Only those respondents to the questionnaire with out-of-county addresses who owned over ten acres of land on which they resided less than one-half of the year were considered as absentee or nonresident landowners.

Method of Recording Names and Mailing Procedures

Reasons for Studying Only Owners of Ten or More Acres

The two study counties have cottage development along the shores or lakes and streams and at other scenic or good hunting sites. These cottage owners are numerous, but the acreage they own is not significant when compared with the acres owned by nonresidents with larger plots of land.

Soon after the recording of names from the tax rolls had begun it became apparent that the platted areas that lie primarily around the major lakes contained the small holdings of many nonresidents. Due to the lack of time to record all of these cottage-site holdings and the lack of sufficient funds to send questionnaires to so many owners, it was decided that only nonresident landowners of ten or more acres would be recorded and mailed a questionnaire.

There were other reasons for this restriction to ten or more acres besides the time and cost factors.⁷ But all of these additional reasons aside, if the time and cost considerations of the survey would have permitted, all nonresident landowners regardless of size of their holdings would have been included.

Problems with Multiple Ownerships

When the ten-day task of recording the names of nonresidents of ten or more acres was completed, the researcher then had a separate list of nonresidents for each political township.⁸ Some owners had their names

⁷For those individual pieces of property under ten acres, the total number of acres was not, as a rule, listed alongside the property descriptions in the tax rolls. Property descriptions for parcels over ten acres, however, usually had the number of total acres listed alongside the description. It was much easier to keep account of the total number of acres that had been recorded by not considering the small plots under ten acres. In addition, these smaller properties lend themselves to other types of research, such as tax or recreation studies, for they have physical facilities built upon them more often than the larger properties.

⁸Four political townships in the two counties had two or three subdivisions, which were the original survey townships. The remaining political townships were identical to the survey townships in area. The researcher had a separate list for each political township, and for each subdivision of the four political townships. A total of 32 lists was recorded, therefore: 23 political and 9 survey townships.

on more than one of these township lists if they owned property in scattered holdings in more than one township. Other owners had their names recorded more than one time on a separate township list if that township had a complex ownership pattern with many owners and if any landowners held property in scattered sections of the township.⁹

Typing and Alphabetization of Envelopes

If a questionnaire had been sent to every separate name on the lists that had been recorded, then many nonresidents would have received more than one questionnaire. It was necessary to correct this by determining which landowners were multiple owners whose names had been recorded from alongside the descriptions of more than one of their parcels. The alphabetization of the last names of all landowners in each county solved the problem of multiple ownerships. This alphabetization was carried out by following the steps of the procedure depicted below:

1. The lineal lists of names were given to typists who typed every name and address on the township lists onto the envelopes that were to be used in mailing the questionnaires. Care was taken to keep the envelopes for each township separate.
2. After all envelopes were typed, the researcher penciled a short abbreviation of the township on the inside of the flap of each envelope. This township abbreviation identified the name typed on the envelope as the owner of property in the township abbreviated on the flap.

⁹To better understand why names and addresses were recorded more than once a review of the manner in which the properties are listed on the township tax rolls is useful. For each township, all of the property owners in Section 1 are first listed. Then all of the property owners and a description of their property in Section 2 are listed, and so on until all 36 sections of a township have been canvassed. If an owner has property in Section 1 and Section 36, and if the ownership pattern is complex and the list of names on the tax roll is a long one, then the owner would have his name recorded twice. The same owner could have his name recorded even more times if he owned land in other townships.

3. All of the envelopes for each county were lumped together, and were alphabetized at the county level using the last names in the addresses on the envelopes.
4. After the alphabetization was complete it could then be determined which landowners had their names typed on more than one envelope. In other words, it was possible to tell which landowners were multiple owners. Written on the back flap of every envelope for these multiple owners was the abbreviation code of the townships in which the landowner had property. All but one of the envelopes for multiple owners were discarded after the township abbreviation codes for all separate parcels had been recopied onto the one envelope that was saved. When this process was completed, there was only one envelope per landowner regardless of how many separate parcels of land he owned.¹⁰

Mailing Procedures

After the elimination of excess envelopes, the next step was to write the name of the township or townships penciled on the back flap of each envelope onto questionnaires. Each questionnaire was then immediately inserted into the envelope from which the township code had been referred. The introductory letter and a self-addressed return envelope was inserted along with each questionnaire. The introductory letters had all been previously signed at the complimentary close, and just prior to being placed inside the envelope they had the name of the landowner written in the salutation.

A month period was allowed for the return of the questionnaire. At the end of the third week a post card was sent to all recipients of the questionnaire.

¹⁰ The only owners of property in more than one township that weren't uncovered by carrying out this procedure were those few who owned land in both counties. There was no determination made regarding how many nonresidents owned land in both study counties, but six questionnaires were returned from nonresidents with land in both counties.

This card thanked the nonresident landowners if they had already returned the questionnaire and asked them to please respond within the next week if they had not yet done so. (See Appendix A for a copy of the post card.)

Response to the Questionnaire

Table 2 summarizes the number of names recorded for each county, the number of questionnaires that were mailed after corrections had been made for multiple ownerships, and the number of responses.

Table 2. Number of Names Recorded,
Questionnaires Mailed, and Returned Questionnaires

	Antrim	Kalkaska	Total
Names recorded	1,069	1,222 ^a	2,291
Correction for multiple ownerships	-82	-98	-180
Questionnaires mailed	987	1,124	2,111
Questionnaires returned that were not answered ^b	107	135	259
Questionnaires that reached the nonresident owner	872	980	1,852
Usable questionnaires returned ^c	469	498	967
Percent questionnaires mailed that had a response	47.4%	44.3%	46.1%
Percent questionnaires that reached the nonresident owners and had a response	53.8%	50.8%	52.9%

^aDoes not include one nonresident owner, a power company, that owns about 17,700 acres in Kalkaska County and was not mailed a questionnaire.

^bThe county of 17 questionnaires that were returned unanswered could not be determined because only the introductory letter or a personal letter was returned. For a detailed list of reasons for these questionnaires being returned, see Table 3. The 17 questionnaires whose county was undeterminable were arbitrarily divided by adding eight to Antrim and nine to Kalkaska County totals.

^cSix questionnaires were returned from owners who have land in both counties.

Table 3 lists the reasons for questionnaires being returned that had not reached the nonresident landowners, or that were not filled in or were not usable. The section of this chapter on difficulties encountered helps explain why so many questionnaires were returned due to wrong addresses, addressee unknown, etc.

Table 3. Reasons for Questionnaires Being Returned
That Did Not Reach the Nonresident, Were Unanswered or Unusable

Reason	Number of Questionnaires
Wrong address, addressee unknown, no such address, etc.	97
Addressee had moved and left no forwarding address	79
Owner had sold property	28
Owner was now a resident of one of the study counties	20
Owner was deceased	14
No reason given for return, or was returned with only very meager information	8
Accompanying note indicated owner misunderstood and/or afraid to answer	5
Other: owned less than ten acres, sour comment, owner ill or senile	8
Total	259
Percent of total mailed questionnaires that were returned unusable	12.3%

Questionnaire Coding and Analysis Procedures

A code sheet was compiled that was used to assign the various possible responses to each question a row number on an IBM card, and each question or other information an appropriate number of columns. A copy of this code sheet is included as Appendix B. Each returned questionnaire was individually coded by the researcher. Information was first written on a Michigan State University Computer Laboratory - Data Coding Form (CL-2). As these forms were completed, they were taken to the Computer Center at Michigan State University where IBM cards were punched and

verified copying the Data Coding Forms. After all questionnaires had their responses and other information coded and punched, computer programs were written.¹¹

Difficulties Encountered

Recording of Names

Certain difficulties were encountered in the process of recording the names, addresses, and acreages owned by nonresidents of ten or more acres. The 1965 tax rolls of each township were used as the source of the information. Unfortunately, the County Plat Books (that have maps of each township which show the property boundaries and owners of all property within each township) were last printed in 1960. The researcher experienced difficulty when recording the names of property owners who had acquired their land between 1960 and 1965, whose names and property boundaries were not shown in the plat book of each county, and whose total acreage-owned figure was not listed beside the property description in the tax roll.¹²

¹¹ See Chapter V for a description of the types of programs used in the questionnaire analysis.

¹² This was especially true when the property description was a long and an irregular one, for it was hard to determine the actual number of acres owned from these lengthy descriptions. If the property description was regular, such as "SW 1/4 of SW 1/4 of Section 2, Township 26N, 6W", then it was easily determined what the total acreage was. In the example just given, it would have been known that 40 acres were owned in the southwest corner of Section 2. This would have been known whether or not the county plat book listed the property owner, or whether or not the total acreage figure was given alongside the property description in the tax rolls. But for lengthy property descriptions that have several lines of descriptive terminology, it was extremely difficult to decipher the total acreage if it was not so indicated alongside the property description or if it was not included in the county plat books.

Those areas of platted lands surrounding lakes had the most property descriptions that bordered on ten acres, with descriptions that were lengthy and involved, and with no total acreage figure indicated. It cannot be said for certain that the researcher was able to properly decide which properties were of ten or more acres in these areas within or near platted areas.

Another problem in recording names stemmed from the sometimes inconsistent methods used by township supervisors to record names on the tax rolls. Recent additions were often added in pencil or pen, and were hard to read. On more than one occasion, the addresses of multiple owners were different, and it was not known which address was the latest and correct one.

The fatigue of the researcher, who recorded all of the names himself, should not be overlooked.

The above difficulties help explain why 176 questionnaires out of 2,111 that were mailed (8.3 percent) were returned due to wrong address, addressee unknown, no such address, or addressee moved.¹³

Coding Difficulties

Coding of responses was hard for Question 2, which asked the non-resident to write his occupation in a space provided. The code system used for classifying occupations was taken from the 1960 Census of Population: Alphabetical Index of Occupations and Industries (revised edition), pages xix to xxiv.¹⁴ It was possible to tell what occupations were included under the major categories by referring to the detailed list of occupations

¹³Discussion with the Soil Conservation Technician of one of the study counties, who had sent information to landowners after recording their names and addresses from the tax rolls, indicated that similar return rates have been a characteristic of other mass mailings.

¹⁴U. S. , Bureau of the Census (Washington: Government Printing Office, October 1960.

included in this reference. Problems were encountered when the respondents indicated the general industry in which they worked, but did not say what their occupation was in the industry. Examples of these responses were, "employee in automobile plant," or "factory employee." When this type of response was given, it was not possible to tell whether the person was a skilled, non-skilled or professional worker in the industry. These responses had to be listed in the category "factory worker" or "unable to tell from response."

Another coding difficulty involved the categorizing of home addresses based on the postmark stamped on the return envelopes. Some of these return envelopes did not have the postmark stamped on them. 54 responses, or 5.6 percent of the 973 returned questionnaires, had no postmark.

One question was incomplete—and coding was not precise. Question 7 (which asked how many days respondents visited their land, and left room for them to indicate the number of days per quarter) should have had an instruction such as, "Please indicate with zeroes if you do not visit your land at all." The way the question was constructed, it was impossible to tell if those who left the space after all four quarters blank intended to say that they did not visit their land at all, or if the question was overlooked by the respondent and was therefore a non-response answer.

Handling of "non-responses" was another area of difficulty in coding and writing the programs. The ninth row was punched in appropriate columns on the IBM cards to indicate the "non-response" category. In writing the programs, it was found that for mechanical reasons it would have been much easier if the row of zeroes had been used to indicate "non-response."

Summary

This Chapter has presented the methodology used in this survey of nonresident landowners of Antrim and Kalkaska Counties. Other studies in the future may want to deviate from the methods used in this initial endeavor. It should be kept in mind that this work was done with land use

as the focal point. Future efforts probably should center around other main topics of research. But regardless of the overall approach, a review of the methodology described above should set the stage for new and improved ideas that are better suited for other objectives and other geographic regions.

CHAPTER IV

BACKGROUND TO THE STUDY COUNTIES

Introduction

This chapter includes highlights of land ownership and use in the two study counties and a summary of important aspects of the historical development of the counties. After first describing the location of the counties and their climatic differences, a review of acreage and percentage statistics pertaining to private and public land ownership is given. Then, a more qualitative discussion is presented of land ownership and use changes, population trends, labor force changes, and other past occurrences that are significant to this present work.

Reference has been made repeatedly to the contents of this chapter in Chapter V, which analyzes the questionnaire responses. The manner in which many questions were answered could be related to the historical background, land and water characteristics, settlement patterns, and differences in land ownership and land use that are included in the pages that follow. The last section of this chapter about the history of the study counties supplements the review of literature on nonresidential ownership of forest land in northern Lower Michigan that was a major portion of Chapter II.

Location of the Two Study Counties

Map 3 shows the location of the study counties in the Grand Traverse Bay region of northwestern Lower Michigan. Antrim County is the northernmost of the two adjacent counties, and has its entire western border touching Grand Traverse Bay. The southern border of Antrim County meets the northern border of Kalkaska County.

Approximate distance by highway from the geographic center of the counties to selected cities and towns in Michigan and bordering states are listed below.

Table 4. Approximate Distance by Highway
from the Geographic Center of the Two
Study Counties to Major Cities and Towns

City or Town	Approximate Miles ¹
Detroit	230
Lansing	170
Grand Rapids	145
Benton Harbor	225
Chicago	315
Toledo	280
Saginaw	135
Manistee	100
Alpena	100
Mackinaw City	85

¹From Michigan 1966 Official Highway Map, Department of State Highways, Lansing.

Climate

The major climatic influence in the Grand Traverse Bay region is the stabilizing effect upon the length of the average annual growing season that is exerted by Lake Michigan. The climate of western Antrim County is influenced by being near Lake Michigan and by the series of interlocked and elongated lakes that lie only a few miles inland. As a result, the western part of Antrim County has an average annual growing season of 130 days. This is from 40 to 50 days longer than in other parts of the two counties.¹

¹Elton B. Hill and Russell G. Mawby, Types of Farming in Michigan, Special Bulletin 206 (2d rev.), Michigan State College, Agricultural Experiment Station (East Lansing: September 1954), pp. 11-14.

Present Land Ownership Patterns

Introduction

This section reports acreage figures which depict the amounts of total land and water area, acres in lakes and ponds, in farmland, and in public land ownership. It was possible to acquire total acreages of land, of water in lakes and ponds, and of state and county lands down to the township level. Having acreage totals at the township level was desired to allow the questionnaire returns to be related to characteristics of resources and land use of as small a geographic region as possible.²

Sources of Information

The sources which yielded information about land area and ownership were as follows.

1. The total land and water area of each township and each county was found in the U. S. Census of 1940.³
2. County plat books were used to tally acreage figures at the township level for state lands, county lands, lands in villages and towns, and the location of large private ownerships of over 5,000 acres.⁴
3. The total water area in lakes and ponds for each township was abstracted from the Michigan Water Inventory conducted under the guidance of Clifford R. Humphrys at Michigan State University.⁵

²Unless designated otherwise, the word "township" is used herein to refer to originally surveyed townships, known as "surveyor" or as "government" townships. Present day political townships usually are made up of one surveyor township, but may include more than one surveyor township. ("Historical Notes," Michigan History Magazine, XXIV, p. 473.)

³U. S. , Bureau of the Census, Areas of the United States, 1940 (Washington: U. S. Government Printing Office, 1942).

⁴Rockford Map Publishers, Farm Plat Book With Index to Owners: Kalamazoo County, Michigan (Rockford, Illinois: 1961); and _____, Farm Plat Book With Index to Owners: Antrim County, Michigan (Rockford, Illinois: 1961). County lands designated for a particular use, such as quarries, schools, or cemeteries were not included in the public land tallies.

⁵C. R. Humphrys and R. F. Green, Michigan Lake Inventory Bulletins,

4. The total land in farms for each county was found in the 1964 Census of Agriculture.⁶ It was not possible to determine the acres of farms for each township.
5. The total amount of nonresidential lands over ten or more acres were copied from the tax rolls of each township as described in the previous chapter, pages 51 to 58.
6. Private rural lands not in farms or owned by nonresidents of ten or more acres were ascertained by subtracting the total acreages of items 2 through 5 from above item 1.⁷

County Acreage Totals

The four tables which follow and the intervening discussions help explain some of the types of land ownership and use in Antrim and Kalkaska Counties.

Table 5. Total Land and Water Areas of the Two Study Counties¹

	Total Acres ²		
	Antrim	Kalkaska	Total
Land and water area	332,800	366,700	699,500
Area of lakes and ponds	30,300	5,900	36,200
Land area	302,500	360,800	663,300

¹See page 63 for sources. ²Rounded to nearest hundred.

Kalkaska County is the larger of the two counties, having 33,920 more acres of land and water than Antrim County. Antrim County has almost

Numbers 5 and 40, Department of Resource Development, Michigan State University (East Lansing: 1962).

⁶U. S. , Bureau of the Census, 1964 United States Census of Agriculture, Preliminary Reports (for Antrim and for Kalkaska Counties, Michigan), Series AC 64 P-1 (Washington: U. S. Government Printing Office, March 1966).

⁷Some of this "private rural land" was actually public land such as highways, township-owned land, or specialized types of county-owned lands that were not counted in the public land tallies.

six times the amount of water in lakes and ponds. In terms of land area alone, Kalkaska County has 58,300 more acres than Antrim County.

Table 6. Total Acres of Public Lands, Land in Towns and Villages, and Private Rural Lands in the Two Study Counties¹

	Total Acres ²		
	Antrim	Kalkaska	Total
State forest lands	41,400	138,700	180,100
Military lands	-	14,200	14,200
County lands ¹	2,500	700	3,200
All public lands	43,900	153,600	197,500
Land in towns and villages	4,200	1,000	5,200
Private rural land	254,400	206,200	460,600

¹ See page 63 for sources, and for delineation of county lands.

² Rounded to nearest hundred.

After the total amount of public land and the land in towns and villages is subtracted from the total land areas, it is readily seen that private rural land in Antrim County exceeds the private rural land in Kalkaska County by 48,200 acres. This is the result of Kalkaska County having over three and one-half times the amount of public land than Antrim County.

Table 7. Total Acres in Farms and Acres Owned by Nonresidents of Over Ten Acres in the Two Study Counties¹

	Total Acres ²		
	Antrim	Kalkaska	Total
Private rural land	254,400	206,200	460,000
Land in farms, 1964	97,200	36,900	134,100
Private rural land not in farms	157,200	169,300	326,500
Nonresident land recorded over ten acres	88,700	109,000	197,700
Private rural land not in towns or villages, in farms, or in non-resident lands over ten acres	68,500	60,300	128,800

¹ See page 63 for sources.

² Rounded to nearest hundred.

Table 7 shows that after the acres of farmland are subtracted from the total private rural lands, Kalkaska County has 12,100 more acres of private rural lands not in farms than Antrim County. These private rural lands not in farms are the lands that nonresidents generally own in the counties, for tenant farming and nonresident farming are not prevalent practices in the counties.⁸ The statistics included in Table 7 indicate that Antrim County nonresidents owned 56.4 percent of that county's private rural lands not in farms, whereas 64.4 percent of the private rural lands not in farms in Kalkaska County were nonresident owned.⁹

Both Antrim County and Kalkaska County had one nonresidential owner of over 5,000 acres. A power company held the majority of the land bordering the banks of the Manistee River, which flows through the southern part of Kalkaska County. A land company owned land in the southeastern townships of Antrim County. Table 8 summarizes the amount of land in large ownerships (over 5,000 acres) and small ownerships (from 10 to 4,999 acres).

⁸1964 United States Census of Agriculture, Preliminary Reports for Antrim and for Kalkaska Counties give statistics which reveal that only about 4.4 percent of the farmers in both counties were "not residing on farm operated." If this total had been higher, then many acres of private rural land in farms as well as out of farms might have been owned by out-of-county owners.

⁹It should be kept in mind that these percents pertain to nonresident landholdings of ten or more acres. The percentages for all nonresidents (if the amount of acres owned by nonresidents of under ten acres had also been recorded) would have been higher. "Private rural land not in towns or villages, in farms, or in nonresident lands over ten acres" can be thought of as being owned by residents who are non-farmers or by nonresidents who own under ten acres. The fact that Antrim County had a smaller percent of its private rural lands not in farms owned by nonresidents of ten or more acres is probably due to the higher population in Antrim County and the presence of many platted areas around the large lakes in Antrim County.

Table 8. Total Acres of Large and Small Nonresidential Holdings
in the Two Study Counties¹

	Total Acres ²		
	Antrim	Kalkaska	Total
Nonresident lands from 10 to 4,999 acres	79,900	91,300	171,200
Nonresident lands 5,000 acres or more	8,800	17,700	26,500
All nonresident lands of 10 or more acres	88,700	109,000	197,700

¹See page 63 for sources.

²Rounded to nearest hundred.

County Acreage Percents

Table 9 summarizes the total acreage statistics that have comprised Tables 5 through 8 by giving the percents of land in each ownership classification. Figure 1, on page 68, graphically depicts the information contained in Table 9 by means of three circle charts.

Table 9. Summary of the Percentages of the Total Land and Water Areas
of the Study Counties in Each Ownership Classification¹

Percent of Total Land and Water Area	Antrim	Kalkaska	Total
In lakes and ponds	9.1	1.6	5.2
In land	90.9	98.4	94.8
In public land	13.2	41.9	28.2
In towns and villages	1.3	0.3	0.7
In farms	29.2	10.1	19.2
In private land other than towns, villages, and farms	47.2	46.1	46.7
In nonresident owned land from 10 to 4,999 acres	24.0	24.9	24.5
In nonresident owned land over 5,000 acres	2.6	4.8	3.8
Owned by non-farm residents or by non- residents of under 10 acres ²	20.6	16.4	18.4

¹See page 63 for sources.

²Corresponds to the ownership classification entitled "private rural land not in towns or villages, in farms, or in nonresident lands over ten acres" included in Table 7.

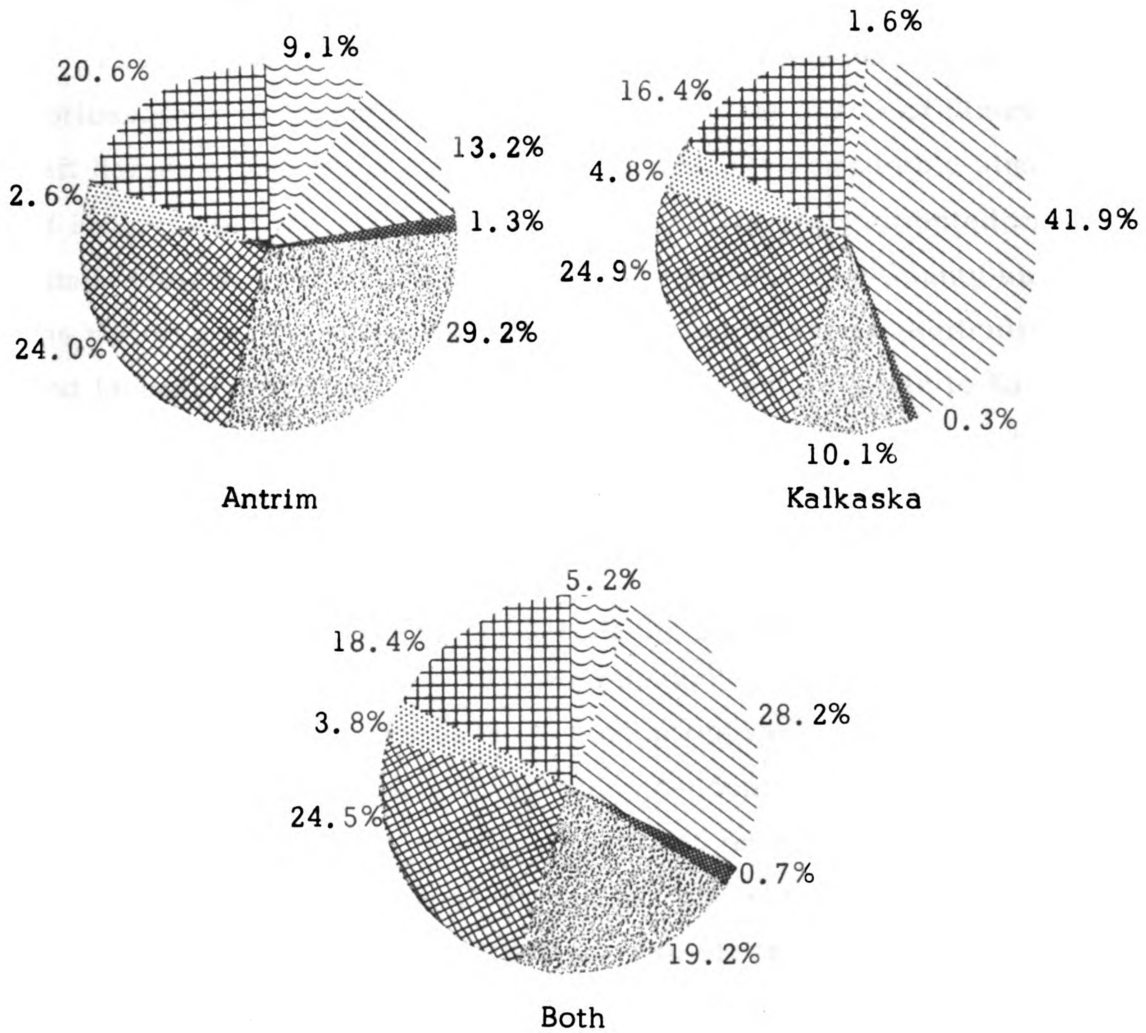
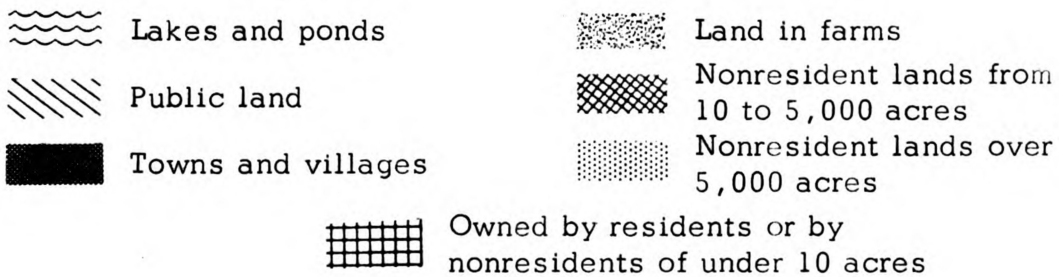


Figure 1. Percent of Total Land and Water Area of Each County and of Both Counties Combined



Another striking feature of the summary percentages is particularly noticeable when depicted by means of the circle charts of Figure 1. The left halves of the county charts are divided into comparably similar patterns of sectors, but the right halves of these charts are segmented in a dissimilar manner. The right halves clearly show Antrim County as having the majority of the water resources in lakes and ponds, agricultural lands, and lands in settlements. The importance of public lands to Kalkaska County is readily apparent. For the left halves of the charts, however, the only sizable variance is the greater amount of absentee owned land over 5,000 acres in Kalkaska County.

Qualitative Description of Major Resources

Physiography¹⁰

The surface features of the two counties were formed during the late Wisconsin glaciation, which left the two-county area of 1,045 square miles with a topography of hilly and rolling terrain. In some places the terrain smoothes out to level dry plains, and elsewhere into poorly drained plains or swampy areas. The extremes in elevation range from 580 feet above sea level at the shoreline of Grand Traverse Bay in Antrim County to more than 1,300 feet in the southeastern part of Antrim County and in the northeastern and southeastern corners of Kalkaska County. Local variations in topographical features, such as between hill crests and nearby streams, lakes, valleys, or swamps, generally are from 50 to 150 feet. Scenic views over broad expanses of territory can be enjoyed from properties which are located on the higher portions of the uneven landscape.

¹⁰This paragraph is based upon: J. O. Veatch, L. R. Schoenmann, and G. L. Fuller, Soil Survey of Antrim County, Michigan, U. S. Dept. of Agriculture, Series 1923, No. 29 (Washington: U. S. Government Printing Office, 1928); and J. O. Veatch, L. R. Schoenmann, Z. C. Foster and F. R. Lesh, Soil Survey of Kalkaska County, Michigan, U. S. Dept. of Agriculture, Series 1927, No. 28 (Washington: U. S. Government Printing Office, n.d.). (See initial sections of both surveys entitled "County Surveyed.")

Soils¹¹

The soils of the counties vary from light sandy soils to heavy loam soils. There is only a relatively minor amount of the heavy loam soil. The soils most important for agricultural uses are the medium and sandy loams. The preponderance of the medium loam soils are located especially in Banks Township (Township 32N, 8W) and the other townships in the western one-third of Antrim County.¹²

The sandy loam soils are the soils most suited for agriculture outside of the medium loam region. In Kalkaska County, these sandy loam soils are found in an interspersed pattern within a strip of land about six miles wide that extends from the southwestern tip of the county toward the northeastern corner. The majority of the remainder of Kalkaska County has light sandy soils or peats and mucks. The northwestern townships of Kalkaska County are exceptions, for they are also interspersed with some sandy loam soils. The regions where sandy soils and the other non-agricultural soils predominate are where the state lands are located.¹³

¹¹ Taken from the soil surveys and from: Michigan Dept. of Conservation, Land Economic Survey, Forest and Economic Report of Antrim County (Lansing: 1923); and _____, Farm and Forest Map of Kalkaska County (Lansing: 1927).

¹² The location of the medium loam soils and the sandy loam soils in the two counties is approximated on Maps 1 and 2, which have the areas of "Best Agricultural Lands in Farms" indicated. These "Best Agricultural Lands in Farms" were copied from the Land Capability Map for each county that was compiled by the Land Use Planning Committees in the early 1940's. The acres in farmland has reduced dramatically since that time, and the areas on Maps 1 and 2 are only intended to acquaint the reader with the general location of the agricultural lands in the counties.

¹³ Map 1 and Map 2 also indicate the present location of state lands. It is obvious that state lands are usually located on the lands with the poorer soils. Nonresident lands of over 5,000 acres are included on the maps also, and it is apparent that they are also found where the soils are not best suited for agriculture.

The sandy loam soils in Antrim County are situated in the tier of townships that are adjacent to the western townships. Other areas which have sandy loams in Antrim County are the north-central part of the county and the Mancelona Plain, which is generally an extension of the diagonal strip of land that runs from southwest to northeast in Kalkaska County.

Agricultural Land Classification

J. O. Veatch's map, "Agricultural Land Classification of Michigan,"¹⁴ reflects the fertility, uniformity, topography, tilth and moisture content of Michigan soils. His classification placed all the land in Michigan into First, Second or Third Class Agricultural Land.¹⁵ Percentage figures of each class of land for the study counties were:

	<u>1st Class</u>	<u>2d Class</u>	<u>3d Class</u>
Antrim County	14%	52%	34%
Kalkaska County	5%	43%	52%

Agricultural Production Statistics

The above description of soils and classes of agricultural land in the two study counties points out that Antrim County has more of the medium loam soils, 9 percent more First Class Land, 9 percent more Second Class Land, and 18 percent less Third Class Land than Kalkaska County. In addition, it has been previously mentioned that the western townships of

¹⁴Agricultural Land Classification and Land Types of Michigan. Special Bul. No. 231, Michigan State College, Agricultural Experiment Station (East Lansing: April 1933), p. 52.

¹⁵Ibid., pp. 46-47. First Class Agricultural Land ". . . in general is supermarginal and embraces those land types on which the present dominant type of agriculture is, or may be in the future, carried on as a business. . . ." Second Class Agricultural Land "is generally marginal. It may be adapted to a purely subsistence type of farming; a home, a partial living for the family; to intensive farming for special crops or individual small tracts; or to no present agricultural use, all depending upon location and other intrinsic factors." Third Class Agricultural Land ". . . in general is submarginal, or locally marginal."

Antrim County have a longer average annual growing season. These differences are emphasized by the agricultural land value and production statistics from the 1964 Census of Agriculture. Table 10 repeats some of these value and production figures.

Table 10. Agricultural Land and Production Statistics
for the Two Study Counties¹

	Antrim	Kalkaska
<u>Land Value Statistics</u>		
Land in farms (acres)	97,237	36,859
Percent of total land in farms	31.9	10.2
Average value land & buildings/acre	\$107.30	\$76.70
Average size of farms (acres)	198.4	245.7
<u>Production Statistics</u>		
All products	\$3,239,602	\$1,047,187
All crops sold	1,482,068	372,061
All livestock and poultry	1,757,534	675,126

¹U.S., Bureau of the Census, 1964 United States Census of Agriculture, Preliminary Reports (for Antrim and for Kalkaska Counties, Michigan) Series AC 64 P-1. Refer to p. 2 of both reports.

In 1964 Antrim County had almost three times the acres in farms as Kalkaska County. Antrim County also had an average of \$30.60 greater value of land and buildings per acre of farmland and an average of 47.3 fewer acres per farm than Kalkaska County. Over two-thirds of the value of farm products sold from Kalkaska County farms were livestock and poultry products, whereas the relative importance of crops to livestock and poultry was more evenly distributed for Antrim County. The importance of the western fruit belt to the relatively greater crop production figures for Antrim County is evident from statistics not included in the Table. Over one-half the crop value sold in Antrim County in 1964 was in the "Fruit and Nuts" category, or \$759,027 worth of these products were sold.

Lakes and Ponds¹⁶

The western townships of Antrim County hold over three-fourths of the area of lakes and ponds in the two counties. The popular "Chain-of-Lakes" lies in this western one-third of Antrim County. This elongated and interconnected series of lakes and streams has a shoreline of 163 miles.¹⁷ Torch Lake, the second largest intrastate lake in Michigan, is the major attraction of the area. The seven townships in Antrim County that surround all but the northern extremities of the "Chain-of-Lakes" have about 28,700 acres of the total 36,200 acres of lakes and ponds in the study counties.

Other parts of the study counties also have important lake resources. The four townships that comprise the northeastern quarter of Kalkaska County contain several moderate sized lakes. These townships have 3,100 acres of the 7,500 acres of lakes and ponds that lie outside of the townships surrounding the "Chain-of-Lakes."

Another group of townships holds 2,600 acres of lakes and ponds. These townships border upon the townships which surround the large western lakes. Four townships are also included in this group: three in Antrim and one in Kalkaska County.

The remaining 1,800 acres of lakes and ponds are spread over one-half of the townships of the counties. Some of these townships have very few acres in lakes and ponds. The maximum area in lakes or ponds is 425 acres for any one survey township in this latter group.

A factor that is important in addition to total acreage figures is the average size of lakes and ponds. The average size is 202 acres for Antrim County, and 17 acres for Kalkaska County. Antrim County has the larger

¹⁶This section is taken from Humphrys and Green, Michigan Lake Inventory Bulletins, Numbers 5 and 40.

¹⁷Antrim County ARA Committee, Overall Economic Development Plan for Antrim County, Michigan, April 1962, p. 4.

average since it has 150 separate bodies of water and over 30,000 total acres. Kalkaska County has 351 separate water bodies and only about 5,900 acres in lakes and ponds.

Streams

Kalkaska County has three times the number of miles of main streams than Antrim County, but when tributary streams are included the two counties have almost an equal number of total miles of streams. This information is shown below:¹⁸

	<u>Drainage Systems</u>	<u>Coastal Streams</u>	<u>Miles of Main Stream</u>	<u>Miles of Tributary Streams</u>	<u>Total Miles of Streams</u>
Antrim County	3	7	28	236	264
Kalkaska County	3	0	83	201	284

The Manistee River is the longest stream in either county. It flows from east to west, cutting a winding course through the southern part of Kalkaska County.

Great Lakes Shoreline

Antrim County has approximately 25.5 miles of shoreline along Grand Traverse Bay.¹⁹ This shoreline is of the Antrim Low Shoretype, which runs along the entire extent of the county's western border. The six southernmost miles were developed approximately 10 percent with cottage and resort property in 1958. At that time, the northern portion of the shore was developed less than 1 percent. The bluff, dry beach and wet beach are generally sandy and uniformly sloping—characteristics which are desirable for recreational activities.

¹⁸J. C. D. Brown, Michigan Lakes and Streams, Fish Div. Pamphlet No. 24 (East Lansing: Michigan Dept. of Conservation, 1943), p. 7.

¹⁹C. R. Humphrys, R. N. Horner, and J. H. Rogers, Shoretype Classification of Antrim County, Michigan, Shoretype Bul. No. 12 (East Lansing: Dept. of Resource Development, Michigan State University, 1958). See page 1 for shoretype description.

State Lands

Maps 1 and 2 have the state lands indicated. The majority of the state lands lie in an irregular pattern in the eastern two-thirds of Antrim County and in all portions of Kalkaska County except the diagonal strip of agricultural land running from southwest to northeast. These lands are open for public recreational use.

Nonresident Lands Over 5,000 Acres

Maps 1 and 2 also show the location of nonresident lands over 5,000 acres. In Kalkaska County these lands border along the Manistee River, and are owned by a power company. In Antrim County, a land company has retained landholdings in three townships in the southeastern part of the county. These lands are not, for the most part, fenced or posted. Similar types of recreational activities can occur on them as occur on the state lands.

Forests, Grassland and Brush

The study counties have noticeable differences in their forest resources that are revealed in Table 11. This table relies on acreages and percents compiled from surveys conducted from 10 to 15 years ago. They are included at this point to acquaint the reader with concepts rather than with actual amounts of forest types and species that are now present. At the time of the latest forest surveys, over one-third of Antrim County was forested with northern hardwoods. It has been said that the largest native stand of hard maple of any county in Michigan is present in Antrim County.²⁰ Kalkaska County had only about one-half the number of acres of northern hardwoods that Antrim County had. Noticeably greater acres in grassland and brush, jack pine, and aspen were growing in Kalkaska County. Kalkaska County has nearly one-third of its land area in grassland and brush,

²⁰ Antrim County ARA Committee, Overall Economic Development Plan for Antrim County, Michigan, April 1962, p. 5.

which was over two times the amount of grassland and brush found in Antrim County.

Table 11. Forest Resources of the Two Study Counties

	Antrim 1955 ^a	Kalkaska 1950 ^b	Total ^c
<u>Total acres</u>			
Forest land	203,500	299,400	502,900
Non-forest land	101,780	61,560	163,340
<u>Percent of total land area</u>			
In conifers	6.7	13.8	10.6
In hardwoods	45.1	38.3	41.4
In grassland and brush	14.6	30.2	23.1
In reserved forests	0.3	0.6	0.5
Total in forest lands	66.7	82.9	75.6
Total in harvestable conifers and hardwoods	51.8	52.1	52.0
<u>Percent of total land in coniferous species</u>			
Jack pine	1.0	8.4	5.0
Other pine	0.6	1.3	1.0
Spruce-balsam fir	0.6	0.7	0.7
Tamarack/Black spruce	0.3	0.4	0.4
Cedar	4.2	3.0	3.5
<u>Percent of total land in hardwood species</u>			
Northern hardwoods	34.5	15.9	24.4
Oak	0.6	6.0	3.5
Aspen	9.0	14.7	12.1
Ash-Elm	1.0	1.7	1.4

^aResearch Division, Michigan Economic Development Department, "Antrim County Supplementary Economic Data Sheet" (Lansing: August 1958). (Mimeographed.)

^bResearch Division, Michigan Economic Development Department, "Kalkaska County Supplementary Economic Data Sheet" (Lansing: May 1958.) (Mimeographed.) (The source for both "Supplementary Economic Data Sheets" was the Timber Resources series published in 1957 by the Forestry Div., Mich. Dept. of Conservation. Antrim County is in the North Tip Block and Kalkaska County in the Cadillac Block.)

^cCalculated by the author.

Wildlife

The wildlife of the two study counties is extremely important in attracting hunters, fishermen, and other outdoor enthusiasts to visit the counties or buy land and become nonresident landowners. It is difficult to compare the wildlife of the two counties, or the features of other resources which have a bearing on the amount of land and water used for recreational purposes to which wildlife are important. The forest resource differences mentioned previously have an effect on the availability of winter food for deer. The eastern one-half of Kalkaska County and the extreme southeastern tip of Antrim County are a part of the Northeast Food Shortage Area.²¹ This area is composed of all of Crawford and Oscoda Counties, and parts of seven other counties besides Antrim and Kalkaska Counties "where there has been a long history of poor winter deer food conditions."²²

Kalkaska County appears to be more heavily hunted for deer. The "Annual Deer Season Reports" for the years from 1963 through 1966 published by the Michigan Department of Conservation have given the numbers of hunters per square mile by counties.²³ The report for the 1963 season listed the number of hunters per square mile for Antrim County in the "10 through 16" category, and for Kalkaska County in the "17 and over" category. Both counties were included in the "10 through 19" category of

²¹C. L. Bennett, Jr., and L. D. Fay, Deer Biological Data: 1964-1965, Research and Development Report No. 39 (Lansing: Michigan Department of Conservation, Sept. 16, 1965), p. 2. (Mimeographed.)

²²Ibid.

²³Game Section, Michigan Department of Conservation, "Annual Deer Season Reports" for 1963, 1964 and 1965 entitled Deer in 1963, etc. (Mimeographed.) Prior to the report for 1963, county boundaries were not used to report the number of hunters per square mile, and therefore earlier figures are not comparable.

1964. The 1965 report included Kalkaska County in the "20 and over" category, and Antrim County remained in the "10 through 19" class.

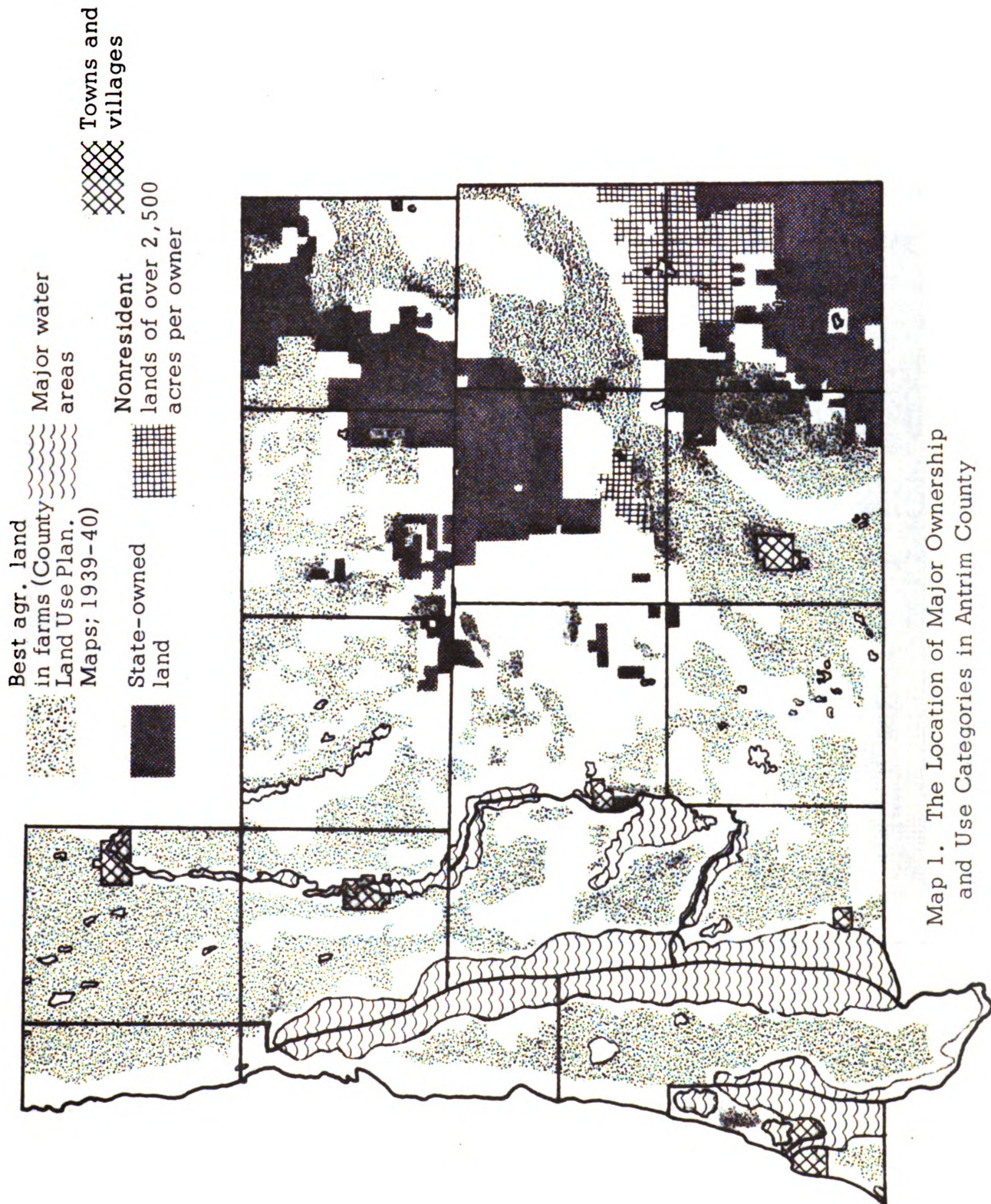
Mining and Mineral Deposits²⁴

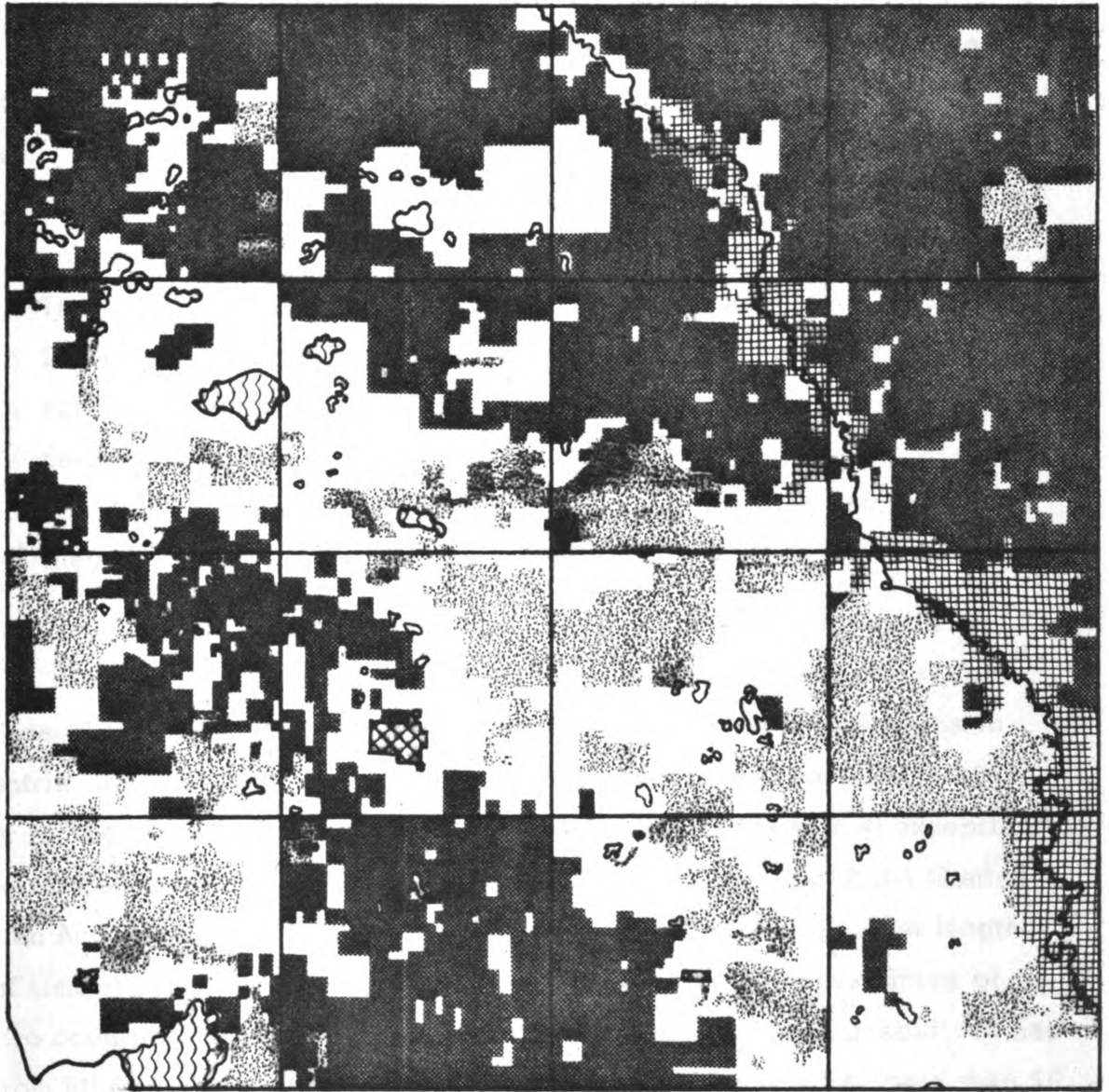
There are no major mining enterprises or mineral deposits presently in operation or being utilized that have significance for detailed mention in this survey of nonresident landowners. Both counties do have some mining operations and mineral deposits that could be a contributing factor to speculative reasons for the ownership of land in the study area. Gravel reserves are located at various places throughout the counties, and there are some quarries operating. If the demand existed for more gravel, these few operations could be expanded or supplemented with more quarries. Explorations for oil, gas and salt have been carried out with limited success. Kalkaska County has some producing oil wells, particularly in the southeast corner of the county. Antrim County has known sources of natural gas that could be used to kiln dry lumber, and has deposits of shale located close to the surface of the soil in the north-central part of the county. Neither county ranks high on the list of mineral producing counties of Michigan, but the speculative significance of these above-mentioned mineral resources should not be overlooked.

Location of Major Ownership and Use Categories

Maps 1 and 2, on the next two pages, indicate the location of state land, towns and villages, major streams and lakes, nonresidential holdings of over 5,000 acres, and township boundaries for each county.

²⁴This section was taken from the Overall Economic Development Plan for Antrim County, Michigan, p. 10; from Kalkaska County Steering Committee, Overall Economic Development Program for Kalkaska County, 1962, p. 2; and from Supplementary Economic Data Sheets for both counties compiled by the Michigan Economic Development Department.





Best agric. land in
farms (County Land Use
Plan. Maps; 1939-40)

State-owned land

Major water areas

Nonresident lands of
over 2,500 acres per
owner

Towns and villages

Map 2. The Location of Major Ownership and Use Categories in Kalkaska County

Historical Development of the Counties

Four Factors that Affected Settlement Patterns

The location of population centers, rate of population growth, and initiation of economic activity, can be correlated with four factors. They are:

1. The date of completion of land surveys and subsequent land disposal policies.
2. The location and amount of pine and hardwood forests.
3. The geographic arrangement of the lakes and streams over which the early populace traveled and transported goods, and upon which lumbering was initially dependent.
4. The date railroads were constructed into the counties and the routes they followed.

Completion of Surveys, Early Land Sales and Settlements

All of the Lower Peninsula of Michigan had been surveyed by the Federal Government surveyors by 1840.²⁵ The surveyed townships in Antrim and Kalkaska County were officially proclaimed for sale in 1840 or in 1841 with the exception of two townships.²⁶ These two exceptions were placed on the market in 1843 and 1853. At the time of the Graduation Act in 1854, which priced government land according to the length of time it had been offered for sale, 19 of the 32 survey townships of the two counties had from 80 to 100 percent of their land then unsold, 10 had from 50 to 80 percent still unsold, and only 4 townships had less than 50 percent of their government land remaining unsold.²⁷ All four townships

²⁵"Historical Notes," Michigan History Magazine, XXIV (September 1940), 473.

²⁶These figures were obtained by the author from the personal maps of Raleigh Barlowe.

²⁷Ibid.

that had over 50 percent of their government land sold by 1854 bordered on Grand Traverse Bay in Antrim County.

The settlement of Antrim and Kalkaska Counties progressed from west to east during the last one-half of the nineteenth century. Antrim County received its first settlers in 1849.²⁸ These settlers came by boat over Lake Michigan to the extreme southwestern part of the county where Elk Rapids is now situated. In 1855 Kalkaska County received its first settlers in its northwestern corner as the expansion of farms spread around the nearby village of Williamsburg in Grand Traverse County. The early growth of both counties was slow until after the Civil War, when veterans acquired homesteads in the counties. Leach describes the activities at the Federal Land Office in Traverse City when homesteads were distributed after January 1, 1863:

The entry of homesteads for the first month at the United States land office at Traverse City numbered 128, and the first eight months 528. For several years afterward they varied from 50 to 80 per month, with exception perhaps of two or three months in the dead winter of each year.²⁹

Early Forest Land Sales, and Original Forest Resources

At least as early as 1853, forest land sales were made in the two-county area. David Ward included in his autobiography mention of purchases of three to four thousand acres that he made in 1853 along the headwaters of the Boardman River northeast of where the town of Kalkaska

²⁸The historical development of the counties, except where otherwise noted, was based upon the following: Veatch, Schoenmann, and Fuller, Soil Survey of Antrim County, Michigan, pp. 933-934; Veatch, Schoenmann, Foster and Lesh, Soil Survey of Kalkaska County, Michigan, pp. 2-5; Forest and Economic Report of Antrim County and Farm and Forest Map of Kalkaska County, both of which were compiled by the Land Economic Survey Division of the Michigan Department of Conservation.

²⁹Leach, A History of the Grand Traverse Region.

was later located.³⁰ Ward described this tract as "fair to good cork pine."³¹ This tract was probably typical of the original forests that grew elsewhere in Kalkaska County on the sandy plains and rolling uplands of the southeastern and west-central parts of the county. Pine or oak-pine forests grew in these areas.³² Hardwood forests covered the the better soils which extend on the diagonal southwestern to northeastern strip of land previously described in the section on soils, page 70, and which is evident on Map 2, page 80. Oak-pine forests also grew in the lowland sandy soils around Torch and Round Lakes in the northwestern corner of Kalkaska County.

Antrim County was originally forested with mixed hardwoods except along the sandy shores of the large inland lakes and the major streams and in the extreme southeastern portion of the county. Maple, elm, ash, basswood, beech, birch and hemlock were important species. Pine forests grew around the waters of Antrim County and in the extreme southeastern part.

The swampy and marshy areas of both counties were covered with original stands of lowland hardwoods or coniferous swamp forests.

Importance of Water and Rail Routes

Natural water routes were used by the early inhabitants of Antrim County to move settlements and farms eastward and to transport necessities. In 1870 the inland water route in western Antrim County, now called the "Chain-of-Lakes," was first used to float pine logs. In that year the first sawmill of the county was constructed at the north end of Torch Lake.

³⁰The Autobiography of David Ward, p. 74. Ward later sold this land to the Dexter and Noble Company of Elk Rapids.

³¹Ibid.

³²Original forest descriptions have been abstracted from the Land Economic Survey reports.

Pine was cut from the shores of the lake, floated to the mill, sawed into lumber, and then transported on a tramway to Grand Traverse Bay, finally being shipped to Chicago. Later on the lumber was rafted to Elk Rapids over the inland water route, and then shipped from Elk Rapids to Chicago. Civil War veterans traveled up the inland waterway from Elk Rapids to the town that grew around the sawmill, known as Torch Lake Village. Supplies were carried further inland from Torch Lake Village by land.

In Kalkaska County settlement was restricted to the northwestern part of the county until the early 1870's when the first railroad pushed through the western part of the county. Railroad land grants were made in the study counties in the 1860's to the Grand Rapids and Indiana Railroad. Leach speaks of these railroad land grants, which held alternate sections of government land off of the market, as having hindered settlement in the Grand Traverse Region.³³ But, Leach concedes, even though the Grand Rapids and Indiana was several years late in being built, when it was finally completed as far north as the region in 1869 then "settlers flocked in."³⁴

By 1873 the Grand Rapids and Indiana line was extended as far north as the North Branch of the Boardman River, and a sawmill was begun at the site where the stream and the railroad met. The county seat, the village of Kalkaska, was laid out and developed around this sawmill. In 1874 another sawmill operation began at the village of South Boardman where the railroad crossed the South Branch of the Boardman River. More lumber mills sprang up all along the railroad as it was built further north-eastward, and several small settlements developed around other mill sites. These villages were later abandoned or dwindled in size as timber resources diminished.

The rail route that entered the southwestern part of Kalkaska County

³³Leach, p. 144.

³⁴Ibid.

followed a diagonal path across the county until it crossed over into the south-central region of Antrim County. In 1874 it was completed to the site where the village of Mancelona had begun. This village in southeastern Antrim County then rapidly expanded, and became a center for the manufacture of hardwood products like Elk Rapids.

It wasn't until 1889 that the western part of Antrim County was serviced by rail, and after that date the inland water route began to lose its significance to the trade of the area. After completion of the Pere Marquette Railroad in western Antrim County, towns like Ellsworth, Bellaire, and Central Lake witnessed growth.

The importance of the railroad land grants in Antrim County can be understood more completely by the below quote from an early history of the county:

There were 14,000 acres of government, 126 acres of state swamp, 5,520 acres of primary school, 880 acres of agricultural college, 89,069 acres of Grand Rapids and Indiana Railroad, and 10,080 acres of Jackson, Lansing and Saginaw Railroad land subject to entry May 1, 1883. The timbered lands are held at from \$5 to \$10 per acre. . . .³⁵

Logging Enterprises

The preceding discussion has pointed out that the early lumber cutting and sawmill operations were located near streams or lakes. As the pine was depleted which grew in close proximity to the water routes, the hardwoods came more in demand.

In Antrim County the pine had been removed from the sandy shores of the large lakes by 1880 after only a ten-year harvest period. Pine was cut from these lands by farmers who had cleared land to farm or who used the income from the forest cutting to supplement their farm income. By 1880, however, the demand for wood in western Antrim County had shifted

³⁵The Traverse Region, Historical and Descriptive (Chicago: H. R. Page and Company, 1884), p. 249.

to hardwoods. Only Torch Lake Village was adversely affected by the shift from pine to hardwood enterprises, for Elk Rapids thrived as already existing hardwood using firms expanded.

As early as 1855, when the firm of Dexter and Noble began in Elk Rapids, hardwoods were vital to the town. Dexter and Noble produced pig iron, wood alcohol, charcoal, tar, and other wood products. Lake streamers were docking at the town and delivering cords of hardwood by 1860. These cords were used to manufacture charcoal, which was in turn used to fire the furnace which produced pig iron.³⁶

The eastern section of Antrim County also had a surge of hardwood industries in the 1880's. The Antrim Iron Company began the production of pig iron just south of Mancelona in 1882. Hardwoods were also used by firms in Mancelona which made brooms, broom handles, butter dishes, sashes, doors, blinds, and cheese boxes. All of the hardwood using enterprises of Mancelona had gone out of business by 1923 except for the Antrim Iron Company.

³⁶For a more complete description of the Dexter and Noble plant at Elk Rapids, refer to. A. Barnes, Vinegar Pie and Other Tales of the Grand Traverse Region (Detroit: Wayne State University Press, 1959), pp. 138-141. In 1882 the Elk Rapids Iron Company, a Dexter and Noble enterprise, began. This company initiated the large scale production of pig iron. The firm operated 20 scows and 3 tugs which were used to haul hardwood timber down the lakes to the 45-foot blast furnace. Sixteen thousand tons of pigs were manufactured annually, and shipped to Chicago or Milwaukee over Lake Michigan. The industry was short-lived, however, and had reached the end of a flourishing life soon after the arrival of the railroads to the western regions in 1889. For the most part of the decade from 1880 to 1890 it provided a readily accessible market for the hardwoods of the region. From the period between 1910 to 1920, the population of Elk Rapids declined from 1,673 to 684 due to the loss of industries dependent on the hardwoods.

Barnes also mentions early days in the town of Kalkaska, pp. 129-131; "Rip Roaring South Boardman," pp. 132-133; steam powered boats that were used on the "Chain-of-Lakes," pp. 142-146; and the large Oval Wood Dish factory at Mancelona from 1883 to 1892, pp. 15-18.

Whereas the forests in the western part of Antrim County were primarily cut by farmers, the eastern forests of Antrim County and the forests of Kalkaska County were mainly harvested from the large landholdings of timber companies. The largest landholder in western Antrim County and northeastern Kalkaska County was David Ward. At various intervals from 1853 until the 1890's he purchased pine and hardwood lands in Antrim, Kalkaska, Crawford, Charlevoix, Montmorency, and Otsego Counties.³⁷ His purchases of high quality cork pine began around the headwaters of the Manistee and Au Sable Rivers in 1865. Ward mentions in his autobiography that "railroad grants now interfered as they comprised the alternate odd sections, and the reserved United States sections were held usually at two and a half dollars per acre."³⁸

In 1877 lumbering was begun by Ward on his pine holdings that extended into Kalkaska County and southeastern Antrim County, with "the logs being run down and sawed at Manistee City, except some four to five million feet of good selected cork pine logs which were transported by rail and manufactured at East Saginaw and Bay City."³⁹

³⁷ This information about David Ward's lumbering activities in the study region has been abstracted from his autobiography (referred to previously in Footnote 26, page 16 of Chapter II), and from Carl Addison Leach, "Deward: A Lumberman's Ghost Town," Michigan History Magazine, XXVIII (March 1944), pp. 1-19; and Rolland H. Maybee, "David Ward: Pioneer Timber King," Michigan History Magazine, XXXII (March 1948), pp. 1-15. For a map of his entire northwestern Michigan holding, see Maybee, page 9. As mentioned on page 82, the purchases in 1853 were along the headwaters of the Boardman River northeast of where the town of Kalkaska is now located. Ward sold this tract to the Dexter and Noble Company of Elk Rapids. Landholdings that were bought, retained, and finally lumbered by Ward in Antrim and Kalkaska Counties were begun in 1865. (The Autobiography of David Ward, pp. 74, 119, 149-150 and 163.)

³⁸ The Autobiography of David Ward, p. 119.

³⁹ Ibid., p. 152.

After 1885, most of Ward's forestland dealings were in hardwood lands.

From that time to this date (1893), eight years, I have purchased, for better or worse as an investment, seventy thousand acres at prices when purchased, of from two and a half to twelve dollars per acre, averaging some six and one-half dollars per acre.⁴⁰

In 1886 Ward began the construction of a 37-mile standard gauge railroad from Frederic, in Crawford County, to a point six miles west of Alba in eastern Antrim County. This work was continuing in 1894, along with work on "from fifty to sixty miles more of spur branch lines leading from the main line at various points on the same, and in various directions through my timber."⁴¹

David Ward died in 1900. He stipulated in his will that his timber tract of eighty to ninety thousand acres should be settled within twelve years. "During that period, the administrators decided to liquidate."⁴² The executors of his estate built the town of Deward in Crawford County. Deward was in the heart of his timber tract—"two and one-half miles from the four corners of Antrim, Kalkaska, Otsego and Crawford counties."⁴³ A giant sawmill was built in 1902 that ran almost continuously. An average of 175,000 feet per day of logs were cut, enough to load an average of 15 rail cars per day. By 1912 the timber on Ward's estate had been harvested. On March 16, 1912, the large mill was dismantled and moved elsewhere.⁴⁴

Other large-scale lumbering operations in the two study counties besides Ward's included those conducted by Dexter and Noble Company of

⁴⁰ *Ibid.*, p. 163.

⁴¹ *Ibid.*, p. 165.

⁴² Leach, "Deward. A Lumberman's Ghost Town," p. 9.

⁴³ *Ibid.*

⁴⁴ *Ibid.*, p. 18.

Elk Rapids, the Hannah, Lay and Company of Traverse City, and by the Antrim Iron Company near Mancelona. Dexter and Noble holdings included the three to four thousand acres that were bought from Ward. This holding was lumbered in the early 1870's by "drawing the logs on sleighs an average distance of fourteen miles and sliding them into the flutable water of the Rapid River."⁴⁵

The Boardman River was known as a "one-company river." Hannah, Lay and Company "bought government land for eighteen miles up the Boardman River,"⁴⁶ and logged pine until 1890. The company "claimed all logs floating on the Boardman River."⁴⁷

The last major owner of harvestable timber in the counties was the Antrim Iron Company.⁴⁸ At the time of the Land Economic Survey of Antrim County in 1927 it was the only company conducting large-scale lumbering. By that time the company had built a logging railroad that extended from its blast furnace and lumber mill just south of Mancelona through the northeastern part of Kalkaska County.⁴⁹ A forest survey of the study area carried out in 1935 by the U. S. Forest Service found that only one percent of the Antrim Area⁵⁰ then supported old-growth saw timber, and the Antrim Iron Company owned the largest single block of this timber, or 7,000 acres.⁵¹

⁴⁵The Autobiography of David Ward, p. 74.

⁴⁶Central Michigan University, Division of Field Services, "Bay Land and People (Mount Pleasant: 1949), p. 44. (Mimeographed.)

⁴⁷Ibid. ⁴⁸Farm and Forest Map of Kalkaska County. ⁴⁹Ibid.

⁵⁰An area in the northwestern part of the Lower Peninsula then used to delimit a typical farm-woodland region for the purpose of a series of studies by the Lake States Forest Experiment Station.

⁵¹Carl J. Holcomb and Richard D. Jones, "The Antrim Area: A Study of Farm Woodland Conditions on a Cut-over Area of Lower Michigan" (St. Paul, Minn.: Lake States Forest Experiment Station, 1938), p. 6. (Mimeographed.)

A survey of primary wood-using industries of Michigan's Lower Peninsula for the year 1935 gave statistics which depict the Antrim Iron Company as the largest wood-using firm in the entire Lower Peninsula.⁵² The company was then averaging an annual output of 7,745 million board feet of greenwood lumber and was using 37,800 cords of hardwood for chemical wood annually. Antrim County had the largest production of primary wood products in 1935 than any other county in the Lower Peninsula, and "a considerable portion of the logs came from adjacent counties."⁵³ In addition to the lumber cut by the Antrim Iron Company in northwestern Kalkaska County, the firm was the major logging concern on the Beaver Islands from 1920 to 1945.⁵⁴

In addition to the lumber railroads operated by the Antrim Iron Company and by David Ward, other logging railroads were constructed that were located in the southern and central parts of Kalkaska County. The Manistee and Northeast Railroad was a lumber railroad that was built through the southern half of Kalkaska County in 1909 and 1910.⁵⁵ "These tracts were taken up in 1924, when the lumbering boom was over."⁵⁶ Another railroad was used for hauling logs in the southeastern portions of Kalkaska County. This network serviced that part of Kalkaska County below the Manistee River, and was abandoned sometime between 1915 and 1925.⁵⁷

⁵²Willett F. Ramsdell, The Primary Wood-Using Industries of the Lower Peninsula of Michigan for the Year 1935, Bulletin No. 8 (Ann Arbor: School of Forestry and Conservation, University of Michigan, 1937), p. 30.

⁵³Ibid., p. 97 and Table 19, pp. 122-123.

⁵⁴Fred W. Foster, "The Beaver Islands: A Study of Isolation and Abandonment," Michigan History Magazine, XXXIX (1955), p. 390.

⁵⁵"Bay Land and People," p. 44.

⁵⁶Ibid.

⁵⁷Farm and Forest Map of Kalkaska County.

Other shorter logging railroads were present in Kalkaska County.⁵⁸ Villages including Sanders, Spencer, Sharon, Springfield, Deibert, Rowley, McGee, O'Neil, and Riverside became "ghost towns" or small hamlets as the forestry activity waned and the railroads were no longer used.⁵⁹

To summarize this section on lumbering in the two study counties, it can be said that the western part of Antrim County was cut mainly by farmers, whereas the eastern forests of the county were mostly cut from the large land holdings of timber companies. Besides the harvestable hardwoods that were left in Chestonia Township (Township 30N, 6W), the remaining forest cover in Antrim County at the time of the Land Economic Survey were listed as fire cherry, mixed hardwoods, poplar, beech and cedar swamp.⁶⁰

Kalkaska County had its original forests cut in three distinct periods that more closely correspond to the traditional lumbering exploits of the pine counties of northern Lower Michigan. The period from 1872 to 1880 was one in which the timber operations were on a small scale with local manufacture by small individual firms of specific wood articles. The second stage was from 1880 to 1910, when the large scale lumber operations of several companies cut most of the timber. After 1910, the lumbering activity tapered off, and at the time of the Land Economic Survey

⁵⁸ Ibid.

⁵⁹ George C. Despres mentions in an article entitled "Railroad Logging," Michigan History Magazine, XXXVIII (June 1954), p. 182, that "From 1897 to 1901 I worked in the Office of the Louis Sands Salt and Lumber Company of Manistee. They operated one of those short railroads up near Kalkaska and dumped their logs which were floated to Manistee, in the Big Manistee."

⁶⁰ W. F. Ramsdell included Chestonia Township in his category, "Rapidly Decreasing Timber Resources," which was part of his study, Township Government and the Exploitation of Timber and Wild Land Resources in Northern Michigan. (See pages 25 and 26 for a review of this study.) Ramsdell shows the rapid decline in tax receipts in the township from 1920 to 1931. By 1931, there was no merchantable timber left in the township. See Ramsdell, page 20 and page 45.

in Kalkaska County in 1927 only one company was harvesting timber. Pine logs were floated down the Manistee, Boardman and Rapid Rivers during the early part of the period of large-scale lumbering from 1880 to 1910. Four major logging railroads (all but one in Kalkaska County) and several smaller railroads were constructed in the study counties during the middle and latter years of the lumbering era. Replacing the original forests of Kalkaska County were sweet fern, aspen, scrub oak, red maple, jack pine, low blueberry, briars, and bracken.⁶¹

Agricultural and Population Trends

It has been previously mentioned herein how the population growth of the study counties had just begun during the Civil War, expanded rapidly with the influx of homesteaders and other settlers after the war ended, and continued to increase even after all the government homestead land had been disposed of.⁶² From 1900 to 1910 the population began to decline in Antrim County. The peak population was reached for Kalkaska County somewhere between 1910 and 1920.

The number of farms in the counties paralleled the early population trends with two exceptions. The rate of increase in the number of farms slowed in the period after all government homestead land was gone even though the population of the counties continued to rise. Also, when the total population began to decrease after the timber resources of the counties were almost depleted, then the total number of farms increased. During this latter period, real estate companies were selling the cut-over land to hopeful farmers.

Table 12, page 93, summarizes these early population figures, the total number of farms, and the acres in farms. This table is current to

⁶¹Farm and Forest Map of Kalkaska County.

⁶²The Land Economic Survey Report for Kalkaska County cites 1875 as the year when all the government homestead land had been disposed of in that county.

Table 12. Trends in Population, Number of Farms, and Acres in Farms

	Population ^a										
	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1965 ^b
Antrim: Total	1,945	5,237	10,413	16,568	15,692	11,543	9,979	10,964	10,721	10,373	10,400
Percent change		+169	+99	+59	-5	-26	-14	+10	-2	-3	
Kalkaska: Total	424	2,937	5,160	7,133	8,097	5,577	3,799	5,159	4,497	4,382	4,400
Percent change		+593	+76	+38	+14	-31	-32	+36	-11	-5	
	Number of Farms ^c										
	1870	1880	1890	1900	1910	1920	1930	1940	1950	1959	1964
Antrim: Total	--	727	997	1,283	1,641	1,481	1,141	1,249	1,078	676	490
Percent change			+37	+29	+28	-10	-23	+9	-14	-37	-28
Kalkaska: Total	--	455	591	679	842	796	490	690	480	228	150
Percent change			+30	+15	+24	-5	-38	+41	-30	-52	-34
	Acres in Farms ^c (nearest 100 acres)										
	1870	1880	1890	1900	1910	1920	1930	1940	1950	1959	1964
Antrim: Total	--	657	722	1,063	1,454	1,570	1,397	1,542	1,558	1,225	972
Percent change			+10	+47	+37	+8	-11	+10	+1	-21	-21
Kalkaska: Total	--	394	439	569	805	869	726	892	881	485	369
Percent change			+11	+29	+41	+8	-16	+23	-1	-45	-24

^aU. S., Bureau of the Census, Census of Population.^bRand McNally Commercial Atlas and Marketing Guide (98th ed.; Chicago, New York and San Francisco: Rand McNally and Company, 1966), p. 238.^cU. S., Bureau of the Census, Census of Agriculture. Before the 1959 Census of Agriculture, 3 acres was the minimum size counted as a farm. The last two censuses have considered 10 acres the minimum size per farm unless smaller farms than 10 acres sold over \$250. The decrease from 1950 to 1959, therefore, in the number of farms and acres in farms is partly due to the change in definition of a farm. Other definition changes occurred earlier, but for the purposes of this presentation they are ignored.

the latest censuses, and includes population estimates for the year 1964. The decline in the number of residents of both counties that began in the first two decades of this century is shown to have continued up to 1960, with the exception of the depression years in the 1930's. From 1940 until 1960 this decline was gradual, but steady. According to population estimates for January 1, 1965, the population for both counties had leveled off from the previous years of steady losses.

The peak number of farms for both counties was reported by the 1910 census. The statistics in Table 12 reveal that the number of farms decreased since the peak period with the exception of the depression years. From 1950 to 1964 the decline has been very rapid.

The acres in farms reached a maximum for both counties in the 1920 census, decreased since that census, and witnessed the usual rise during the depression years. The period from 1950 to 1964 was once again the time of the most significant losses of farm land.

Recreational Uses

County histories published as early as 1884 describe the use of the resources of the counties, especially the water resources, for outdoor recreation purposes. For instance, one early quote from a chapter about Antrim County's history is as follows:

These lakes and streams abound in fish, and during the season sportsmen come from all parts of the county to enjoy the rare sport that is here afforded.⁶³

Another more recently written source speaks of the early use of the shores of Grand Traverse Bay by nonresidents: "As early as 1883 wealthy people from Chicago were spending their summers on the shore of the bays."⁶⁴

Excursion steamers on the "Chain-of-Lakes" in western Antrim County were the first major type of tourism in the counties. Steamers with names

⁶³The Traverse Region, Historical and Descriptive, p. 250.

⁶⁴"Bay Land and People," p. 3.

like the "Queen of the Lakes" or "Lizzie Rose" carried passengers, freight, or both up and down the waterway, and traveled to and from large cities to the south via the Great Lakes.⁶⁵ Hedrick named the 1890's as the zenith of this lake steamboat craze for northern Lower Michigan,⁶⁶ and this appears to be true for the study counties. After 1889, and the building of the Pere Marquette Railroad through Antrim County's western townships, the tourist and resort traffic began to rely less on the steamers and more on rail traffic. Railroad companies encouraged this travel by advertising the northern Michigan region as the haven for the vacationer, as well as for the would-be farmer. Combination rail and steamer tours were made available whereby the tourist would travel by rail to the resort region, and would then take the local excursion boats on the inland waterway route to a resort:

Coming by boat or train from Detroit or Chicago, these vacationers would be carried to their final destination by one of the many inland-lake steamers making regular trips daily and calling at the various resorts on the route: Skegemog, Rex Terrace, Person's Harbor, Alden, Lone Tree Point, Helena (Clam River) and Torch Lake Village.⁶⁷

There were regular excursion boats on the "Chain-of-Lakes" until in the 1920's when they became unprofitable.⁶⁸

Hard-surfaced state highways were built in the 1920's that interconnected all parts of Michigan's Lower Peninsula. The outdoor recreation attractiveness of northern counties then was not found only in the water-blessed townships near access to rail or Great Lake tourist traffic.

⁶⁵A. Barnes, Vinegar Pie and Other Tales of the Grand Traverse Region, pp. 142-146.

⁶⁶Wilbur O. Hedrick, Recreational Use of Northern Michigan Cut-Over Lands, p. 21.

⁶⁷"Bay Land and People," p. 9.

⁶⁸Ibid., p. 4.

Townships more inland and not necessarily dependent on major transportation arteries began to lure hunters, fishermen, and others.

The Land Economic Surveys of the study counties were carried out as this transitional period was underway. Most of the large lumbering had already been completed, and the state highways linking the study counties with the south had been completed. Therefore, a close look at the land ownership and use patterns reported in the Land Economic Surveys is profitable, and provides a benchmark to compare with later surveys.

Table 13 attempts to compare the categories of land use and ownership that were reported by the Land Economic Surveys. Unfortunately, even though the surveys were conducted only four years apart, in 1923 and in 1927, the classes each used to describe ownership of land were almost entirely different.

Significant differences in land ownership between the two counties and other important factors were:

1. Land in farms occupied about twice the number of acres in Antrim County as in Kalkaska County.⁶⁹
2. Recreation or resort properties were only just beginning to be developed.
3. Assuming absentee owners to be the owners of the cut-over timberland, speculative holdings, abandoned farms, and bank holdings, Antrim County had 42.0 percent of its land held by absentees and Kalkaska County had 60.9 percent of its land held by absentees.⁷⁰

⁶⁹This ratio of about two times the land in farms in Antrim County to one for the land in farms in Kalkaska County held true as a rough approximation until the 1950's, when Kalkaska County began to lose more land from farms, proportionally, than Antrim County. By 1964 the ratio was about three to one. Refer to Table 12, page 93.

⁷⁰These would appear to be the minimum totals for absentee owned lands. Recreation lands, water power lands, and timber holdings included in the "productive use" category in the first one-half of Table 13 probably had other acres owned by absentee landowners.

4. Public ownership of cut-over tax forfeited land was just on the verge of growing in importance. In the decade of the 1930's, tax reversion was to take place on a larger scale.⁷¹

Table 13. Land Ownership Reported by
Land Economic Surveys in 1923 and 1927

Antrim Categories ¹	Percent of Total Land Area			Kalkaska Categories ²
	1923 Antrim	1927 Kalkaska		
Resident farm	42.0	22.4	. .	Farming: owner op- erated
	--	1.3	. .	Farming: rented
Local non-farming . . .	10.5	--		
Timberland holdings (culled)	3.5	6.0	. .	Timber
Industrial (outside villages)	0.5	0.5	. .	Industrial (includes residential)
Recreation or resort . . .	1.5	1.4	. .	Recreation
	--	3.3	. .	Water power
TOTAL: Private in productive use	58.0	34.9	. .	TOTAL: Private in productive use
Timberland holdings (cutover)	23.5	16.3	. .	Timberland residual holdings
General absentee	10.5	34.4	. .	Speculation
Former resident farm ownership	7.0	10.2	. .	Farming abandoned
Bank ownership	1.0	--		
TOTAL: Private lands not in productive use .	42.0	60.9	. .	TOTAL: Private lands not in productive use
Public ownership	40 acres	4.2	. .	Public ownership

¹Forest and Economic Report of Antrim County.

²Farm and Forest Map of Kalkaska County.

⁷¹Refer to pages 20 through 22 for a more complete discussion of periods of tax reversion and for state land policies.

Adding to the information about recreational facilities in the study counties after the time of the lake steamers and railroad tours and yet before the full impact of new highways had been witnessed was Hedrick's study in 1931.⁷² Table 14 lists the types of taxable outdoor recreational activities Hedrick's research uncovered in Antrim and Kalkaska Counties, and gives the number of townships in various percentage categories whose budget was borne by recreational facility assessments.

Table 14. Taxable Outdoor Recreation Facilities
and Their Contribution to Township Budgets, 1931

Recreational Facility	Number of Facilities ¹		
	Antrim	Kalkaska	Total
Proprietor-owned summer resorts	4	0	4
Individual holdings summer resorts	24	2	26
Unclassified summer resorts	9	8	17
Summer hotels	5	1	6
Detached resort properties	126	111	237
Boys' or Girls' camps	1	0	1
Hunting or fishing clubs	0	5	0
Percentage of Township Budgets Borne by Taxes on Recreational Facilities			
	Number of Townships ²		
	Antrim	Kalkaska	Total
20 - 30 percent	2	2	4
10 - 19 percent	3	0	3
0.2 - 9 percent	4	5	9

¹Hedrick, pp. 24-35.

²Hedrick, pp. 60-63.

⁷²Hedrick's survey, Recreational Use of Northern Michigan Cut-Over Lands, has been reviewed previously in the literature review, from pages 23 to 25.

All of the recreational facilities in Antrim County in 1931 that are given in Table 14 were in the nine townships that surround the large inland lakes in western Antrim County. In Kalkaska County, the recreational facilities were quite dispersed, but were still oriented to lakes or streams. Three townships in Kalkaska County contained the majority of the recreational activities found by Hedrick: Clearwater Township in the extreme northwestern corner of the county held resorts and four hunting and fishing clubs; Springfield Township in the extreme southwestern part of the county had detached resort properties along Fife Lake; and Blue Lake Township had resort properties primarily along the shores of Lake Manistee. Other townships in Kalkaska County had detached resort properties along the smaller lakes or along the Manistee River. The hunting and fishing clubs were not shown being alongside a large body of water. None of the clubs, all of which were in Kalkaska County, comprised over 1,000 acres.

Ramsdell's tax study in 1933 includes a graphical description of the assessed valuations of two of the five townships in Antrim County that Hedrick listed as having over 10 percent of their budgets comprised of assessments on recreational activities.⁷³ Torch Lake and Milton Townships were part of Ramsdell's research. Hedrick had found that Torch Lake Township had 22.7 percent of its budget borne by recreation facilities, and Milton Township had 11.3 percent of its budget dependent on outdoor recreation. Ramsdell's graphs show Torch Lake Township's properties had grown in valuation from 1920 to 1931, whereas Milton Township's assessments of property valuation remained stable. These townships "would have shown a decided economic decline had it not been for recreational development,"⁷⁴ Ramsdell concludes.

⁷³ Ramsdell's study, Township Government and the Exploitation of Timber and Wild Land Resources in Northern Michigan, has been reviewed previously in the literature review, pages 25 and 26. Torch Lake and Milton Townships were mentioned on pages 27, 28 and 30.

⁷⁴ Ibid., p. 30.

The pattern of outdoor recreational facility development in Antrim and Kalkaska County has been shown to have begun with a dependence on the water resources of the two counties. This manner of development apparently paralleled that of nearby Crawford County, which was studied by Clifford Humphrys in 1941.⁷⁵ He found that along streamways speculators held land that they intended to sell in small lots for private cabins or for hunting and fishing clubs. Relatively few cabins were then located out on the plains, and lakeside property development had reached stability. Humphrys found the same correlation between lake and stream frontage that has been described herein for Antrim and Kalkaska Counties. However, statistics on seasonal dwelling units that are given in the next section herein seem to indicate that the lakeside property development had not yet reached stability in the study counties in 1941.

Trends in Seasonal Dwelling Units

Seasonal dwelling units have been counted by the United States Censuses of 1940, 1950 and 1960 and have been reported in the Census of Housing for all three periods. These censuses reveal how the construction of seasonal dwelling units in both study counties boomed during the 20 years from 1940 to 1960. Table 15 depicts these seasonal dwelling unit figures, and reveals how Kalkaska County had a larger percentagewise increase than Antrim County during both decades. However, the absolute increase in dwelling units from 1940 to 1960 in Antrim County was greater than the increase in Kalkaska County by 550 units.

From the definitions given in the footnotes of Table 15 it is readily seen that the number of seasonal dwelling units given for each date are only approximate estimates of seasonal recreational dwellings. It is possible that some migrant worker dwellings, lumber camps, or other discrepancies such as double-counting are present in the figures. Nevertheless,

⁷⁵ Clifford Humphrys, "Land Use Criteria for Crawford County, Michigan" (unpublished M.S. thesis, Michigan State University, 1941), pp. 7, 8, and 50.

they represent the closest approximation that is possible to the trend in the recreational use of seasonal dwelling units, many of which are owned by out-of-county residents.

Table 15. Trends in Seasonal Dwelling Units, 1940 to 1960

	1940 ^a	1950 ^b	1960 ^c
<u>Antrim County</u>			
Number of units reported	856	1,206	3,122
Absolute increase over previous period	---	350	1,916
Percentage increase over previous period	---	14.1	258.9
<u>Kalkaska County</u>			
Number of units reported	145	786	2,152
Absolute increase over previous period	---	641	1,366
Percentage increase over previous period	---	542.1	273.8

^aIncluded in the 1940 statistics are the categories of the 1940 Census of Housing entitled, "Vacant units, for sale or rent—seasonal," and "Vacant units, not for sale or rent—seasonal." "The group 'vacant, for sale or rent' includes all vacant dwelling units available for occupancy, even though they were not actually offered in the housing market at the time of enumeration. Vacant dwelling units in buildings under construction are excluded; those in 'boarded-up' structures are excluded if they were beyond repair. . . ."

"The relatively small group classified as 'vacant, not for sale or rent' includes dwelling units neither occupied nor available for sale or rent at the time of enumeration because they were being held for absent households, and also dwelling units occupied temporarily by nonresident households. A nonresident household is one enumerated in the population census at a place other than its usual place of residence and reallocated to the home district. . . ." (Sixteenth Census of the United States: 1940; Housing, Vol. II, Part 3.)

^bIncluded in the 1950 statistics are the categories of the 1950 Census of Housing entitled, "Nonresident dwelling units" and "Seasonal and non-seasonal vacant units." "Nonresident dwelling units — A nonresident dwelling unit is a unit which is occupied temporarily by persons who usually live elsewhere. . . . The nonresidents were assigned to the dwelling unit at their usual place of residence." "Seasonal and nonseasonal vacant units — Vacant seasonal dwelling units are those intended for occupancy during only a portion of the year, and are found primarily in resort areas. In farm areas, dwelling units used for only a portion of the year to house

Table 15--Continued

migratory workers employed during the crop season are classified as seasonal. Similarly, vacant dwelling units in lumber camps were enumerated as seasonal. In resort areas, a dwelling unit which is usually occupied on a year-round basis was considered nonseasonal." (Census of Housing, 1950; Vol. I, Part 4.)

^CIncluded in the 1960 statistics are the categories of the Census of Housing: 1960 entitled "held for occasional use" and "seasonal" units. "The category tabulated as held for occasional use consists of vacant units which are for year-round occupancy and in either sound or deteriorating condition, and which are held for weekend or other occasional use. The intent of this question was to identify homes reserved by their owners as 'second homes.' Because of the difficulty of distinguishing between this category and seasonal vacancies, however, it is possible that some second homes were classified as seasonal and therefore are included in the category 'seasonal.' "Seasonal units are intended for occupancy during only a season of the year. Included are units intended for summer or winter recreational use, such as beach cottages and hunting cabins; units held for herders, loggers, and cannery workers; and units intended for migratory workers employed in farmwork during the crop season. . . ."

"Essentially the same definitions were used in the 1950 Census. In 1950, however, units which were temporarily occupied by persons having a usual residence elsewhere (classified as 'nonresident' units) were shown as a separate category and, although they were treated as vacant units, they were not classified by year-round or seasonal use as in 1960. It is believed that most of the 'nonresident' units in 1950 would have been classified as seasonal." (Census of Housing: 1960; Vol. I, Part 5.)

Ownership Changes in Eastern Antrim County from 1924 to 1939

Andrews and Bromley studied changes of ownership classes from 1924 to 1939 in four counties of northern Michigan.⁷⁶ The eastern two-thirds of Antrim County was included in their study area. Table 16 repeats the changes that they found had taken place in the wild land zones in eastern Antrim County.⁷⁷

⁷⁶Trends in Land Use in Northern Michigan: A Study of Alpena, Antrim, Ogemaw and Roscommon Counties, previously reviewed on pages 27 and 28.

⁷⁷Ibid., p. 15.

Table 16. Changes in Land Ownership in the
Wild Land Zones of Eastern Antrim County

Ownership Classification	1924		1939	
	Acres	Percent	Acres	Percent
State land	015	0.2	28,305	15.9
Federal land ¹	0	--	11,880	6.7
Large private land ²	85,015	47.7	79,380	44.5
Small private land	36,630	20.5	30,310	17.0
Land in crops	56,285	31.6	28,405	15.4
Hunt clubs, etc.	0	--	0	--

¹Federal land was later transferred to control of the State of Michigan.

²The division between large and small ownerships was 5,000 acres.

The above statistics for the eastern two-thirds of Antrim County are the only ones that were found for any section of the two study counties that pertain to the change in land ownership over time. Table 16 depicts a fact previously mentioned in the literature review, that by 1940 the large private landholdings had not yet begun to be broken into more fragmented parcels. Yoho and Schallau have both written how this fragmentation came in the 1940's and in the 1950's.⁷⁸ The rise in acres of public land due to tax forfeitures and the reduction in the land area devoted to crops has been pointed out previously in this chapter. It is particularly noticeable that eastern Antrim County did not have any hunting or fishing clubs by 1939. These clubs were prevalent in the northeastern counties of Michigan's Lower Peninsula.

Employment Changes from 1940 to 1960

The trends in employment from 1940 to 1960 for the two study counties reveal the increasing losses in employment stemming from lumbering operations and from agriculture, and depict how workers have shifted to jobs in

⁷⁸Refer to the literature review, Chapter 2, pages 28 to 32.

manufacturing and construction and in government and professional services. The total working force in 1960 was slightly larger in Antrim County than the 1940 working force, and was slightly smaller in Kalkaska County. The rise in construction and service employment is characteristic of resort communities and communities which cater to the needs of many seasonal visitors. Table 17 vividly describes the importance of the tourist and seasonal visitor (many of whom are nonresident landowners) to the economy of the study counties.

Table 17. Components of Employment Changes, 1940 to 1960^a

Source of Employment	Antrim County			Kalkaska County		
	1940	1960	Percent Change	1940	1960	Percent Change
Manufacturing (except lumbering and food processing	253	753	+197	18	260	+1,344
Lumbering and forestry	210	104	-50	128	101	-21
Food processing	23	131	+469	5	28	+460
Agriculture	1,553	684	-56	770	161	-79
Wholesale and retail trade	304	457	+50	101	193	+91
Government and other services	360	545	+51	157	240	+53
Medical and other pro- fessional services	190	383	+102	74	145	+96
Transportation, com- munications, utilities	113	113	-	37	50	+35
Contract construction	190	383	+102	66	129	+95
Total	3,085	3,202	+4	1,355	1,307	-4

^aTaken from U. S. Department of Commerce, Office of Business Economics, Growth Patterns in Employment by County, 1940-1950 and 1950-1960 (Washington: Government Printing Office, 1965). Table 7 (13), No. 5 and No. 40, pp. 7-2 and 7-14.

Recent Mention of Nonresidency

The most recent sources which include mention of nonresident landowners are the Overall Economic Development Plans that were written in

both counties so that they would qualify for funds under the Area Redevelopment Act. These plans were written in the early 1960's.

The Kalkaska County plan mentioned nonresidential ownership only in a brief comment: "Private land is now equally divided between local and absentee owners, with uncertain plans for the future."⁷⁹ The only specific land use problem that could be related to the presence of non-residential landholdings in the county was stated in the following quote.

The development of ranch-type livestock feeding programs may be feasible. Terrain, soils and abundant water suggests this type of activity, which is currently handicapped by the pattern of small tracts per owner and the lack of venture capital for expansion.⁸⁰

Another problem mentioned in the Kalkaska County OEDP that was ap-
purtenant to the visits by tourists to the area, among which would be non-
resident landowners, was the following:

Kalkaska County has several good motels, cabins, hotels and resorts, with restaurants, drive-ins and lunch counters serving tourists. Its merchants supply most tourist needs but it appears that many of retail and service business employees need promotional training and especially in the area of local public relations.⁸¹

The Antrim County OEDP had more included about nonresidents of the county. It recognized that the shorelines of its lakes and streams were "becoming more valuable by the day for cottage and home sites," and that

⁷⁹"Overall Economic Development Program for Kalkaska County," Arthur A. Hagman, General Chairman; and Foster McCool, Vice Chairman; n.d., pp. 2-3.

⁸⁰Ibid., p. 3.

⁸¹Ibid.

The Kalkaska County OEDP also mentions on page 2 that "40% of the county" was in public ownership. With 60 percent of the county lands in private ownership, according to the OEDP estimate 30 percent of the total area of the county would have been owned by local people and 30 percent owned by nonresidents. These figures correspond generally with those found during the conduct of this research, and which are included in Table 9, page 67; and Figure 1, page 68. Not counting the nonresident lands of

"the valuation of such property becomes of increasing economic importance to the welfare of the County."⁸² Recommendations were made to construct "roads to open up new lake property,"⁸³ to begin a "directory of property owners—permanent and summer residents, addresses of summer folks, vocations and avocations, for better rapport throughout the county,"⁸⁴ for the "formation of an 'Antrim County Financial Authority' [with] [m]oney to be raised through potential of summer residents,"⁸⁵ and the establishment of "an Antrim County civic organization, consisting of all interested summer residents and local civic leaders to exchange and broaden our ideas in administering our County."⁸⁶

A specific problem mentioned in the Antrim County plan that might have been taking place on many nonresidential landholdings involved the physical deterioration of the area:

Some of our farms, abandoned or not used because of declining markets have become an eyesore to our countryside. This could lead to a wrong impression of our overall picture for progress. The Village of Antrim, on U.S. 131, somewhat abandoned with the closing of the Antrim Iron and Lumber Co., many years ago, should be rehabilitated, at least esthetically, as one of our worst deteriorated sections.⁸⁷

Summary

This chapter first presented a quantitative description of the amount

under ten acres, the statistics reported herein list 41.9 percent of the county's total land and water area in public ownership (including some county lands), 29.7 percent owned by nonresidents, and 26.8 percent owned by local people or nonresidents who owned plots of under ten acres.

⁸²"Overall Economic Development Plan for Antrim County, Michigan." Antrim County ARA Committee, Edwin Loomis, Chairman, April 1962, p. 5. (Mimeographed.)

⁸³Ibid., p. 19.

⁸⁴⁻⁸⁶Ibid., p. 18.

of nonresident land of ten acres or over that was tallied from county tax rolls. In Antrim County, 26.6 percent of the land and water area was found to be owned by absentee landowners of ten or more acres. In Kalkaska County, the nonresidents were determined to own 29.7 percent of the total county area. These percentages of nonresidential land are surprisingly close when one considers the vast differences in the number of acres of water, public lands, and farms in the counties.

Following the statistical presentation of the land ownership and use in the counties, a qualitative discussion was given in which each of the natural resources of the counties were described. Differences in the amount and type of water resources, forest resources, and wildlife of the counties were pointed out.

Finally, this chapter gave a review of the major historical trends of the two counties from the time of their settlement just over 100 years ago to the present. Lumbering activities and agricultural land use provided the mainstay of the economies of the counties until the first or second decades of this century. At that time, recreational activities, which had been growing in importance since the 1880's, assumed more and more importance to the counties. These recreational activities shifted from dependence upon lake steamers and railroad tours to more diversified outdoor interests after the state highways reached the counties in the early 1920's. Summer homesites then began to increase, and since 1940 the number of summer residences in the counties has increased over five times. Shifts in employment in the counties from 1940 to 1960 reflect the increased construction activities associated with these summer homes, and the need for additional services to take care of the needs created by the rise in tourism and nonresidential ownership.

The character of the statistical and historic sources from which this chapter has been dependent has not made it possible to completely evaluate the role that nonresidential ownership of land and facilities played in the various stages of the county histories. The nonresident has never been

singled out specifically for study. Reports mention the amount of non-residential landownership only in passing, include nonresidential ownership within other categories of owners, or don't delineate absentee owned interests at all.

CHAPTER V

ANALYSIS OF QUESTIONNAIRE RESPONSES

Introduction

Included in this chapter is an analysis of responses to the written mail questionnaire used in this survey on a question-by-question basis. Following the discussion of the returns to each question, the answers to a few selected questions are studied for five categories of townships. The grouping of townships was based on similarities in the amount of water in lakes and ponds, amount of agricultural land, and amount of public land or large nonresident landholdings of over 5,000 acres. The tables of Appendix B contain the complete frequency distributions of alternative responses to each question. The statistics which show the method of classifying townships and the breakdown of alternative answers to selected questions comprise Appendix C.

Description of Computer Programs

After all usable questionnaires had their information coded onto Data Coding Forms and then punched onto IBM cards (as described on pages 56 and 57), computer programs were written to yield the following information:

1. Computer Program One. The frequency distributions of replies to Questions 2, 10, 11 and 12 were printed out for each county, and for those few respondents who owned land in both Antrim and Kalkaska County. These four questions pertained to the occupation of the respondents; the types of assistance they desired; whether or not they were Cooperators with the Antrim or Kalkaska County Soil Conservation District; the types of past assistance received; and from which agencies the past help, if any, had been received.
2. Computer Program Two. This program gave a frequency count for each

of the questions not included in the first computer program. Total acreage figures were printed out for Questions 3 through 5. All of the questions analyzed by this program were broken down to the township level. An analysis was also included in this program for those respondents who owned land in two, three, four or five townships.

3. Computer Program Three. The need was met by this program for a separate breakdown of replies to the questions included in Computer Program Two for those who owned land in more than one township. Three sections were included in this program: one gave results for owners in two to five townships in Antrim County, another for Kalkaska County, and the third section for owners of land in both counties.
4. Computer Program Four. This program yielded a list of the questionnaire numbers of those questionnaires that included written comments of particular note in the free spaces following questions with check lists or in the space reserved for general comments on the final page of the questionnaire. The questionnaire numbers of those returned questionnaires which had the name of the respondent included as a part of Question 10 were also listed. These names were written voluntarily by respondents who wanted to receive further information about types of assistance mentioned in Question 10.
5. Computer Program Five. This program printed out the various responses to the same questions included in Programs Two and Three, except that the analysis was broken down into the categories of home addresses instead of the townships in which the nonresidents owned land.

Reasons for Selection of the Computer Programs

None of the computer programs that were selected were involved with statistical analysis such as regression analysis or Chi Square tests. With the exception of Computer Program Four, all of the programs were limited to totaling frequency counts for alternative means of answering

questions, or to totaling acreage figures. Reasons for this limitation were threefold.

First of all, the financial resources allocated for this survey were used for the most part in the trips required to record the 2,111 names of nonresidents from the tax rolls, and in printing and mailing the questionnaires. The funds remaining for the computer analysis after these initial expenses were not sufficient for a thorough statistical analysis by computer.

Also a consideration was the fact that several County Resource Development Agents in the northern part of Michigan had expressed a desire to use a similar mail questionnaire, coding procedure, and computer technique to conduct a survey of absentee landowners in their counties. To promote the ease in understanding of the computer programs by other potential users, the researcher decided to have programs written with headings printed near each set of data. This type of computer program had a more understandable format than the prearranged tabular programs which include the statistical correlations but have no written headings.

Lastly, the researcher was interested in correlating the replies to certain questions about ownership, acquisition and land use with the characteristics of a similar group of townships. It was decided that these efforts would suffice as a substitute for the mathematical correlations. In describing the results of many questions in the following pages, there are references to the historical trends mentioned in the prior chapters. The pattern of replies for different geographic groupings have logical explanations that are also referred to in the literature review and in the background of the study counties. These historical and geographic correlations are believed sufficient to arrive at some general conclusions regarding nonresidential ownership of land in the two study counties.

Method Used to Present and Analyze Responses

The pages to follow in this chapter report the results of the computer analysis on an item-by-item basis, starting with the breakdown of home

address information and then proceeding from Question 1 to Question 13. The findings obtained by classifying the townships of the study counties into five categories and comparing the replies of the different categories are then presented. The final part of this chapter includes a discussion of the types of comments that were written on the final page of the questionnaire. A few representative comments have been quoted.

The reader must refer to the tables of Appendix B for the complete frequency distribution of the various ways respondents answered each question. Summary tables are inserted at appropriate junctures in the text to emphasize the more important concepts.

Attempts are made to hypothesize within the discussion of many questions why the responses were characterized by certain patterns and groupings. Other hopefully explanatory comments pertain to the synopsis of more than one question, and have been mentioned in the discussion of the questions or left for the summary section of the chapter.

It should be understood what the percentage figures in Appendix B and in Appendix C (which are repeated in the text) have been based upon. For all separate questions and for the analysis of postmarks to derive home address information, the number of no responses was subtracted from the total number of returned questionnaires for each county, for both counties and for the total number of returns. Therefore, the analysis of each question in Appendix B is based upon the actual number of responses to each question and not upon the size of the total sample.

Most of the questions studied in Appendix C are questions that were constructed with a check list of answers following the questions and a space provided for a free answer below the check lists. Any respondent could check one or more of the items on the check lists, and he could also include his own written answer in the free answer space below each check list. For the questions considered in Appendix C, the total number of checks to all alternatives of each question was determined for each of the five groups of townships. The percentage figures in Appendix C listed

below each township category indicate the way respondents answered each item on the check lists. Therefore, these percentages are based upon the total number of checks and not upon the total number of respondents to each question. For the analysis of each question the columns of percents below each classification of townships totals 100 percent.

Analysis of Home Address Postmarks

Home address information was obtained from the return envelopes that respondents were provided to send back their completed questionnaires. The coding procedure involved dividing Michigan into the ten regions shown on Map 3, page 114. In addition, six out-of-state regions were formulated. These are listed in the marginal information of Map 3.¹

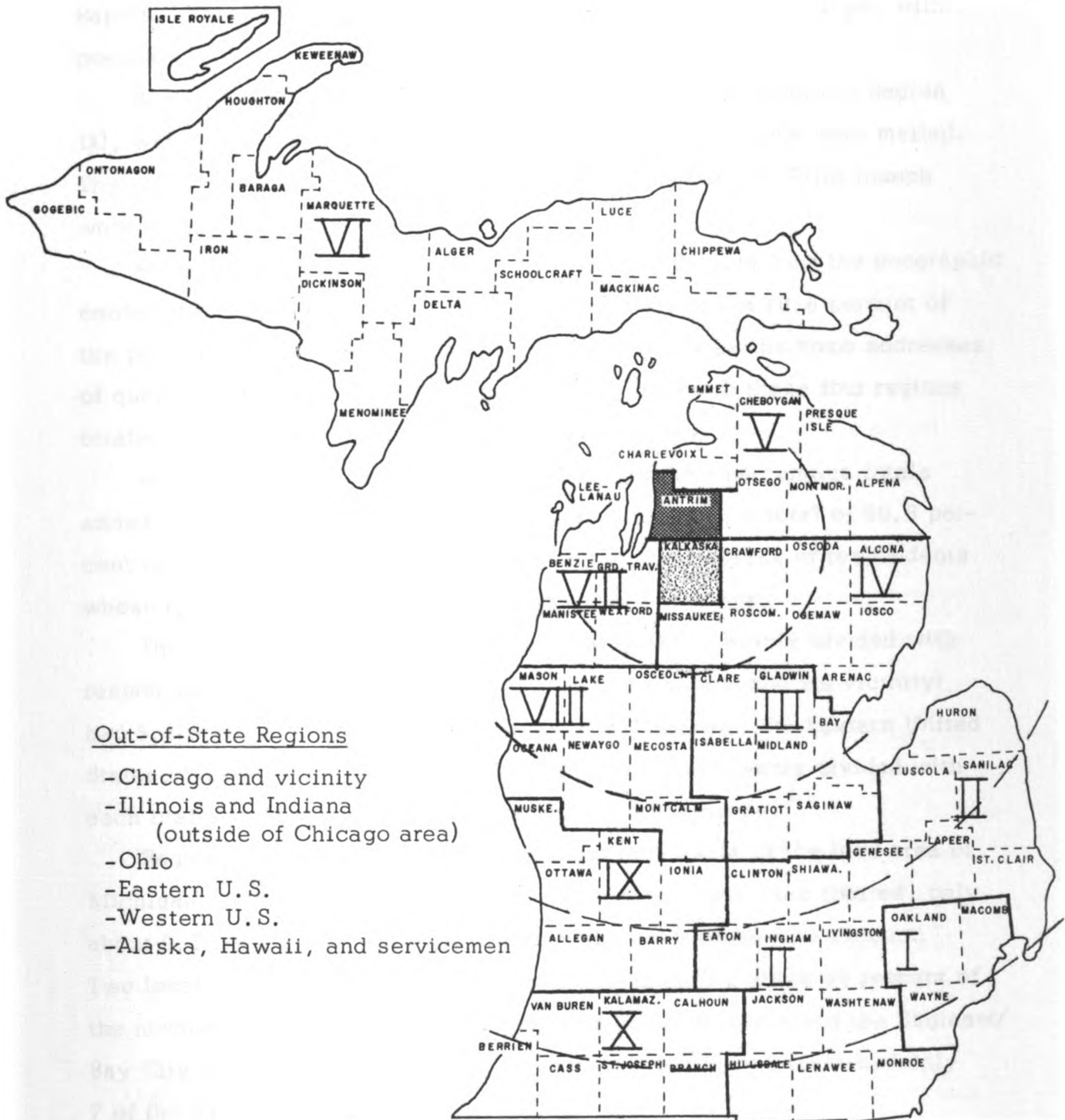
Region I (which included Detroit, Pontiac, and the remainder of the Tri-County Region of Wayne, Oakland and Macomb Counties) accounted for 37.9 percent of the 919 returned envelopes that had a stamped postmark.² Responses from Detroit made up 30.5 percent and the other parts of Region I comprised 7.4 percent of the total.

The origin of 17.7 percent of the analyzed postmarks was within Region II, which included the cities of Lansing, Ann Arbor, Flint, Jackson and Port Huron. These cities had 10.6 percent of the total analyzed postmarks.

The region with the third largest number of respondents was Region IX,

¹In determining the boundaries for the ten regions in Michigan, two references were used. These were (1) the map published by the Michigan Department of Highways, Average 24-Hour Flow on the Trunkline System, 1965, and (2) the 1960 Census of Population listing of Standard Metropolitan Statistical Areas in Michigan. (U.S., Bureau of the Census, Vol. I, Characteristics of the Population: Part 24, Michigan (Washington: U. S. Government Printing Office, 1963), pp. 323-324.)

²Postmarks were not stamped on the envelopes used for 54 of the 973 total returned questionnaires. Therefore, 919 questionnaires that had postmark information were analyzed.



Map 3. Home Address Regions

a six-county region which encompassed the cities of Muskegon and Grand Rapids. This region had 8.8 percent of the 919 returned envelopes with postmarks.

Region X, in the southwest corner of the state (just south of Region IX), was the region from which 6.2 percent of the postmarks were mailed. The cities of Battle Creek, Kalamazoo, Benton Harbor and Saint Joseph were in Region X.

All four regions mentioned above are over 100 miles from the geographic center of the study counties. They comprised a total of 70.6 percent of the postmarks, which were interpreted in this study as the home addresses of questionnaire respondents. The urban postmarks in these four regions totaled 49.2 percent of the 919 analyzed postmarks.

When the six out-of-Michigan regions had their percentage totals added onto this 70.6 percent from southern Michigan, a total of 90.8 percent of the postmarks were considered as being addresses of respondents whose home was over 100 miles from the study counties.

The six regions outside of Michigan were fairly evenly divided with respondents. Illinois and Indiana (outside of Chicago and its vicinity) had 5.1 percent; Chicago and vicinity had 2.1 percent; the Eastern United States, Western United States and Ohio were almost evenly divided with each claiming about 4 percent of the analyzed postmarks.³

Regions III through VIII comprise about two-thirds of the land area of Michigan. When the responses from these six regions were totaled, only about 9.2 percent of the analyzed postmarks were taken into account. Two localities of these northern regions accounted for about 40 percent of the northern postmarks: Traverse City had 19 respondents and the Saginaw/Bay City area had 17 respondents. The entire Upper Peninsula had only 7 of the 84 northern Michigan postmarks.

³The Mississippi River was used as the dividing line between the Eastern and Western Regions.

Appendix Table B-1 reveals that there are some differences in the pattern of home addresses between absentee landowners of Antrim and Kalkaska Counties. Of notable significance is the fact that Antrim County had 10.8 percent more of its postmarks originating from within Region I. The Kalkaska County respondents were characterized by having more postmarks from all other regions in Michigan besides Region I. Nonresident postmarks from out-of-state, when considered as one group, were almost equally divided between absentees of the two counties. However, when the out-of-Michigan postmarks were subdivided into the six regions, then Antrim County was seen to draw more heavily from the vicinity of Chicago, the Eastern United States, and the Western United States. Kalkaska County had more nonresidents coming north from the three border states of Indiana, Ohio and Illinois.

Table 18 summarizes the breakdown of home address postmarks.

Table 18. Summary of the Analysis of Home Address Information

	Total Post- marks	Percent of Postmarks				
		Tri- County	Else- where Southern Michigan	Out- of- State	Total Over 100 mi.	Northern Michigan
Antrim	439	43.5	28.5	21.3	93.3	6.7
Kalkaska	474	32.7	36.5	19.3	88.5	11.5
Both	6	33.3	50.0	16.7	100.0	0.0
ALL	919	37.9	32.7	20.1	90.8	9.2

Question-by-Question Analysis

Individual and Group Ownerships

Generally speaking, almost an eight to one ratio of individual owners to group owners was discovered. Appendix Table B-2 shows that the divergence of each county from this ratio was not great. There was only a rise to 8.6 in the individual to group ratio for Antrim County, and a drop

to 7.2 in Kalkaska County's ratio. The average ratio for all respondents was 7.8. Trustees and persons who checked both the "individual" and the "group owner" alternative answers were not included in the ratio calculations. Table 19 highlights this information.

Table 19. Summary of the Analysis of
Individual and Group Ownerships

	Total Anal.	Indiv. Owners ¹	Group Owners	Ratio Ind./Grp.	Both or Trustee
Antrim	468	413	48	8.6	7
Kalkaska	496	430	60	7.2	6
Both	6	5	1	5.0	0
ALL	970	848	109	7.8	13

¹Husband and wife ownerships were considered as individual ownerships.

Occupation of Respondents

The major categories of occupations were taken from the 1960 Census of Population, Alphabetical Index of Occupations and Industries, that has been referred to on page 58 in the discussion about methodology. Appendix Table B-3 summarizes the responses to the occupation question.

Antrim County absentee owners were noticeably more prone to be professional and technical persons, craftsmen and foremen, and housewives or widows. Kalkaska County respondents particularly exceeded, on a comparative basis, Antrim County's percentages for the farmer and farm manager category, laborer classification, "factory" employees, and the retired classifications.⁴

⁴It was necessary to supplement the major categories of occupations given in the census publication by adding categories to include persons who merely indicated their occupation as "factory worker" or "worker in automobile plant," etc. These responses were included in the "factory worker" classification. Other categories had to be added to include those indicated they were retired, were students, or were in the Armed Forces. Widows were included along with housewives in another added category.

The greatest divergence between the counties was in the retired category: Antrim County had only 10.9 percent of its respondents to the occupation question listing retirement, while Kalkaska County respondents who indicated they were retired totaled 17.2 percent. The most noticeable differences are given below in Table 20.

Table 20. Summary of the Analysis of
Major Groups of Occupations

	Total Anal.	Percent of Total Analyzed		
		Group A ¹	Group B ²	Group C ³
Antrim	402	49.3	20.1	30.6
Kalkaska	425	38.6	29.9	31.5
Both	5	60.0	40.0	0.0
ALL	832	44.0	25.2	30.8

¹Includes the professional and technical; craftsmen and foremen; and housewives and widows categories.

²Includes the farmer or farm manager, laborer, "factory worker," and retired categories.

³All other categories of occupations are included; i. e., clerical workers; managers, officials, and proprietors; sales workers; operative workers; service workers; students and servicemen; and those other occupations whose category could not be ascertained from the response.

The breakdown of occupations by major groups points out that Antrim County had more absentee owners in the higher paid classifications and more housewives and widows. The analysis of postmarks, summarized in Table 18, has given figures which have shown that more nonresident landowners of Antrim County had home residences in the urbanized Tri-County area surrounding and including Detroit. These address and occupational differences are believed to be related to the higher prices of land in the

resort area surrounding the major lakes in western Antrim County.⁵

Acres Owned and Fenced or Posted

The total number of acres owned by nonresident landowners who responded to the questionnaire was surprisingly close for the two study counties, for there was only 200 acres difference in the total acreage figures of both counties.⁶ The overall average amount of land owned by all respondents was 88.9 acres per owner. The average size of owner-ships in Antrim County was higher than in Kalkaska County by about six acres.

A noticeable dissimilarity in the amount of fenced or posted land was discovered. Kalkaska County had 14,100 acres of the 25,500 total acres that were fenced or posted in both counties, or 3,600 more acres than Antrim County. Between one-fourth and one-third (26.9 percent) of the acres owned by all respondents were fenced or posted. The average size of fenced and posted lands per owner exceeded the average size of all lands by 27 acres. This larger average size for fenced or posted lands was extremely affected by the few large holdings in the northeastern townships of Kalkaska County that were owned by hunting clubs or other groups who had their lands fenced or posted. The average size of fenced or posted lands in Antrim County was only 3.7 acres greater than the 90.2 acres which was the average size of all ownerships in that county. The average

⁵It was noticed during the recording of names from tax rolls that many of the landholdings in the resort districts of the two counties were in the name of women. The researcher was informed by the County Treasurers that the wife's name was often listed on the title to the land to protect it from any lawsuits the husband might become involved in.

⁶Kalkaska County had a total of 109,000 acres of nonresident lands recorded compared to Antrim County's 88,700 acres recorded. However, 17,700 acres of Kalkaska County's recorded acres were owned by a power company, which did not receive a questionnaire. Total acres owned by recipients of a questionnaire were 91,300 for Kalkaska County and 88,700 for Antrim County, or 2,600 acres difference.

size of fenced or posted land in Kalkaska County was 52.4 acres above the 84.5 acres which was the average size of all ownerships in that county.

Insofar as the number of respondents with fenced or posted lands was concerned, Antrim County had relatively more owners who had at least some of their land fenced or posted. Of the 468 respondents who held land in Antrim County, 113 (or 24.1 percent) had fenced or posted land; of the 496 respondents from Kalkaska County, 103 (or 20.8 percent) had any land fenced or posted. In summary, Antrim County had more owners with fenced or posted land and a smaller average size of fenced or posted land per owner, whereas Kalkaska County had ten fewer respondents with fenced or posted lands, but had 3,600 more acres of fenced or posted land.

The 86,200 acres represented by the response of 970 persons was 47.9 percent of the nonresident lands whose owners were mailed a questionnaire, and 43.6 percent of all the nonresident land over ten acres that was recorded from the tax rolls. The acres owned by respondents was 18.7 percent of the private rural land in the two counties, 12.9 percent of the total land and water area, and 13.0 percent of the total land area in the two study counties.⁷

Table 21, on page 121, includes the statistics of total acres owned by respondents and the amounts of fenced or posted lands.

The nonresident owned lands of Kalkaska County were of a smaller average size per owner than the nonresident lands of Antrim County. However, the average size of farms in Kalkaska County has a long history of being greater than the average size of farms in Antrim County. The author's hypothesis for the smaller size of nonresident lands per owner in Kalkaska is that the average size of lands in Kalkaska County was affected by the irregular and broken pattern of state land interspersed among

⁷ See pages 63 through 66 for what lands are included as private rural lands, the procedure used to determine the amount of these lands, and the sources of information for land and water areas.

private land in many townships. Rapid River Township, Township 28N, 7W, had only 45.8 acres per respondent to the questionnaire, and had only 49.9 acres per owner recorded from the tax rolls. Map 3, page 114, depicts this township with a very segmented pattern of state forest land. Blue Lake Township, Township 28N, 5W, was another township with intermingled state and private land. Landholdings of respondents in Blue Lake Township averaged 59.4 acres. The tendency was constant for other townships with irregular outlines of state land to have smaller average sizes of land owned by nonresidents.

Table 21. Summary of the Analysis of
Acres Owned and Fenced or Posted

	Antrim	Kalkaska	Both Counties	Total
Total analyzed questionnaires	468	496	6	970
Acres owned by respondents	42,300	42,100	1,800	86,200
Average acres per owner	90.4	84.8	300.0	88.9
Acres owned by all who were sent a questionnaire	88,700	91,300	--	180,000
Number of owners sent a questionnaire	987	1,124	--	2,111
Average size per owner sent a questionnaire	89.9	81.2	--	85.3
Acres fenced or posted	10,500	14,100	900	25,500
Number of respondents with fenced or posted land	113	103	3	219
Average size of fenced or posted land	93.9	136.9	300.0	116.4
Percent of respondents with any fenced or posted land	24.1	20.8	50.0	22.6
Percent of all acres owned by respondents that was fenced or posted	24.8	33.5	50.0	29.6

Methods of Acquiring Land

Appendix Table F-5 includes figures describing the acres of land obtained by various methods of acquiring land, the number of respondents that received land by each of these means, and the average size of lands per owner that was acquired by each method. The most significant fact revealed by Appendix Table B-5 is that 79.3 percent of all the nonresidential land represented by the questionnaire response was purchased from a private individual or firm. The two counties had a somewhat different allocation of the total amount of acres and the total number of owners who acquired land by each method. Kalkaska County had only 73.6 percent of the responded acres purchased from a person or company, whereas Antrim County had 84.2 percent so obtained. This relative difference of 10.6 percent was offset by Kalkaska County respondents having acquired relatively more land by gift, the "other method(s)" category, and especially by the amount of land bought from the State of Michigan. Over 10 percent of land owned by nonresidents of Kalkaska County (excluding the power company that did not receive a questionnaire) was purchased from the State. Only 2.3 percent of the land owned by absentees in Antrim County was purchased from the State.⁸

Acres acquired through inheritance represented the second-most important way of gaining title to land, and included 9 percent of the responded acres from both counties. Lands purchased from the State were 6.3 percent of the total acres; 3.4 percent of all acres were acquired by "other method(s)"; and only 2.4 percent were received as a gift.

The average size of acres acquired per owner was greatest for purchased lands, with the exception of the state land purchases which were

⁸A total of 34 nonresidents of Kalkaska County had bought 4,320 acres of state land. In Antrim County, 24 respondents had purchased state land totaling only 970 acres. Once again, the significance of a few large group owners in Kalkaska County's northeastern corner to the average figures is pointed out. One such group ownership bought 2,500 acres at a public auction of state land in 1929 and the early 1930's.

so influenced by a few group-owner transactions in Kalkaska County. Purchased lands averaged 87.0 acres, inherited lands 74.3 acres, lands transferred by gift 46.2 acres, state lands 90.3 acres, and the "other" category averaged 72.4 acres.

Reasons for Purchase

The respondents who indicated they had purchased land were asked to check the "reason or reasons that were most important in influencing the purchase decision of you or your ownership group." The "BETTER HUNTING AND FISHING" response was checked by 33.8 percent of the respondents to the question, and was the first-ranking response. Next in line was the check answer, "You wanted to RETIRE in the county." This alternative received a check mark from 30.1 percent of the respondents to the question. The "LAND PRICES WERE MORE REASONABLE" and the "FOREST PRODUCTS" check answers had a response from about one of every four respondents. Appendix Table B-6 presents the complete breakdown of replies. Listed below are the rankings of responses for each county.

Table 22. Rankings of Reasons for Purchasing Land Checked by Respondents of Each County

Group	Antrim		Kalkaska	
	Alternative Answer	Percent Respondents	Alternative Answer	Percent Respondents
I	"Other" category . . .	32.2	Hunting/Fishing	38.4
	Retirement	30.3	"Other" category . . .	32.3
	Hunting/Fishing . . .	29.3	Retirement	30.1
II	Forest products	25.8	Prices	25.3
	Prices	23.1	Forest products	24.5
	Resorts, other recreation besides hunting		Public areas	21.2
	and fishing	17.6	Resorts, other recreation besides hunting	
	Public areas	15.7	and fishing	11.9
III	Always wanted to own land in the county . .	15.4	Always wanted to own land in the country . .	10.2
	Bought when a resid. .	10.4	Highways better or	
	Highways better or		closer to home	7.0
	closer to home	5.9	Bought when a resid. .	5.9
	Agricultural use . . .	2.7	Agricultural use	2.4

The reasons in each of the three groupings above are the same within each group, but the order is different in every group. The explanation for these different rankings, as hypothesized by the researcher, are as follows:

The first group of three alternative responses points out that hunting and fishing and retirement were the most important reasons for buying absentee land. The widest divergence in the percents of responses for each alternative reason for purchase was in the "HUNTING OR FISHING" alternative. Kalkaska County had 9.1 percent more of its respondents who checked hunting or fishing. This was to be expected, since it has already been mentioned in the background chapter that:

1. Kalkaska County has more state land and other wild lands where there is access to hunting land, and Kalkaska County has recently had more deer hunters per square mile than Antrim County.⁹
2. Kalkaska County had a slightly lower ratio of individual to group owners.¹⁰ Group owners often have hunting and fishing uses as a primary intent of ownership. It was to be expected that Kalkaska County respondents, with more group owners included, would have more hunting and fishing uses.

The "other" category and the "retirement" category were accountable for almost exactly the same percent of responses in both counties. Included in the "other" category were written responses that mentioned reasons for purchase such as investment, mineral use, construction of manufacturing or business enterprises, recommendations by friends or relatives, good climate and scenery, escape from crowded city conditions, and other reasons.

The arrangement of choices in the second group of alternatives seems to have a relative sequence that is logical for each county. The first two

⁹ Refer to the sections on state lands and wildlife in Chapter IV.

¹⁰ See Table 19, page 117.

alternatives, prices and forest products, are in inverse order on each county's list. Forest products are logically higher on Antrim County's list since that county has the more abundant hardwood forests: better prices were checked more often by Kalkaska County's respondents probably because Kalkaska County has fewer miles of expensive lakefront sites such as those which line the "Chain-of-Lakes" resort and water sports region in Antrim County.

The second pair of alternatives in Group II (concerning public areas and resort and recreation uses besides hunting and fishing) are also in opposite sequence on the list for each county. This was expected in view of the fact that Antrim County has the majority of the resort areas and large lakes, and Kalkaska County has over three times more public land than Antrim County. As a result, Antrim County respondents mentioned resorts or other recreation besides hunting or fishing almost 6 percent more than Kalkaska County respondents. Kalkaska County purchasers of land indicated the influence of nearby public areas 5.5 percent more frequently than Antrim County nonresidents who had bought land.

The final set of four alternatives, Group III, seems to be best explained by the population of the counties and by their location. Table 12, page 93, depicts statistics which show that Antrim County has consistently had over two times the population as Kalkaska County. It was to be expected, therefore, that respondents who owned land in Antrim County answered more frequently in the spaces provided alongside the alternatives "PURCHASED WHEN YOU WERE A RESIDENT OF THE COUNTY" and "You grew up in the county and had ALWAYS WANTED TO OWN PROPERTY THERE." Kalkaska County is the closest to southern Michigan and the out-of-state regions that Table 18, page 116, has shown as the home address locations of 90.8 percent of all respondents. The slightly higher percent of respondents indicating that highways or closeness to their home influenced their purchase decision was logical for Kalkaska County nonresidents. Agricultural uses were the purchase reasons given the fewest times for

both counties. This was expected due to the fact that tenant farming or ownership of farms by persons "not residing on farm operated" accounted for only 4.4 percent of the farms in both counties in the 1964 Census of Agriculture.¹¹

In summary, the reasons for purchase of land by nonresidents from each county in Table 22 on page 123 points out that the recreation and retirement reasons were foremost influences on the purchase decisions forest products and prices were secondary reasons and former residence in the counties, closeness to home address, better highways, and agricultural uses were among the least significant influences.

Length of Time Spent on Property

Question 7 asked respondents to indicate the number of days they spent on their property during each quarter of the year. Of the 973 respondents to the entire questionnaire, 842 indicated the amount of time they spent on their land in the spaces provided.¹² A total of 27,201 days were spent on the land by these 842 respondents. Almost one-half of these days, or 12,588 were included in the "July, August, September" period. The second and fourth quarters each had roughly one-fourth of the total days of visits; the second quarter accounting for 6,862 days and the fourth quarter for 6,429 days. The January through March months only received 1,322 days of visits from absentees.

Antrim County respondents were prone to list more days in the July through September period, whereas Kalkaska County respondents had a

¹¹See Footnote 8, page 66.

¹²Group owners were not requested to answer this question, but about one-third of them answered anyway. Altogether there were 133 respondents who did not indicate the number of days they spent on their property during any of the four quarters. About one-half of the nonresponse was from the group owners, and 73 questionnaires had the spaces behind each quarter for the response left completely blank. It was not possible to tell if the blank questionnaires of individual owners were from nonrespondents, or if the respondent meant to imply that he did not visit his land at all. See page 59 for mention of this shortcoming in questionnaire construction.

somewhat more even distribution of total days of visits among the four quarters. The total number of days respondents visited their property was higher in Kalkaska County than in Antrim County for the first, second and fourth quarters.

The average number of days spent by respondents to each quarter was highest in both counties for the third quarter, when 23.6 days was the average length of visit. The second quarter visits were next in line, with an average per respondent of 15.6 days spent on the property during that period. The fourth and then the first quarters followed, with an average per respondent of 13.5 days and 7.6 days of visits respectively.

The differences described above between the two study counties apparently reflect the greater use of Antrim County for water-based activities during the third quarter and the larger number of deer hunters in Kalkaska County during the fall deer season. Appendix Table B-7 summarizes the data referred to above. Of particular note is the final row of this table, which shows the pronounced significance of the average number of days of visits during the third quarter when the total number of 973 respondents is divided into the days visited the nonresident land during each quarter.

Time of Title Acquisition

The respondents to Question 8 who indicated they had owned land less than ten years comprised 60.1 percent of the respondents. Another 26.4 percent indicated they acquired property from 1945 to 1954. It is seen from Appendix Table B-8 that for each successive time period further and further from the time of the survey, fewer and fewer respondents had acquired property.

There are some important divergencies between the time tables of acquisition for the two study counties which apparently can be explained by past occurrences. Antrim County had less than 1 percent of its respondents who had acquired their land before 1920, whereas Kalkaska County had 4.1 percent who acquired land during that period. This most

likely reflects the earlier purchasing of state lands in Kalkaska County.¹³ By 1930, however, Antrim County had tax reverted acres transferred to the state, and the percentages of questionnaire returnees for each county who had held their land since the 1920 to 1929 period was about evenly distributed among the two counties.

In addition to early purchases of state land, it should be remembered that numbers of farms in both counties began to decrease in number from the 1920 census up to the present, with the exception of the 1930's. Table 12, page 93, has shown this trend. A few who were farmers and were forced to abandon their farmland have continued to pay the property tax over the years and retain their lands.

A further comparison of the length of tenure of the two study counties reveals that Kalkaska County respondents acquired land at a relatively rapid rate between the 1930 and 1939 period (5.0 percent of the responses) and the 1940 to 1944 period (10.0 percent of the responses). This represented a rapid increase in the time sequence of acquisition for that county. This increase wasn't found in the Antrim County statistics until the comparison of the 1945 to 1949 period of acquisition (8.3 percent of the respondents) with the 1950 to 1954 period (17.0 percent). It is hypothesized that differences in the amount of forestland available for sale in the two

¹³The biennial reports of the Michigan Department of Conservation give the number of tax reverted acres for each county as far back as 1916. In 1920, Kalkaska County had 8,126 acres of tax reverted acres and Antrim County only 235 acres. By 1930, Kalkaska County had 46,643 acres reverted, and Antrim County had increased to 2,254 acres. The years from 1926 to 1932 and from 1938 to 1942 represented the two periods when tax reversion rose at the fastest rate. Acres dwindled slightly in the depression years, but then rose to the peak acreage figures in Antrim County (1942) of 57,095 acres and in Kalkaska County (1944) of 148,471 acres. From the peak periods until about 1950 there was a steady decrease in the amount of state land in both counties, and from 1950 until the present the acreage statistics for Antrim County have remained in the vicinity of 42,000 acres of state forest land and of 138,000 acres of state forest land in Kalkaska County.

counties are reflected in the early rise in Kalkaska County during the five years from 1940 to 1944. Yoho has been quoted on pages 29 and 30 herein to point out this early 1940 period as the peak of the forestland market. "This is probably due to a lack of other investment activity during the war years and the desire to obtain for recreational purposes."¹⁴ This period was apparently of more relative effect in Kalkaska County than in Antrim County.

The more recent surge of title acquisition in Antrim County, which took place just after World War II, probably indicates the availability of more investment capital following the war to buy the higher priced lands in the resort region of western Antrim County.

Table 14, page 98, has presented the trends in seasonal dwelling units as given by the 1940, 1950 and 1960 Censuses of Housing. That table confirms the early rise witnessed in Kalkaska County's dates of title acquisition, and the rise in Antrim County that occurred about ten years later. When Table 14 is compared to Figure 2, page 130, some similarities are uncovered.¹⁵

The most recent trend in the percent of respondents who had acquired any land during the last five years indicates that the rate of acquisition in Antrim County has tapered off. More respondents from Kalkaska County had acquired their land during the last five year period of acquisition than those from Antrim County. This could be an indication that Kalkaska County lands were resold more frequently than Antrim County lands. It could also be the result of the shorelines of the larger lakes in Antrim County becoming more congested with cottages, and represent a shift to the smaller or more remote water areas such as those found in Kalkaska County for seasonal sites.

¹⁴Yoho, p. 117.

¹⁵Table 14 has shown that Antrim County had almost six times the number of seasonal dwelling units than Kalkaska County by 1940. During the

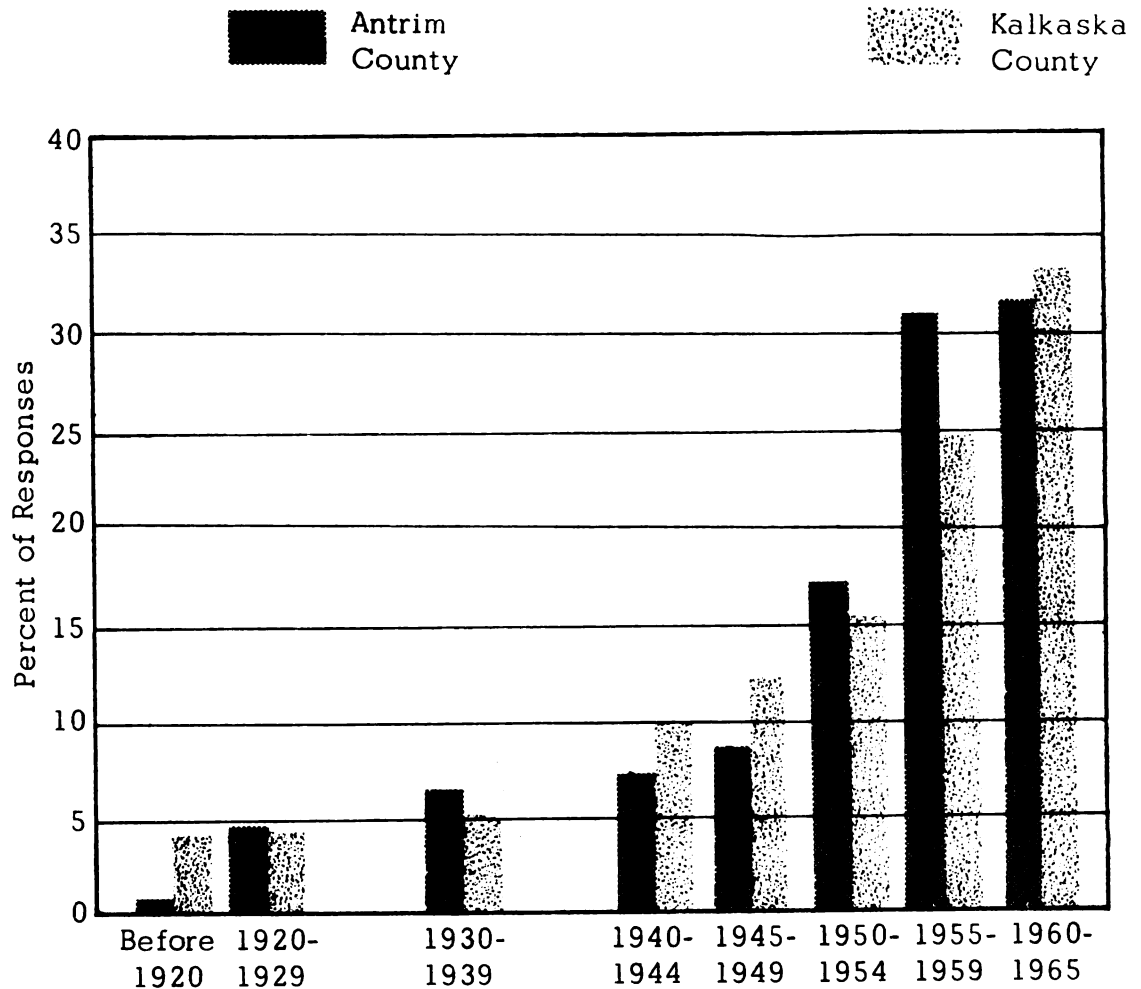


Figure 2. Time Chart of Dates of Title Acquisition

1940's, however, the rate of increase had been much faster in Kalkaska County, and by 1950 the number of seasonal dwellings in Antrim County exceeded the number in Kalkaska County by only 150 percent. This corresponds to the earlier increase in time of title acquisition the respondents from Kalkaska County indicated. From the 1950 Census to the 1960 Census, the rate of increase in seasonal dwelling units was almost the same for both counties, being 250 percent for Kalkaska County and 270 percent for Antrim County. In terms of absolute numbers of seasonal dwellings, however, the increase in Antrim County from 1950 to 1960 is much more significant than the rate would indicate. Antrim County gained 1,778 seasonal dwellings during the 1950's while Kalkaska County gained 1,336, a difference of 442 units. Figure 2 shows the trend line for Antrim County above that of Kalkaska County during the 1950's.

Analysis of Land Use

Question 9 asked respondents to indicate by checking in the appropriate spaces any past, present, or future use of the land they had for their property in Antrim or Kalkaska County. These responses are given in Appendix Table B-9, which has similar patterns of answers as the analysis of Question 6 in Appendix Table B-6. The following discussion first mentions the percents of respondents to Question 10 who checked any present or future use of the land. The text later centers around the responses that were noticeably past uses or future uses.

As in the analysis of Question 6, the two rankings below for Question 9 have the relative order of importance for uses of the land listed according to the percentage of respondents who checked each alternative answer. Certain similarities are noticeable between the rankings in Table 23 to follow and those given in Table 22 on page 123.

Table 23. Rankings of Present or Future Uses of Land
Checked by Respondents of Each County¹

Group	Antrim		Kalkaska	
	Alternative Answer	Percent Respondents	Alternative Answer	Percent Respondents
I	Hunting and fishing . .	46.4	Hunting and fishing . .	50.2
	Summer residence . . .	39.7	Summer residence . . .	37.0
	Retirement	36.8	Retirement	33.0
II	Lumber	27.5	Family outings and picnics	28.3
	Family outings and picnics	25.9	No specific use	26.4
	No specific use	25.4	Christmas trees	26.0
	Pulpwood	24.1	Use of public areas . .	24.7
	Use of public areas . .	23.7	Pulpwood	21.9
	Good investment-- price rise	22.8	Good investment-- price rise	20.4
III	Winter sports	17.2	Lumber	19.6
	Water sports	12.9	Winter sports	13.2
	Field and row crops . .	9.4	Water sports	9.8

Table 23--Continued

Group	Antrim		Kalkaska	
	Alternative Answer	Percent Respondents	Alternative Answer	Percent Respondents
IV	Good investment—		Other recreation use .	5.7
	plan to subdivide . .	6.3	Good investment—	
	Livestock and dairy . .	6.0	plan to subdivide . .	5.3
	Other recreation use . .	5.1	Other miscellaneous .	5.1
V	Other miscellaneous . .	5.1	Field, row and	
			special crops	4.7
	Horticultural crops . .	4.0	Soil Bank	3.8
	Poultry and swine . . .	2.9	Other forest uses . . .	3.6
	Other forest uses . . .	2.2	Livestock and dairy . .	3.0
	Soil Bank	2.2	Poultry and swine . . .	2.1

¹ Respondents that checked only the past use of their land for the alternatives were not included in the calculation of the percentages. Any combination of checks for the answers to each alternative which indicated present or planned future use were considered in the percentage calculations.

In general, the above orderings indicate that hunting and fishing, cottages, and retirement were the uses of land checked most often by respondents to the question. Forest uses, recreational uses other than hunting and fishing, and investment purposes were in the middle groups. Agricultural and miscellaneous forest and recreational uses were checked least by respondents of both counties.

Hunting and fishing uses were once again checked more often by respondents to the question from Kalkaska County, but not to the degree represented by the responses analyzed for Question 6. Retirement was again high on the scale for both counties. As on the lists in Table 22, retirement was indicated more often by Antrim County respondents.

Of particular note is the divergence between the 27.5 percent of Antrim County's respondents and the 19.6 percent of Kalkaska County respondents who indicated present or future lumber uses. Winter sports and water sports were also marked by a noticeably larger number of Antrim County respondents.

The use of nearby public areas, surprisingly, was not indicated by as relatively a greater number of Kalkaska County respondents as might be expected. Kalkaska County has about three times the amount of public land than is found in Antrim County, but only a 1 percent higher response was indicated to the use of nearby public areas by Kalkaska County's respondents. This is perhaps an indication that the nearness of the nonresidents' lands to public areas was not much of an influence on the use of public areas by nonresidents. Evidently, the nonresidents were willing to travel extra miles to public areas that were located in the general vicinity of their property. Closeness of property to public areas was apparently not an important determinant of who did and who did not visit the public areas.

As expected, all agricultural uses were checked more frequently by Antrim respondents.

When only those responses were studied with the "past" space checked to an alternative or the "future" space checked, there were a few important findings. The use of absentee-owned lands for summer residences, retirement, winter sports, and all forest uses were characterized by a relatively high percent of respondents who checked only the future alternative. Table 24 summarizes all uses included in Question 9 that had over 20 percent of the checks to land use only the the past alternative or only in the future alternative answers.¹⁶

Table 24 points out that of the recreation uses, only the summer residence and the winter sports alternative had over 20 percent of the checks to that alternative use in the future category. All of the forest uses, however, appeared to be uses that were primarily planned for the future. The past use of forests that had since been discontinued was also moderately high.

¹⁶To refer to how the question was constructed, turn to page 166, Appendix A. Respondents could check any one of the seven combinations of past, present, or future uses.

Table 24. Analysis of Significant Past or Future Uses of Land

Alternative Answer	Percent of checks to each alternative answer that were in the space for "past" use or in the space for "future" use	
	"Past" Space Checked	"Future" Space Checked
Summer residence	(6.82)	33.86
Winter sports	(3.49)	26.90
Christmas trees	(13.97)	36.40
Pulpwood	(9.24)	63.45
Lumber	(11.38)	65.04
Other forest uses	(18.18)	21.21
Field, row and special crops	40.74	25.93
Horticultural crops	(18.42)	44.74
Livestock, dairy	39.71	33.82
Poultry, swine	50.00	34.78
Good investments	(7.38)	43.44
Retirement	(7.18)	50.86
Soil bank	(12.50)	25.00
Miscellaneous uses	(12.73)	22.27

The agricultural choices were characterized by having either the "past" or the "future" blocks checked the preponderance of the time. This points out the fact that of the respondents who checked agricultural uses relatively few were at the present time carrying out an agricultural use. Instead, they had either done so in the past or were planning to do so in the future.

The future returns to land owned for investment purposes stands to reason, as does the future use for retirement. The future use of land by putting it in the Soil Bank program evidently represents returns from non-residents who were unaware of the discontinuance of the program.

Types of Assistance Desired

Of the total of 973 questionnaires returned, nearly three-fourths (608 or 72.5 percent) answered that they would desire assistance in at least

one of the types of alternatives included in Question 10. The answer most often checked was the alternative, "Plant trees or shrubs for wildlife food or cover," which had a check from 53.0 percent of the 608 respondents to the question. The alternative, "Develop or improve areas for deer feed," was a close second with 46.2 percent of the question's respondents indicating it. Consistent trends in the responses to the questions on why land was purchased (Question 6), how land was used (Question 9), have already been shown by Tables 22 and 23. Table 24 continues this trend. Improvement of wildlife food supply received the most requests for assistance. Beautification of property and help in the harvesting and improvement of forest are in the middle part of the lists. This is similar to the "recreation first—then summer residence and retirement—and forest use sequence" that has been described previously in the analysis of Questions 6 and 9.

Table 25. Rankings of Types of Assistance Desired
That Were Checked by Respondents of Each County

Antrim		Kalkaska	
Alternative Answer	Percent Respondents	Alternative Answer	Percent Respondents
Plant wildlife trees		Plant wildlife trees	
or shrubs	50.7	or shrubs	54.8
Improve deer feed	43.0	Improve deer feed	48.9
Construct ponds	42.6	Beautify property.	35.4
Beautify property	41.9	Harvest forest products .	34.1
Harvest forest products .	41.6	Construct ponds	31.8
Thin out stands of		Thin out stands of	
hardwoods	37.9	hardwoods	23.3
Stock fish	25.2	Stock fish	20.0
Improve fish habitat . . .	11.4	Improve fish habitat . . .	10.5
Other types of help	8.7	Other types of help	7.5
Plant Christmas trees		Plant Christmas trees	
or pines	3.3	or pines	2.0

The relatively greater use of Kalkaska County for deer hunting and other types of hunting was portrayed once more, as was the somewhat

greater use of forests in Antrim County. More respondents from Antrim County wanted help in constructing ponds, stocking fish, and improving fish habitat. This would logically be the case since Kalkaska County has over two times the number of small natural water bodies as Antrim County, and therefore has a smaller requirement for the pond-size body of water.¹⁷

Number of Names Given for Receipt of Further Information

As mentioned in the previous section, 608 of the 973 respondents asked for some type of advice or assistance. Of the 608 nonresidents who checked they were interested in at least one of the types of assistance, 552 gave their names for the purpose of receiving more information from appropriate county agencies about the help they had requested. Another 16 respondents voluntarily gave their name without having checked one of the means of help listed. Therefore, a total of 568 names of respondents were obtained. All 568 of these names were given voluntarily. They represent 91.0 percent of the total of 624 who responded to any part of Question 10, and 58.4 percent of the total number of respondents to the questionnaire. The 568 names were 26.9 percent of the 2,111 total questionnaires that actually reached the nonresident owners.¹⁸

Cooperators with the Soil Conservation Districts

Question 11 asked if the questionnaire respondents were Cooperators with the Antrim or with the Kalkaska County Soil Conservation Districts. Of the 973 returned questionnaires, 172 had no answer to the question, leaving 801 to be analyzed. Of these 801 questionnaires, only 21.5 percent were from Soil Conservation District Cooperators.

¹⁷For a complete description of the differences in the lakes and ponds of the study counties, refer to pages 73 through 74.

¹⁸Tables 2 and 3, pages 55 and 56, include the information pertaining to the number of questionnaires mailed, the number of questionnaires returned without reaching the owners or returned unanswered, and the reasons for these returned questionnaires.

Some respondents to the Question (4.7 percent of the total) answered with a written comment in such a manner to show that they did not understand what the term "Cooperator" meant.

Prior to mailing the questionnaire, the researcher copied the names of nonresidents who were Cooperators with either the Antrim or the Kalkaska Soil Conservation District and who owned over ten acres of land. There were 128 nonresident Cooperators who owned over ten acres recorded from the files of the Antrim County Soil Conservation District, and 197 Cooperators copied from the Kalkaska County files. Using the number of respondents to Question 11 that indicated they were a Cooperator in the numerator and the number of recorded nonresident in the denominator of a fraction, 52.9 percent of the recorded Cooperators had responded to the questionnaire. This percentage is the same percent of response from all recipients of the questionnaire returned.

Past Help Received and Agencies from Which Received

Only 150 of the 875 replies to Question 12, which asked if any help had been received from agencies in the past, indicated that past assistance had been received. In other words, 17.1 percent of the respondents to Question 12 had received help. A slightly greater percent of Kalkaska County respondents to Question 12 (18.6 percent) than Antrim County respondents (15.4 percent) had been assisted.

The planting of trees, mostly pines, was by far the type of help most often received. Over one-half of those who had been given assistance in the past indicated tree planting—81 of the 150 respondents having received such help. Timber stand improvement was the next highest specific type of help referred to, but only 25 of the 150 respondents gave it as an answer. The other types of help given in Appendix Table B-13 were included by only a few of the respondents. A total of 71 respondents in the "other" category were written by respondents. These included types of help such as soil testing and survey, receipt of seeds and fertilizer, advice on forest cutting,

drawing up of conservation plans, receipt of informational bulletins, and the planting of cover crops.

The agency that was most often mentioned by respondents who had received help was the cost sharing plan of the Agricultural Conservation Program of the Agricultural Stabilization and Conservation Service. Slightly over one-third of those who had received help had obtained it from the Agricultural Conservation Program. The Soil Conservation Districts assisted 20 of the 150 respondents who listed past help received. The State Forester, Soil Conservation Service and County Extension Agents were mentioned by eleven, ten and nine respondents respectively.

Of the 150 nonresidents who had been the recipient of help, 34.7 percent wrote an inaccurate description of the agency from which the assistance had been received. These descriptions had to be coded by the researcher in the "Received help from other agencies than listed above or uncodable answers" category. Names of "agencies" such as "Kalkaska," "Antrim Agriculture," "A.A.A.," "Soil Conservation," "U. S. Department of Agriculture," "Conservation Department," or "Soil Agency" could not be identified with any definite assistance-giving agency. Another 15 respondents, or 10 percent of those who had received help, failed to list the agency that had given the help.

The major difference in county returns regarding types of advice or assistance received was the greater number of nonresidents who had received help in planting trees in Kalkaska County and the higher number of instances of help having been extended by the Kalkaska County Agricultural Conservation Program. For a breakdown of all the responses to Question 12, refer to Appendix Table B-13.

Opinions Given by Nonresidents

Question 13, the final question, asked recipients of the questionnaire to "Please check the answer regarding each local community facility or regulation that best expresses your opinion." Places were provided for

respondents to indicate with a check mark whether they believed tax rates were "Appropriate" or "Too High" or if they had "No Opinion." Other spaces were provided alongside the remaining items, which asked respondents to check their opinion toward the "Cooperation of local people toward absentees," "County Road System," "Snow removal," "Police protection," "Fire protection," "Medical, dental, legal and clerical services," and "Retail businesses." The latter series of seven items could be checked as "Poor," "Satisfactory," "Excellent," or "No Opinion." Respondents could also check the "See Comments" space that was alongside all parts of Question 13 and then write their comments about any of the services or community policies on the second one-half of the last page of the questionnaire.

Some of the 973 total respondents to the entire questionnaire did not answer any of the eight parts of Question 13. There were 83 such non-responses to the entire question. This left 890 questionnaires with answers to at least one of the eight parts of the question. Each of the eight parts, however, had a different number of the 890 respondents to the entire question who answered that particular part. In computing the percent of respondents to the various alternative spaces alongside each part of the question, the total sample of 890 respondents was used in the denominator of the fractions.

The statistical summary of the results of Question 13 are included in Appendix Table B-14. This table reveals that the non-responses to each part of the question ranged from 17.7 percent to 36.9 percent of the 890 nonresidents who answered at least one part of the question. Answers about tax rates were the most abundant, and the part about fire protection had the lowest number of respondents. The parts of Question 13 had a similar order in the number of "no opinion" checks as in the number of non-responses to each part. Only 8.7 percent of the 890 respondents to Question 13 had no opinion about the county road system, whereas 30.9 percent had no opinion about fire protection. Apparently, the amount of

contact the absentee landowners had with the community facility or regulation represented by each part of the question was reflected in the number of respondents who had a definite opinion toward each part of the question.

When the non-responses and the no opinions were summed, the following percentages of the 890 respondents to Question 13 had checked either the "Too High," "Appropriate," "Poor," "Satisfactory," "Excellent," or "See Written Comments" spaces beside the various parts of the question.

Table 26. Percent of Respondents to Question 13
Who Gave a Definite Opinion
to Each Part of the Question

Part of Question 13	Percent of Respondents Who Answered With Other Than No Response or No Opinion
Tax rates	68.1
Cooperation of local people	61.6
County road system	69.8
Snow removal	48.4
Police protection	39.5
Fire protection	32.0
Medical, dental, legal, clerical service	35.2
Retail business	50.8

All nonresidents use county roads if they visit their land at all, all must pay taxes, and most come in contact with local people if they visit their land: these items all had above 60 percent of the respondents giving definite answers. Retail businesses and snow removal were apparently in an intermediate level of contact and use by absentees. Fire protection, police protection and the professional services categories were the least used.

A little over one-fifth (21.4 percent) of the respondents thought tax rates were too high. Almost one-half, or 44.6 percent, checked the "appropriate" block for tax rates.

For the other seven parts of the question besides the part on tax rates, the "Poor" blocks had checks ranging from a low of 2.0 percent for professional services to a high of 8.7 percent for the county road system. "Satisfactory" checkmarks were from a range of 17.9 percent for fire protection to 42.4 percent for the county roads. The "Excellent" spaces were checked by the 890 respondents from the lowest percent for fire protection services (6.0 percent) to the highest for the cooperation of local people (22.6 percent). For all of the seven latter parts of Question 13, the "Satisfactory" checks were the most prevalent, followed by the "Excellent" checks and finally by the "Poor" checks except for the case of both police and fire protection, where the "Poor" checks exceed the "Excellent" checks.

The "See Written Comments" alternative was indicated by 20 respondents to tax rates, 15 to the county road system, 13 to police protection, 10 to snow removal and 7 or 8 for all remaining parts of Question 13. Many respondents commented in the space provided on the last page even though they had checked other spaces besides the "See Written Comments" spaces.

Examples of Written Comments

As the coding of the 973 returned questionnaires progressed, the researcher assigned codes to the written comments.¹⁹ If a written comment by a respondent pertained to more than one topic, then each topic was coded in prescribed columns on the Data Coding Forms, from which the IBM cards were copied. There was no attempt made to differentiate between favorable or unfavorable comments within each category of written comments. Only if the topic heading indicated any distinction between favorable or unfavorable comments was there any such distinction made.²⁰ The list of subjects the researcher assigned as he proceeded with the coding of the questionnaires have been grouped into major categories in

¹⁹ Refer to pages 56 and 57 for the coding procedure.

²⁰ Refer to pages 179 and 180, Appendix B, for the relevant part of the code sheet referred to in this discussion.

Table 27. Alongside each category is the number of times the researcher included in the coding procedure the comments of respondents he judged to pertain to that category. This list is included to give the reader a general acquaintance with the types and number of responses that were written voluntarily by respondents. Examples of what are considered to be representative comments within each of the primary categories are quoted after the discussion of Table 27.

Table 27. Major Categories of Written Comments
and Number of Comments Included Within Each

Category Heading Assigned	Number of Written Comments Included by the Researcher in Each Category
General comments or specific comments mentioned only a few times ¹	133
Comments about taxes	93
Personal requests made in comments	61
Comments about fire and police protection; property vandalism; trespassers; and posting	56
Future plans explained	40
Comments about roads	37
Comments about deer hunting or other hunting & wildlife .	36
Especially notable comments were made that were favor- able to the questionnaire	33
Comments about services of the local community	30
Comments on the need for zoning; the protection of beauty; pollution control; or summer overcrowding . . .	23
Plan on selling the property	21
Snow removal	15
Plan on becoming a resident	13
Needs financial help or employment to return to local area.	10
Especially notable comments were made that were unfavorable to the questionnaire	3

¹ General comments totaled 89 of the respondents in this class—specific comments that were mentioned only a few times dealt with reforestation (6); expensive electrical power (3); land too far from home to be practicable (6); persons living on the property in the owner's absence to care for the property (4); out-of-state fishing and hunting fees (2); owner never having seen the property (6); and others with one to three comments (17).

Comments on taxes represented the largest single definitive classification of written responses by the nonresidents. The preponderance of these tax comments were other than favorable. The researcher was led to believe that even though those who checked the tax rates as "Appropriate" comprised 44.6 percent of the respondents to Question 13, there existed a certain vocal minority among the 23.5 percent who checked the "Too High" or the "See Written Comments" spaces that were of a definite opinion that the taxes were too high.

Another quite vocal group was the one which comprised the 56 comments about fire and police protection, trespassing and vandalism. These comments made up the second largest group with a fairly specific content.

Numerous personal requests were made by about 61 of the respondents. These requests were not the type of request for assistance that were mentioned in Question 10, but included such items as requests to settle boundary line problems, advice on what the best general use of the land would be, how to have a road or snow removal service granted, where to locate wells, and other such specific questions.

It was especially interesting to note that a fairly large number of respondents (40 nonresidents) offered to comment on what their future plans were for their property. Many of these comments showed the nonresidents were interested in their land, and were willing to invest in future improvements. On the other hand, about 21 respondents wanted to sell their property.

In general, the written comments pointed dramatically to a salient feature of absentee landowners: they are a diverse ownership classification with many uses of their land, with different problems associated with these uses, with various levels of ability and desire to improve their property, and with divergent opinions about the policies and facilities provided by the local community.

Results of Questionnaire Analysis
Obtained by Classifying Townships

The major portion of the analysis of results of the questionnaire analysis obtained by classifying townships has been included in the introduction, classification of townships, and the summary of responses to selected questions by category of townships in Appendix C. What is described at this point is a summary of the Appendix material.

It was noticeable during the recording of names of nonresidents from the tax rolls, coding the responses to the questionnaire, and studying early printouts from the computer that the characteristics of nonresidents and responses to land use tended to be similar for some groups of townships. The researcher then decided to break down information normally found only at the county level to the township level. The sources for this township information have been previously described on pages 63 and 64. Three types of township information were used in the classification process:

1. The percent of the area of each township that was in lakes and ponds.
2. The percent of the area of each township that was in public land or in the hands of private owners with over 5,000 acres.
3. The percent of the area of each township that was included in J. O. Veatch's classification of First and Second Class Agricultural Lands.

Four groups of townships were determined. They were:

Group A. Six townships in western Antrim County that surround all but the northernmost portion of the "Chain-of-Lakes." These townships had very meager amounts of public land, and were the site of the best agricultural lands in the counties.

Group B. Six townships also make up this group. These townships have lands that either border on some of the major lakes in the "Chain-of-Lakes" region or have a fairly significant amount of water. The acres of public land are not significant in this group. The agricultural lands are not as good as those found in Group A but are generally better than those which comprise the other groups.

Group C. This group was comprised of four townships in the north-eastern one-fourth of Kalkaska County with several medium-sized lakes and with the presence of nearby state forest land. The agricultural lands are about on par with Group D, but not as good as the previously described regions.

Group D. The remaining surveyor and political townships of the study counties not included in the above three groups were listed in Group D. This group of 17 surveyor townships has only a relatively few acres of water in lakes and ponds, moderate to much public land, and townships with varying agricultural capabilities.

Analysis of certain questions by groups of townships could not include the questionnaires that were returned by 37 nonresident landowners who held 8,600 acres of land that was in more than one township. It was not possible to categorize these 37 questionnaires according to one of the four township groups, and these questionnaires were analyzed as a separate group.

Interesting and meaningful results of the analysis of chosen questions according to the above grouping of townships were:

1. The acres of nonresidential land that was represented by a questionnaire response was greater in Group A, where 61.5 percent of the acres recorded were represented by a response. The other three groups had decreasing percents of acres represented by responses: Group B had 52.0 percent; Group C had 44.4 percent; and Group D had 32.5 percent. Apparently, the nonresidents showed greater interest in their land in the western part of Antrim County and in the townships surrounding the "Chain-of-Lakes" region.
2. The average acres owned by respondents from each region was smallest in the group with the most fragmented public land, Group D. The average size per ownership in this group was 74.2 acres. The average size in the western townships of Antrim County, Group A, was about five acres more, or 79.6 acres. Groups B and C average sizes

were 95.2 acres and 97.0 acres respectively. Owners of land in two or more townships held an average of 233.4 acres. The influence of fragmented state lands and platted resort areas are believed to be the significant factors influencing these divergent acreage figures.

3. The percent of nonresident land represented by the questionnaire response that was fenced or posted ranged from 40.6 percent in Group C to 25.1 percent for Group D. The average acres per owner of fenced or posted lands ranged from 224.0 acres in Group C to 71.9 acres in Group A. The importance of group-owned lands that are fenced or posted in the northeast part of Kalkaska County is evident in these statistics.
4. Group owners were found more often in Group C and in the classification of two or more townships.
5. The analysis of reasons for purchase by each group emphasized:
 - a) The regions with the majority of the towns and villages (Groups A and B) had higher percents who bought the land when they were a resident, and who indicated more frequently that they had grown up in the county and always wanted to own land in the county.
 - b) Fewer respondents indicated that they were influenced by prices being better from Group A. This is reasonable due to the higher price of land in the resort region.
 - c) Group A had higher numbers of checks percentage wise than the other three groups for the retirement alternative, resort and other recreation besides hunting and fishing alternative, and for agricultural prospects. These responses reflect the influence of the large lakes, the soils and the climate of townships in Group A.
 - d) Group C had more checks, relatively speaking, than the other groups for prices being an influence on the purchase decision, and for the hunting and fishing alternative.
 - e) The respondents who owned land in two or more townships indicated the alternative of forest products at the rate of almost one out of

four checks to all alternatives (or 23.7 percent of all checks).

These respondents also indicated the influence of land prices and nearness to public areas more often than the other alternatives.

6. Study of the pattern of responses of the number of days respondents from each group visited their land per quarter pointed out the following primary differences:
 - a) The average number of days respondents visited their land showed that those from Group A spent fewer days in the first quarter and more days in the third quarter than any other group. Respondents from Group C spent more days in the first quarter and more days in the fourth quarter than any group but the owners in two or more townships. Once again, it is hypothesized that differences in water resources and in hunting opportunities are reflected. The owners in two or more townships had the highest number of days spent per respondent on the land during the fourth quarter. This could be explained, perhaps, by the late fall activity involved with the harvesting of forest products, such as the shearing and harvesting of Christmas trees.
 - b) The percent of total respondents for each group of townships who indicated they visited their land during the four quarters repeated some of the same patterns that the average number of days visited per quarter depicted. Group A had the fewest respondents on a relative basis indicating that they visited their land at all during the third quarter. The other differences that have been described above for the average number of days spent on the land were not present in the percent of total response figures. Evidently, the relative percents respondents visit their land during the four quarters does not differ as much as the number of days they spend during their visits during these quarters.
7. The percent of total responses to the question which asked when the title(s) to the nonresident land were acquired revealed some important

trends that differed between groups of townships. Group A, the western townships in Antrim County, had a steep rise in time of title acquisition between the years 1950 to 1954. Group B had this increase in time of acquisition occur earlier, that is within the 1940 to 1944 period. Group C was distinguishable by the much higher percents of titles acquired during the years before 1920, and from 1920 to 1929. The trend of percents for Group D has been the most uniform of all the groups with no rapid increases that were as noticeable as trend lines for the other groups. The owners in two or more townships have had the most recent periods of title acquisition, with an increased rate of land acquired during the years following World War II, but with the most dramatic rise in title acquisition from 1955 to 1959.

The major differences in these trends seem to stem from the higher price of land in the western townships of Antrim County, the early purchasing of state land in the northeastern townships of Kalkaska County, the regrowth of forests and the subsequent surge in more recent years for forest use by the owners of land in two or more townships, and the dates that large holdings were sold and fragmented in the forested regions of the counties.

8. The analysis of the use of land by respondents for each of the five groups of townships reiterates the differences mentioned in the discussion of Appendix C thus far. Group A had more responses than any other area (i.e., check marks) in the following alternative uses: summer residence, water sports, horticultural crops, livestock and dairy, and retirement. Group B had the most responses on a percentage basis than any other group of townships only for field and row crops. Group C had relatively more responses to the use of nearby public areas. Group D was most used for hunting and fishing. Owners in two or more townships apparently made the most use of their lands for financial return. They had the highest percents of check marks to the alternatives of all the forest uses and the investment uses, and had the

lowest percents for the "no specific use" category, for retirement and for the major recreation categories of summer residence and hunting and fishing.

When all regions are considered together, the percent of the check marks that were for any present or planned future use showed that recreational uses accounted for 47.9 percent of all the check responses, forest uses were indicated by 21.1 percent of the checks, retirement was indicated 9.8 percent of the time, all agricultural uses were checked 4.9 percent, and the other uses ("no specific use," good investment, soil bank, and the "other miscellaneous" category) accounted for 16.4 percent of the check responses.

CHAPTER VI

SUMMARY, RECOMMENDATIONS, AND CONCLUSIONS

Summary

The names of all nonresident owners of ten or more acres of land in Antrim and Kalkaska Counties, Michigan, were recorded from the township tax rolls that are kept in the county courthouses. A total of 2,112 names were recorded, and were all sent a questionnaire except for a power company which owned 17,700 acres along the Manistee River. All recorded owners held 197,700 acres of land, or 28.3 percent of the total land and water of the two study counties. Responses were received from 973 of the absentee owners, which was a 46.1 percent response. However, 259 questionnaires were returned that were not completed or for some reason had not reached the nonresident landowner. If these 259 questionnaires are subtracted from the total number mailed, then the 973 returned questionnaires represented 52.9 percent of the questionnaires which reached the landowner or which were not filled in for other reasons.

The respondents to the questionnaire owned 86,200 acres of land. These acres accounted for 47.9 percent of the recorded land whose owners were mailed a questionnaire. The total acres owned by respondents to the questionnaire equaled 18.7 percent of the private rural land in the study counties and 12.9 percent of the total land and water area of the two counties.

The average number of acres owned per respondent was 88.9 acres.

Fenced or posted lands comprised 25,500 acres of the 86,200 acres owned by respondents, or 29.6 percent of the responded acres. The average size of fenced or posted acres was 116.4 acres. The number of respondents with any of their land listed as fenced or posted was 219 or

22.6 percent of the respondents. The presence of large group owned lands that were fenced or posted in the northeastern part of Kalkaska County had a sizable influence on these fenced or posted land statistics.

Of all the nonresident land represented by the questionnaire returns, 79.3 percent was acquired by purchase from a private individual or company. Inherited acres accounted for 9.0 percent of the land. Kalkaska County totals were influenced by the 10.6 percent of the responded acres that had been bought from the State of Michigan. Purchases of state land in Kalkaska County were over four times the amount of acres bought from the state in Antrim County.

Generally speaking, an eight to one ratio of individual ownerships to group ownerships was discovered. There were more group owners in the parts of the study counties such as the northeastern quarter of Kalkaska County where early purchases of state land for hunting and fishing and other recreational uses had occurred. Respondents who owned land in more than one township also tended to be group owners more frequently than owners in only one township.

The reasons respondents checked for buying land in the study counties and their indicated uses for their land for past, present, or future purposes pointed out that recreation and retirement were the most frequently mentioned, followed by the use of forests products and investment purposes, and finally by agricultural and other uses for the land. The use of land for summer residences, retirement, winter sports, all forest uses and for investment purposes were looked upon as a future use more often than the other alternatives. Agricultural uses were characterized as either having been practiced in the past or planned for the future.

When just the checks to present or to future uses of nonresident land were analyzed, it was found that the hunting and fishing alternative answer was checked most often. Hunting and fishing was mentioned by 48.4 percent of the respondents to the question on land use. Summer residences were checked as a present or a future use by 38.4 percent, and retirement

by 35.0 percent of the respondents. There were certain logical differences in land use that was revealed between regions of the counties that had divergent amounts and types of water resources, agricultural lands, public lands, large nonresidential lands, and population concentrations. The tables of Appendix C depict these differences in responses for selected questions between five groups of townships.

Respondents to the questionnaire from Antrim County were more prone to be within the higher paid occupational categories. A larger percentage of the Antrim County respondents had home addresses in the Tri-County Region of Michigan which includes Detroit and Pontiac. Kalkaska County respondents had home addresses (as determined by the postmarks stamped on envelopes used to return the questionnaires) that were more numerous from all other parts of Michigan besides the Tri-County Region.

The four regions that comprised most of the southern one-third of Michigan accounted for 70.6 percent of the home-address postmarks which were present on return envelopes. The cities of southern Michigan comprised 49.2 percent, and the localities outside of the major urban areas in southern Michigan comprised 21.4 percent of this 70.6 percent of postmarks from southern Michigan. Out-of-Michigan postmarks were stamped on 20.1 percent of the analyzed postmarks. Therefore, slightly over nine out of ten of the questionnaires with a postmark were mailed from home addresses which were over 100 miles from the geographic center of the two study counties.

The types of assistance that respondents desired closely corresponded to their reasons for purchase and their uses for the land. Planting of wild-life food and cover was most often requested. Advice or assistance in harvesting or improving forests was next in line. Beautification of property and construction of ponds were other requests that were related to recreational or retirement intentions. There were 608 respondents out of the 973 total respondents that checked at least one type of desired advice or assistance. Names were voluntarily written on 568 questionnaires by

respondents who wanted to be contacted by agencies regarding their indicated requests for advice or assistance.

The opinions of absentee landowners toward eight types of local community services or regulations indicated that the average person who answered the questionnaire was satisfied with the conditions he found when he visited his land. There were, however, written comments on the last page of the questionnaire that demonstrated the fact that vocal minorities are concerned with the taxes they were paying and with other topics such as trespassing, vandalism, police protection, and fire protection. The interest shown by the respondents to the eight-part opinion question seemed to be akin to the amount of contact the absentees had with each part of the question during visits to their property.

The third quarter of the calendar year was visited for 12,588 of the 27,201 total days respondents indicated they spent on their land. The second and fourth quarters accounted for 6,862 and 6,429 days respectively. Only 1,322 days were spent on the nonresidential property during the first three months of the year. The parts of the study counties with significant water resources had relatively more respondents visiting their property during the third quarter. Regions where hunting or fishing were popular had somewhat of a greater use than other parts of the counties during the last quarter.

Recommendations

This survey of nonresidential ownership has revealed important traits of the nonresident owners themselves, their reasons for owning lands, the use of their lands, the types of advice and assistance they desire and have received in the past, their opinions about certain community traits, and other trends in nonresidency. The type of information on absentee ownership discussed throughout the analysis of the responses to the questionnaire is pertinent information about the use of many acres of land in the two study counties. County planners, assistance agencies, educational

and research endeavors, and anyone else concerned with the changing land ownership and use of the counties can use the material included in this thesis. The researcher believes that his efforts to relate the questionnaire returns to historical trends and geographical resource differences have been, at least partially, successful. The study counties that were selected for this research have combinations of natural resources and human activity that correspond to a wider region of northern Lower Michigan, particularly the northwestern part of this region.

The following recommendations seem fitting:

1. That the results of this study and names of nonresidents who requested assistance be made available to the Antrim and Kalkaska County Natural Resource Extension Agents for use in their counties.
2. That the questionnaire, coding sheet, and computer method be available as a guide for other interested Natural Resource Extension Agents.
3. That the method of communicating with absentee landowners through the mail be encouraged. This involves the necessity of recording names from tax rolls. The federal, state and local agencies should identify themselves and their programs of assistance in a manner that is easily understood by nonresident owners. A joint publication of all agencies, perhaps working through the County Technical Action Panels, which identified each agency and the advice or help they offered would be an economical and productive method of contacting nonresident owners.

In some cases, a selective mailing to nonresidents with some common characteristic would be more economical than a mass-mailing to all nonresidents. For instance, owners of land in two or more townships have been shown to be interested in forest products. If the resources of an agency were limited it would receive more response to a forest program if it concentrated its effort on these owners.

4. That in addition to the contact with nonresident landowners by mail procedures, other programs for absentees such as tours, demonstrations, and meetings be held during the summer months.

5. That coordination be established between the Natural Resource Extension Agents in Antrim and Kalkaska Counties with Agents in southern Michigan so that during the winter months the southern Michigan Agents could organize programs for absentees that stressed tree planting, wildlife cover planting, or other types of land improvement that could be implemented in the spring or summer.
6. That this study in northwestern Lower Michigan be followed up with at least two other studies—one in the northeastern part of the Lower Peninsula and one in the Upper Peninsula. Random sampling procedures such as those used in forest ownership studies by the Department of Forestry at Michigan State University should be considered as future possibilities. Detailed study of a few townships would also be valuable. The procedure used in this study to group townships according to the amount of water resources, types of agricultural land, and acres of state land or large nonresidential owned land that is not fenced or posted should be improved upon, tested, and results compared with other localities.
7. That an evaluation be made to determine whether future studies should be conducted with more importance placed on:
 - a) The tax structure of absentee lands.
 - b) The impact of retired persons on the local community, and problems in providing facilities for these retirees.
 - c) The extent of trespassing, vandalism and fencing and posting of absentee owned lands, with an evaluation of the best means of protection of their lands and the impact of the fencing and posting on the recreational use of nonresidential land.

Conclusions

1. This first effort to contact nonresident owners by a written mail questionnaire was a success. The percentage of response, number of names voluntarily given for contact by assistance agencies, and

written comments by respondents all indicate that a substantial number of absentee owners have the degree of interest in their rural landholdings to make future mail questionnaires profitable.

2. This research proved that nonresident or absentee owner classification encompassed a widely diverse group of landholders with many types of uses and degrees of interest in their land. It was not possible to characterize a "nonresident" or an "absentee" of either of the study counties in any simple statement.
3. Recreational and retirement uses were checked most often. Forest products and investment were secondary uses. Agricultural uses were indicated by the least number of respondents.
4. Respondents were generally satisfied with community services and tax policies. Written comments, however, were often directed toward high taxes and toward problems caused by trespassers, vandals, and lack of protection in the absence of nonresidents from their lands.
5. Past advice or assistance had been received by 150 of the total of 973 respondents. Of those who had received help, 67 could not give an accurate description of the agency from which the help had been received.
6. It was possible to relate the natural resource characteristics of a geographical area to the manner in which respondents tended to answer questions on land use, and to draw similarities and dissimilarities between the responses of nonresidents from regions with varying resource combinations.

BIBLIOGRAPHY

BIBLIOGRAPHY

Articles in Historical Journals

- Despres, George C. "Railroad Logging," Michigan History Magazine, XXXVIII (June 1954), 182-84.
- Foster, Fred W. "The Beaver Islands: A Study of Isolation and Abandonment," Michigan History Magazine, XXXIX (December 1955), 385-404.
- Gordon, Douglas H., and May, George S. "The Michigan Land Rush in 1836," Michigan History Magazine, XLIII (March 1959), 1-42.
- "Historical Notes," Michigan History Magazine, XXIV (September 1940), 467-79.
- Leach, Carl Addison. "Deward: A Lumberman's Ghost Town," Michigan History Magazine, XXVIII (March 1944), 1-19.
- Maybee, Rolland H. "David Ward: Pioneer Timber King," Michigan History Magazine, XXXII (March 1948), 1-15.
- Taber, Morris C. "New England Influences in South Central Michigan," Michigan History Magazine, XLV (December 1961), 305-36.

Books

- The Autobiography of David Ward. New York: Privately Printed, 1912.
- Barlowe, Raleigh. Land Resource Economics. Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1958.
- Barnes, A. Vinegar Pie and Other Tales of the Grand Traverse Region. Detroit: Wayne State University Press, 1959.
- Clawson, Marion; Held, R. Burnell; and Stoddard, Charles H. Land for the Future. Baltimore: Johns Hopkins Press, 1960.
- Dana, Samuel Trask; Allison, John; and Cunningham, Russell. Minnesota Lands: Ownership, Use, and Management of Forests and Related Lands. Narberth, Pa.: The Livingston Publishing Co., 1960.
- Dana, Samuel Trask, and Krueger, Myron. California Lands: Ownership, Use, and Management. Narberth, Pa.: The Livingston Publishing Co., 1958.
- Dunbar, Willis. Michigan: A History of the Wolverine State. Grand Rapids: William B. Eerdmans Publishing Co., 1965.

- Farm Foundation and Resources For the Future. Land Economics Research. Washington: Resources For the Future, Inc., 1962.
- Gates, Paul Wallace. The Wisconsin Pine Lands of Cornell University. Madison: The State Historical Society of Wisconsin, 1943.
- Harris, Abram. Economics and Social Reform. New York: Harper and Brothers, 1958.
- Interregional Land Tenure Research Committee. Agricultural Land Tenure Research. Chicago: Farm Foundation, October 1955.
- Interregional Land Tenure Research Committee. Land Tenure Research Workshop. Chicago: Farm Foundation, 1956.
- Johnson, V. Webster, and Barlowe, Raleigh. Land Problems and Policies. New York: McGraw-Hill Book Co., 1954.
- Leach, Morgan Lewis. A History of the Grand Traverse Region. Facsimile of serial first published in Grand Traverse Herald in 1883. Mt. Pleasant: Central Michigan University Press, 1965.
- Moore, Charles. History of Michigan. Vol. I. Chicago: The Lewis Publishing Company, 1915.
- Poneroy, Kenneth, and Yoho, James. North Carolina Lands: Ownership, Use and Management of Forest and Related Lands. Narberth, Pa.: The Livingston Publishing Co., 1964.
- Powers, Perry F. A History of Northern Michigan and Its People. Vol. I. Chicago: The Lewis Publishing Company, 1912.
- Sakolski, Aaron. Land Tenure and Land Taxation in America. New York: Robert Schallenberg Foundation, 1957.
- Selltiz, Claire; Jahoda, Marie; Deutsch, Morton; and Cook, Stuart W. Research Methods in Social Relations. Revised one-volume edition. New York: Holt, Rinehart, and Winston, Inc., 1964.
- The Traverse Region, Historical and Descriptive. Chicago: H. R. Page and Company, 1884.
- Veblen, Thorstein. Absentee Ownership and Business Enterprise in Recent Times. New York: B. W. Heubsch, Inc., 1923.

Census Materials

- U. S. Bureau of the Census. Census of Agriculture for decennial censuses from 1880 to 1950 and for 1959 and 1964. Washington: U. S. Government Printing Office.
- U. S. Bureau of the Census. Census of Housing for years 1940, 1950, and 1960. Washington: U. S. Government Printing Office.

- U. S. Bureau of the Census. Census of Population for all decennial censuses from 1870 to 1960. Washington: U. S. Government Printing Office.
- U. S. Bureau of the Census. 1960 Census of Population: Alphabetical Index of Occupations and Industries. Revised edition. Washington: U. S. Government Printing Office, October 1960.
- U. S. Bureau of the Census. 1964 United States Census of Agriculture, Preliminary Reports (for Antrim and Kalkaska Counties, Michigan). Series AC 64 P-1. Washington: U. S. Government Printing Office, March 1966.
- U. S. Department of Commerce. Office of Business Economics. Growth Patterns in Employment by County, 1940-50 and 1950-60. Washington: U. S. Government Printing Office, 1965.

Dissertations, Theses, and Abstracts

- Harris, Marshall. Genesis of the Land Tenure System of the United States. Published abstract of a Ph.D. dissertation, University of Illinois, 1945.
- Humphrys, Clifford R. "Land Use Criteria for Crawford County, Michigan." Unpublished M.S. thesis, Michigan State University, 1941.
- Yoho, James. "Private Forestland Ownership and Management in Thirty-One Counties of the Northern Portion of the Lower Peninsula of Michigan." Unpublished Ph.D. dissertation, Michigan State University, 1956.

Maps, Atlases, and Surveys

- Brown, J. C. D. Michigan Lakes and Streams. Fish Division Pamphlet No. 24. East Lansing: Michigan Department of Conservation, 1943.
- Humphrys, C. R., and Green, R. F. Michigan Lake Inventory Bulletins, Numbers 5 and 40. East Lansing: Department of Resource Development, Michigan State University, 1966.
- Humphrys, C. R.; Horner, R. N.; and Rogers, J. H. Shoretype Classification of Antrim County, Michigan. Shoretype Bulletin No. 12. East Lansing: Department of Resource Development, Michigan State University, 1958.
- Michigan Department of Conservation. Land Economic Survey. Forest and Economic Report of Antrim County. Lansing: Michigan Department of Conservation, 1923.

- Michigan Department of Conservation. Land Economic Survey. Farm and Forest Map of Kalkaska County. Lansing: Michigan Department of Conservation, 1927.
- Michigan Department of Highways. Average 24-Hour Flow on the Trunk-line System, 1965.
- Michigan Department of Highways. Michigan 1966 Official Highway Map.
- Rand McNally Commercial Atlas and Marketing Guide. 98th edition. Chicago, New York and San Francisco: Rand McNally and Company, 1966.
- Rockford Map Publishers. Farm Plat Book with Index to Owners. Antrim County, Michigan. Rockford, Illinois: 1961.
- Rockford Map Publishers. Farm Plat Book with Index to Owners. Kalkaska County, Michigan. Rockford, Illinois: 1961.
- U. S. Bureau of the Census. Areas of the United States, 1940. Washington: U. S. Government Printing Office, 1942.
- Veatch, J. O. Agricultural Land Classification and Land Types of Michigan. Special Bulletin No. 231. East Lansing: Agricultural Experiment Station, Michigan State College, April 1933.
- Veatch, J. O.; Schoenmann, L. R.; Foster, Z. C.; and Lesh, F. R. Soil Survey of Kalkaska County, Michigan. U. S. Department of Agriculture, Series 1927, No. 28. Washington: U. S. Government Printing Office, n.d.
- Veatch, J. O.; Schoenmann, L. R.; and Fuller, G. L. Soil Survey of Antrim County, Michigan. U. S. Department of Agriculture, Series 1923, No. 29. Washington: U. S. Government Printing Office, 1928.

Miscellaneous Publications

- Antrim County ARA Committee. "Overall Economic Development Plan for Antrim County, Michigan," April 1962. (Mimeographed.)
- Biennial Reports of the Michigan Department of Conservation.
- Kalkaska County Steering Committee. "Overall Economic Development Program for Kalkaska County," 1962. (Mimeographed.)
- Klemme, Randall. "Absentee Landlords," Current Farm Economics. XVII. Stillwater: Oklahoma Agricultural Experiment Station, October 1944.
- Michigan Department of Economic Development. Research Division. "Antrim County Supplementary Economic Data Sheet." Lansing: August 1958. (Mimeographed.)

Michigan Department of Economic Development. Research Division.
 "Kalkaska County Supplementary Economic Data Sheet." Lansing:
 May 1958. (Mimeographed.)

Webster's Third New International Dictionary. Springfield, Mass.: G. &
 C. Merriam Co., 1961.

Monographs

Andrews, Horace, and Bromley, Willard. Trends in Land Use in Northern Michigan: A Study of Alpena, Antrim, Ogemaw and Roscommon Counties. Washington, D. C.: The Charles Lathrop Pack Forestry Foundation, 1941.

Barlowe, Raleigh. Administration of Tax Reverted Lands in the Lake States. Technical Bulletin No. 225. East Lansing: Agricultural Experiment Station, Michigan State University, December 1951.

Barlowe, Raleigh. Use of Land and Water Resources in Michigan. Project '80 Research Report No. 52. East Lansing: Agricultural Experiment Station, Michigan State University, 1966.

Bennett, C. L., Jr.; and Fay, L. D. Deer Biological Data: 1964-65. Research and Development Report No. 39. Lansing: Michigan Department of Conservation, September 16, 1965.

Black, J. D., and Gray, L. C. Land Settlement and Colonization in the Great Lakes States. USDA Bulletin No. 1295. March 1925.

Bliss, A. Federal Land Grants for Internal Improvement in the State of Michigan. n.p.: Pioneer Society of Michigan, n.d.

Hartman, W. A., and Black, J. D. Economic Aspects of Land Settlement in the Cutover Region of the Great Lake States. USDA Circular No. 160. April 1931.

Hedrick, Wilbur. Recreational Use of Northern Michigan Cut-over Lands. Special Bulletin No. 247. East Lansing: Agricultural Extension Service, Michigan State College, February 1934.

Hill, Elton B., and Mawby, Russell G. Types of Farming in Michigan. Special Bulletin 206, 2d rev. East Lansing: Agricultural Experiment Station, Michigan State College, September 1954.

Holcomb, Carl J., and Jones, Richard D. "The Antrim Area: A Study of Farm Woodland Conditions on a Cut-over Area of Lower Michigan." St. Paul, Minn.: Lake States Forest Experiment Station, 1938. (Mimeographed.)

Maish, L. J., and Hoglund, C. R. The Economics of Beef Cow Herds in Michigan. Research Report No. 58. East Lansing: Agricultural Experiment Station, Michigan State University, 1966.

- McDowell, J. C., and Walker, W. B. Farming in the Cutover Lands of Michigan, Wisconsin and Minnesota. USDA Bulletin No. 425. October 1916.
- Michigan Department of Conservation. Game Section. "Annual Deer Season Reports" for 1963, 1964 and 1965 entitled "Deer in 1963," etc. (Mimeographed.)
- Ramsdell, Willett F. The Primary Wood-Using Industries of the Lower Peninsula of Michigan for the Year 1935. Bulletin No. 8. Ann Arbor. School of Forestry and Conservation, University of Michigan, 1937.
- Ramsdell, W. F. Township Government and the Exploitation of Timber and Wild Land Resources in Northern Michigan. Detroit: Detroit Bureau of Governmental Research, January 1933.
- Reynolds, D. Early Land Claims in Michigan. Lansing. Lands Division. Michigan Department of Conservation, 1940.
- Schallau, Con. Fragmentation, Absentee Ownership, and Turnover of Forest Land in Northern Lower Michigan. U. S. Forest Service Research Paper LS-17. St. Paul, Minn.: Lake States Forest Experiment Station, January 1965.
- Sparhawk, William, and Brush, Warren. The Economic Aspects of Forest Destruction in Northern Michigan. USDA Technical Bulletin No. 92, 1929.
- Stace, Arthur W. What Are We Going to Do With 2,208,975 Added Acres? Michigan Department of Conservation reprint of eight articles by Booth Newspapers, Inc. Lansing: 1940.
- Titus, Harold. The Land Nobody Wanted. Special Bulletin No. 332. East Lansing: Agricultural Extension Service, Michigan State College, April 1945.

APPENDICES

APPENDIX A

INTRODUCTORY LETTER, QUESTIONNAIRE, FOLLOW-UP POST CARD, AND CODE SHEET

(The questionnaire and code sheet were printed on legal size paper but have been reproduced herein on letter size paper.)

COOPERATIVE EXTENSION SERVICE

MICHIGAN STATE UNIVERSITY • EAST LANSING • MICHIGAN 48823

Department of Resource Development

AND U.S. DEPARTMENT OF AGRICULTURE COOPERATING

February 21, 1966

Dear

Michigan State University's Cooperative Extension Service and the Department of Resource Development are undertaking a program which is vitally important to you as a non-resident landowner of Antrim or Kalkaska County.

You and 2,000 other property owners in Antrim and Kalkaska counties are being sent the enclosed questionnaire. Based upon the information received from you, an attempt will be made to better understand your land use problems. This could mean further assistance to you and your local agencies in serving your needs. The success of this research will depend upon the response received to this questionnaire. Will you please complete and return it in the enclosed self-addressed envelope which requires no postage by March 21, 1966.

Other non-resident landowners in Michigan will be contacted by a similar questionnaire following the completion of this two county study. We hope that you share our enthusiasm about proceeding with these long overdue research programs, which finally recognize your important role in the future development of rural Michigan.

IT IS NOT NECESSARY FOR YOU TO SIGN THE QUESTIONNAIRE. NONE OF THE INFORMATION YOU REPORT OR THE OPINIONS YOU GIVE IN FILLING OUT THE QUESTIONNAIRE WILL BE DISCLOSED FOR ANY REASON. We are not interested in any individual's or group's private affairs.

If you have any questions about the study or the questionnaire, please feel free to write to us.

Thanks in advance for your cooperation.

Sincerely,

COOPERATIVE EXTENSION SERVICE

George P. Graff
Extension Specialist in
Soil and Water Conservation

Questionnaire for Non-Resident Landowners of Antrim and Kalkaska Counties, Michigan

Township _____

PLEASE CHECK APPROPRIATE SPACE OR FILL IN APPROPRIATE BLANK FOR YOUR ANSWERS:

1. Are you an individual landowner or a representative of an ownership group? () Individual landowner (includes husband and wife ownerships) () Representative of an ownership group (two or more owners)
2. What is your profession or occupation? (Individual landowners only.) _____
3. How many acres of land do you or your ownership group own that are located entirely within Antrim and/or Kalkaska County? _____ acres
4. How many acres of land are fenced or posted to prevent others from trespassing? _____ acres
5. Please indicate the approximate number of acres of land you or your ownership group have acquired by any of the methods listed below. (Remember to include only land acquired within Antrim and/or Kalkaska Counties.)
 _____ acres purchased from private individual or company _____ acres inherited _____ acres acquired by gift
 _____ acres purchased from State of Michigan _____ acres acquired by other method _____ (Indicate method above)

NOTE: Answer Question 6 ONLY if you indicated in Question 5 that you have acquired land by PURCHASE. If you HAVE NOT acquired any land by purchase, please skip to Question 7.

6. Why was land PURCHASED in Antrim and/or Kalkaska County rather than elsewhere? Check the reason or reasons that were most important in influencing the purchase decision of you or your ownership group.

- () Property was PURCHASED WHEN YOU WERE A RESIDENT OF THE COUNTY.
 () LAND PRICES WERE MORE REASONABLE than elsewhere.
 () Land was CLOSER TO YOUR HOME OR THE HIGHWAYS WERE BETTER leading from your home to the land.
 () You wanted to RETIRE in the county.
 () You grew up in the county and had ALWAYS WANTED TO OWN PROPERTY THERE.
 () Land was NEAR PUBLIC AREAS, SUCH AS STATE FORESTS, which offered good recreational opportunities.
 () Land offered BETTER HUNTING OR FISHING than elsewhere.
 () Land had better prospects for RESORT OR RECREATIONAL USES other than hunting and fishing.
 () Land had better prospects for FORESTS PRODUCTS, including the growing of Christmas trees.
 () Land had better AGRICULTURAL PROSPECTS than elsewhere.
 () Other(s) _____

7. How many days do you usually spend on your property? (Individual landowners only.) Jan, Feb, Mar . . . _____ days Jul, Aug, Sept . . . _____ days
 Apr, May, Jun . . . _____ days Oct, Nov, Dec . . . _____ days

8. When was the title(s) to the land acquired?

() 1960-65 () 1950-54 () 1940-44 () 1920-29
() 1955-59 () 1945-49 () 1930-39 () Before 1920

9. Please use check marks to indicate uses you have made in the past, are presently making, or plan on making in the future on your land.

Recreational Uses	Past	Present	Future
Summer residence			
Hunting or fishing on own land			
Use of near by Public Areas			
Family outings and picnics			
Water sports			
Winter sports			
Other(s) _____			
Forest Products	Past	Present	Future
Christmas trees			
Pulpwood			
Lumber			
Other(s) _____			
Agricultural Uses	Past	Present	Future
Field, row and special crops			
Horticultural crops			
Livestock, dairy			
Poultry, swine			
Other Uses	Past	Present	Future
No specific use - just believe it is good to own land			
Good investment - expect that land price would go up			
Good investment - plan on subdividing land and selling small plots			
Land held for retirement			
Land held for returns from Soil Bank or other governmental payments			
Other(s) _____			

Local, State and Federal agencies offer advice, technical help, or financial assistance to landowners who are interested in installing land improvement practices on their property. Listed in Question 10 are some of the types of assistance offered by these agencies.

10. Please check if you desire to receive additional information from agencies about any practice listed below.

Land improvement practice for which assistance is available	Check below if you desire to receive further information
Harvest forest products such as pulpwood	
Thin out stands of hardwood	
Plant trees or shrubs for wildlife food or cover	
Develop or improve areas for deer feed	
Construct ponds	
Stock fish	
Improve present fish habitat	
Beautify property	
Other(s) _____	

NOTE: If you have indicated above that you would like to receive further information, you may sign your name and address below. You may personally contact the agencies if you do not desire to sign.

LAST NAME, FIRST, INITIAL ADDRESS
11. Are you a Cooperator with the Antrim or Kalkaska Soil Conservation District?

Yes No

12. Have you received help in the past from any governmental agency in installing land improvement practices on your property?

() Yes () No

If you have received help in the past, please indicate below the type of assistance you received and the agency from which you received the help.

Type of assistance received - Agency which gave assistance
 (1) _____
 (2) _____
 (3) _____

13. Please check the answer regarding each local community facility or regulation that best expresses your opinion.

	Appropriate	Too High	No Opinion	See Comments
Tax Rates				

	Satisfactory	Excellent	No Opinion	See Comments
Cooperation of local people toward absentees				
County Road System				
Snow removal				
Police protection				
Fire protection				
Medical, dental, legal and clerical services				
Retail businesses				

COMMENTS: YOUR COMMENTS ARE ENCOURAGED. THIS SIDE OF THE PAGE IS FOR YOUR USE. COMMENTS ON THE QUESTIONNAIRE OR THE STUDY ARE WELCOME.

REMINDER: PLEASE RETURN QUESTIONNAIRE BY MARCH 21, 1966. SELF ADDRESSED ENVELOPE IS PROVIDED.

COOPERATIVE EXTENSION WORK IN AGRICULTURE AND HOME ECONOMICS
U. S. DEPARTMENT OF AGRICULTURE AND MICHIGAN STATE UNIVERSITY COOPERATING

March 14, 1966

Dear Non-Resident Landowner:

In late February you should have received a questionnaire for non-resident landowners of Antrim and Kalkaska Counties, Michigan.

If you are among the many landowners who returned their completed questionnaire, Michigan State University's Cooperative Extension Service and the Department of Resource Development would like to express their thanks. With your assistance, the study is off to a fine start.

If you have not yet completed and returned the questionnaire, won't you please do so by March 28? We need to include your response in our study. The overall effectiveness of this important research depends upon YOUR reply.

Sincerely,



George P. Graff
Extension Specialist in
Soil and Water Conservation

CODE SHEET FOR ANTRIM AND KALKASKA COUNTIES'
NON-RESIDENT LANDOWNER QUESTIONNAIRE

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
1	Card Number 1 - Card number 1 of 2 2 - Card number 2 of 2	1-2	1
2	County 1 - Antrim 2 - Kalkaska 3 - Both Antrim and Kalkaska	1-3	2
3	Questionnaire Number	001-???	3, 4&5
4	Home Address (from postmark or Question 10) 01 - Detroit (area on map in yellow) 02 - Pontiac 03 - Elsewhere in Tri-County Area (Region I) 04 - Ann Arbor 05 - Jackson 06 - Lansing/East Lansing 07 - Flint/Mount Morris 08 - Port Huron 09 - Elsewhere in Region II 10 - Saginaw 11 - Bay City 12 - Midland 13 - Elsewhere in Region III 14 - Region IV 15 - Region V 16 - Region VI (Upper Peninsula) 17 - Traverse City 18 - Cadillac 19 - Manistee 20 - Elsewhere in Region VII 21 - Region VIII 22 - Muskegon/Muskegon Heights 23 - Grand Rapids 24 - Elsewhere in Region IX 25 - Kalamazoo 26 - Battle Creek	01-99	6&7

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
	27 - Benton Harbor/Benton Heights/ St. Joseph		
	28 - Elsewhere in Region X		
	29 - Chicago/Highland Park/Evanston/ E. Chicago/Gary/Michigan City (and vicinity)		
	30 - Illinois (outside Chicago vicinity) and Indiana		
	31 - Ohio		
	32 - Eastern U.S. (all states east of Mississippi River besides Michigan, Illinois, Indiana and Ohio)		
	33 - Western U.S. (all states west of Mississippi River)		
	34 - Alaska or Hawaii		
	35 - Men in the service		
	99 - No postmark and no address given in Question 10		
5	Township	00-37	8&9
	01 - Banks		
	02 - Torch Lake		
	03 - Central Lake		
	04 - Echo		
	05 - Jordan		
	06 - Warner		
	07 - Star		
	08 - Chestonia		
	09 - Kearney		
	10 - Forest Home		
	11 - Milton		
	12 - Elk Rapids		
	13 - Helena		
	14 - Custer		
	15 - Mancelona (west)		
	16 - Mancelona (east)		
	17 - Clearwater		
	18 - Rapid River		
	19 - Coldsprings		
	20 - Blue Lake		
	21 - Bear Lake (north)		
	22 - Excelsior		

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
	23 - Kalkaska (east)		
	24 - Kalkaska (west)		
	25 - Boardman		
	26 - Orange		
	27 - Oliver		
	28 - Bear Lake (south)		
	29 - Garfield (east)		
	30 - Garfield (central)		
	31 - Garfield (west)		
	32 - Springfield		
	33 - Two townships		
	34 - Three townships		
	35 - Four townships		
	36 - Five townships		
	37 - Six or more townships		
6	Individual or Group Landowner	-	10
	1 - Individual		
	2 - Group		
	3 - Husband and wife		
	4 - Trustee		
	7 - Both checked		
	9 - No response		
7	Occupation or Profession	-	11&12
	01 - Professional, technical and kindred workers		
	02 - Farmers and farm managers and part-time farmers		
	03 - Managers, officials and proprietors (except farm)		
	04 - Clerical and kindred workers		
	05 - Sales workers		
	06 - Craftsmen, foremen and kindred workers		
	07 - Operatives and kindred workers		
	08 - Service workers, except private household		
	09 - Farm laborers and foremen		
	10 - Laborers, except farm and mine		
	11 - Miscellaneous, n.e.c.		
	12 - Retired		
	13 - Widows		

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
	14 - Housewives		
	15 - Servicemen (enlisted)		
	16 - Servicemen (officers)		
	17 - Unable to tell from response		
	19 - Student (college)		
	96 - Not applicable (group owner)		
	97 - Not applicable (trustee)		
	99 - No response		
8	Acres of Land Owned	0001-1,000+	13-16
	9998 - See written comment		
	9999 - No response		
9	Acres of Land Fenced or Posted	001-997	17-19
	999 - No response		
10	No Response to any Method of Acquiring Title in Question 5	9	20
11	Acres of Land Purchased	000-997	21-23
	997 - Unknown amount		
12	Acres of Land Inherited	000-997	24-26
	997 - Unknown amount		
13	Acres of Land Acquired by Gift	000-997	27-29
	997 - Unknown amount		
14	Acres of Land Purchased from State	000-997	30-32
	997 - Unknown amount		
15	Acres of Land Acquired by Other Method	000-997	33-35
	997 - Unknown amount		
16	Other Method of Acquiring Land (if applicable)		36
	1 - Gift		
	2 - Repayment of debt		
	3 - Tax sale		
	4 - Mortgage foreclosure		
	5 - Purchased from town		
	6 - Exchange		
	7 - "Proved upon tax title"		

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
	8 - Estate administrator		
	9 - "Quit claim deed and pay back in taxes"		
17	Land was Indicated as Purchased in Question 5 but there was No Response to Question 6	9	37
18	Land was Purchased When a Resident of Either County	1	38
19	Land Prices were More Reasonable	1	39
20	Land was Closer to Home or the Highways were Better	1	40
21	Land Held for Retirement	1	41
22	Always Wanted to Own Property in the Counties; Grew Up There	1	42
23	Land Near Public Areas such as State Forests	1	43
24	Land Offered Better Hunting or Fishing	1	44
25	Land had Better Prospects for Resort or Other Recreational Uses	1	45
26	Land had Better Prospects for Forest Products	1	46
27	Land had Better Prospects for Agricultural Uses	1	47
28	Other Reason(s) Indicated for Purchasing the Land	-	48
	1 - Reason listed		
	9 - No reason indicated but there was a check mark by "other methods"		

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
29	Group Owner - not applicable	6	
	No zeroes, no "nones," and no comments at all by any group of months listed in Question 7	9	49
	Group owner - but answered anyway	5	
30	There was a comment made pertaining to Question 7 but it is not possible to determine how many days the land is visited from the comment	8	50
31	Number of Days the Land is Visited in Jan., Feb., or Mar.	00-90	51&52
32	Number of Days the Land is Visited in April, May, or June	00-90	53&54
33	Number of Days the Land is Visited in July, Aug., or Sept.	00-90	55&56
34	Number of Days the Land is Visited in Oct., Nov., or Dec.	00-90	57&58
35	Comment says does not know when title was acquired	8	
	No response at all as to when the land title was acquired in Question 8	9	59
36	Title was Acquired from 1960-65	1	60
37	Title was Acquired from 1955-59	1	61
38	Title was Acquired from 1950-54	1	62
39	Title was Acquired from 1945-49	1	63
40	Title was Acquired from 1940-44	1	64
41	Title was Acquired from 1930-39	1	65
42	Title was Acquired from 1920-29	1	66
43	Title was Acquired Prior to 1920	1	67

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
44	Written Comment Indicating No Use of the Land	8	
	No response at all as to any use of the land in Question 9	9	68
	NOTE: All questions on past, present or future land use will use the following code:		
	1 - Past		
	2 - Present		
	3 - Future		
	4 - Past, Present, Future		
	5 - Past, Present		
	6 - Past, Future		
	7 - Present, Future		
	8 - See written comment		
45	Summer Residence	1-8	69
46	Hunting or Fishing on Own Land	1-8	70
47	Use of Nearby Public Areas	1-8	71
48	Family Outings and Picnics	1-8	72
49	Water Sports	1-8	73
50	Winter Sports	1-8	74
51	Other Recreational Uses	1-8	75
52	Christmas Trees	1-8	76
53	Pulpwood	1-8	77
54	Lumber	1-8	78
55	Other Forest Uses	1-8	79
56	Card Number	1-2	1
	1 - Card number 1 of 2		
	2 - Card number 2 of 2		

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
57	County 1 - Antrim 2 - Kalkaska 3 - Both Antrim and Kalkaska	1-3	2
58	Questionnaire Number	001-???	3, 4&5
59	Field, Row and Special Crops	1-8	6
60	Horticultural Crops	1-8	7
61	Livestock, Dairy	1-8	8
62	Poultry, Swine	1-8	9
63	No Specific Use - just believe it is good to own land	1-8	10
64	Good Investment - plan on subdividing and selling small plots	1-8	11
65	Land Held for Retirement	1-8	12
66	Land Held for Returns from Soil Bank, etc.	1-8	13
67	Land Held for Other Miscellaneous Uses	1-8	14
68	No Response at all to Question 10	9	15
69	Written Comments Made Beside Checks to Question 10	8	16
70	Harvest Forest Products such as Pulpwood	1	17
71	Thin Out Stands of Hardwood	1	18
72	Plant Trees or Shrubs for Wildlife Food or Cover	1	19
73	Develop or Improve Areas for Deer Feed	1	20
74	Construct Ponds	1	21

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
75	Stock Fish	1	22
76	Improve Present Fish Habitat	1	23
77	Beautify Property	1	24
78	Other Improvements Listed	1	25
79	Name and Address Given for Further Response	-	26
	1 - Name was given		
	2 - Name was not given		
	3 - Name wasn't given because entire question was indicated as no response in column 15		
	4 - Said he would contact the agencies		
80	Soil Conservation District Cooperator or Not	-	27
	1 - Yes		
	2 - No		
	5 - Would like to be one		
	6 - Used to be a member but no longer		
	7 - Comment says don't know what Cooperator or the District is		
	8 - See written comment		
	9 - No response		
81	Had Received Help in the Past from Agencies?	-	28
	1 - Yes		
	2 - No		
	8 - See written comment		
	9 - No response		
82	Said had Received Help in Past but Failed to List Agency	9	29
83	Received Help in Harvesting Forest Products	1	30
84	Received Help in Thinning Out Stands of Hardwood	1	31
85	Received Help in Planting Trees or Shrubs for Wildlife	1	32

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
86	Received Help in Improving Areas for Deer Feed	1	33
87	Received Help in Constructing Ponds	1	34
88	Received Help in Stocking Fish	1	35
89	Received Help in Beautifying Property	1	36
90	Received Help in Planting Christmas Trees	1	37
91	Received Help in Other Methods Than Listed	1	38
92	Received Help from Soil Conservation Service	1	39
93	Received Help from Soil Conservation District	1	40
94	Received Help from County Resource Development Agent	1	41
95	Received Help from Agricultural Conservation Program	1	42
96	Received Help from State Forester	1	43
97	Received Help from M.D.C. Fish and Game Management	1	44
98	Received Help from M.D.C. Law Enforcement Officers	1	45
99	Received Help from M.D.C. Fire Control Officers	1	46
100	Received Help from Other Agencies Than Listed Above	1	47
101	No Response to Question 13 - all of opinion questions	9	48

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
102	Tax Rates 0 - No opinion 1 - Too high 2 - Appropriate 8 - Written comment 9 - No response	-	49
103	Cooperation of Local People 0 - No opinion 1 - Poor 2 - Satisfactory 3 - Excellent 8 - Written comment 9 - No response	-	50
NOTE: Columns 51-57 use the same code as column 50, i.e., the remaining opinion questions are coded the same as was the cooperation of local people.			
104	County Road System	-	51
105	Snow Removal	-	52
106	Police Protection	-	53
107	Fire Protection	-	54
108	Medical, Dental, Legal and Clerical Services	-	55
109	Retail Businesses	-	56
110	Comments Were Not Made in the Space Provided	9	57
111	Comments Were Made in the Space Provided 01 - Especially notable comments were made - favorable 02 - Especially notable comments were made - unfavorable 03 - Personal requests were made in the comments	1-7	58-64

<u>Master Item</u>	<u>Description</u>	<u>Code</u>	<u>Column</u>
04	- Comments about taxes		
05	- Comments about roads		
06	- Comments about deer hunting season on deer or other wildlife		
07	- Comments about fire, police, etc.		
08	- General comments		

APPENDIX B

TABULAR ANALYSIS OF QUESTIONNAIRE RETURNS

(Analysis of home address information that was obtained from the postmarks stamped on return envelopes preceeds the analysis of Questions 1 through 13 on a question-by-question basis. In this appendix, percentage figures are based upon the number of respondents who answered each question being analyzed.)

Appendix Table B-1. Analysis of Home Address Information
Obtained from Postmarks Stamped on Return Envelopes

	Total Returns	No Post- mark Stamped	Total Analyzed Responses	Regions						Ill. and Ind.	Chicago and vic.	Ohio	East. U.S.	West. U.S.	Alaska, Hawaii, & Svce.
				I	II	III	IV- VIII	IX	X						
Antrim: Total Percent Anal.	469	30	439	191 43.5	73 16.6	11 2.5	19 4.4	35 8.0	17 3.9	11 2.5	18 4.1	20 4.6	21 4.8	20 4.6	3 0.7
Kalkaska: Total Percent Anal.	498	24	474	155 32.7	88 18.6	16 3.4	38 8.1	45 9.5	40 8.4	7 1.4	21 4.4	27 5.7	16 3.4	19 4.0	2 0.4
Both: Total Percent Anal.	6	0	6	2 33.3	2 33.3	0 0.0	0 0.0	1 16.7	0 0.0	1 16.7	0 0.0	0 0.0	0 0.0	0 0.0	0 0.0
ALL: Total Percent Anal.	973	54	919	348 37.5	163 17.7	27 2.9	57 6.2	81 8.8	57 6.2	19 2.1	39 4.2	47 5.1	37 4.0	39 4.2	5 0.5

Appendix Table B-2. Analysis of Question 1: "Are you an
individual landowner or a representative of an ownership group?"

	Total Returns	No Response	Total Analyzed Responses	Both		
				Individual	Group	Trustee
Antrim: Total Percent Anal.	469	1	468	413 88.2	48 10.3	5 1.1
Kalkaska: Total Percent Anal.	498	2	496	430 86.5	60 12.1	3 0.6
Both: Total Percent Anal.	6	0	6	5 83.3	1 16.7	0 0.0
ALL: Total Percent Anal.	973	3	970	848 87.4	109 11.2	8 0.8

Appendix Table B-3. Analysis of Question 2: "What is your profession or occupation? (Individual landowners only.)"

	Prof. and Tech.	Farm Mgr.	Cler.	Mgrs., Office, Prop.	Sales	Craft. Fore.	Operatives	Svcs. Wkrs.	La-borers	Retired	Housewives	Factory	Student or Svce.	Unable to Tell
Antrim: Total ¹	80	8	29	11	24	94	28	14	3	44	24	26	3	15
Percent Anal.	19.9	2.0	7.2	2.7	6.0	23.4	7.0	3.5	0.7	10.9	6.0	6.5	0.7	3.7
Kalkaska: Total ²	68	16	38	8	30	82	25	14	6	73	14	32	4	19
Percent Anal.	16.0	3.8	7.8	1.9	7.1	19.3	5.9	3.3	1.4	17.2	3.3	7.5	0.9	4.5
Both: Total ³	2	0	0	0	0	1	0	0	0	2	0	0	0	0
Percent Anal.	40.0	0.0	0.0	0.0	0.0	20.0	0.0	0.0	0.0	40.0	0.0	0.0	0.0	0.0
ALL: Total ⁴	150	24	62	19	54	177	53	28	9	119	38	58	7	34
Percent Anal.	18.0	2.9	7.5	2.3	6.5	21.3	6.4	3.4	1.1	12.8	4.6	7.0	0.8	4.1

¹ 67 no responses and 402 analyzed responses.

² 73 no responses and 425 analyzed responses.

³ 1 no response and 5 analyzed responses.

⁴ 141 no responses and 832 analyzed responses.

Appendix Table B-4. Analysis of Questions 3 and 4: "How many acres of land do you or your ownership group own that are located entirely within Antrim and/or Kalkaska County? How many acres of land are fenced or posted to prevent others from trespassing?"

	Column Number								
	1	2	3	4	5	6	7	8	9
	Total Ret.	No. Resp.	Total Anal.	Percent Fenced or Posted	Ave. Acres Owned	Percent Fenced or Posted	No. Fenced or Posted	Percent Total Resp.	Ave. Acres Fenced or Posted
Antrim: Total	469	1	468	49.1	90.2	49.1	10,500	41.2	24.1
Kalkaska: Total	498	2	496	48.8	84.5	48.8	14,100	55.3	20.8
Both: Total	6	0	6	2.1	300.0	2.1	900	3.5	50.0
ALL: Total	973	3	970	100.0	88.9	100.0	25,500	100.0	22.6

¹ Percent of the total number of responded acres that were present within each county or within both counties. (Total of Column 1 divided into rows of Column 1.)

² Percent of the total number of responded acres for each county and both counties that were fenced or posted. (Column 4 divided by Column 1.)

³ Percent of the total number of responded acres that were fenced or posted that were present within each county or within both counties. (Total of Column 4 divided into rows of Column 4.)

⁴ Percent of the total number of respondents for each county and both counties who indicated that their land or a part thereof was fenced or posted.

Appendix Table B-5. Analysis of Question 5: "Please indicate the approximate number of acres of land you or your ownership group have acquired by any of the methods listed below. . . ."

	Antrim	Kalkaska	Both	All
Total returns	469	498	6	973
No response	1	4	0	5
Total analyzed responses . .	468	494	6	968
<u>Purchased</u>				
Total responses	385	379	6	770
Total acres acquired	35,400	29,900	1,690	67,010
Percent of responded land . .	84.2	73.6	94.9	79.3
Average acres per owner . . .	91.9	78.9	281.5	87.0
<u>Inherited</u>				
Total responses	47	54	1	102
Total acres acquired	3,870	3,660	40	7,570
Percent of responded land . .	9.2	9.0	2.3	9.0
Average acres per owner . . .	82.4	67.8	40.0	74.3
<u>Gift</u>				
Total responses	14	29	0	43
Total acres acquired	670	1,320	0.0	1,990
Percent of responded land . .	1.6	3.2	0.0	2.4
Average acres per owner . . .	47.0	45.5	0.0	46.2
<u>Acquired from State</u>				
Total responses	24	34	1	59
Total acres acquired	970	4,320	40	5,330
Percent of responded land . .	2.3	10.6	2.3	6.3
Average acres per owner . . .	40.3	127.2	40.0	90.3
<u>Other Method</u>				
Total responses	17	19	0	36
Total acres acquired	1,150	1,450	0.0	2,610
Percent of responded land . .	2.7	3.6	0.0	3.1
Average acres per owner . . .	67.8	76.5	0.0	72.4

Appendix Table B-6. Analysis of Question 6: "Why was land PURCHASED in Antrim and/or Kalkaska County rather than elsewhere? Check the reason or reasons that were most important in influencing the purchase decision of you or your ownership group."

Check List of Answers												Column No. Below	
Property was PURCHASED WHEN YOU WERE A RESIDENT OF THE COUNTY.													1
LAND PRICES WERE MORE REASONABLE than elsewhere.													2
Land was CLOSER TO YOUR HOME OR THE HIGHWAYS WERE BETTER leading from your home to the land.													3
You wanted to RETIRE in the county.													4
You grew up in the county and had ALWAYS WANTED TO OWN PROPERTY THERE.													5
Land was NEAR PUBLIC AREAS, SUCH AS STATE FORESTS, which offered good recreational opportunities.													6
Land offered BETTER HUNTING OR FISHING than elsewhere.													7
Land had better prospects for RESORT OR RECREATIONAL USES other than hunting and fishing.													8
Land had better prospects for FORESTS PRODUCTS, including the growing of Christmas trees.													9
Land had better AGRICULTURAL PROSPECTS than elsewhere.													10
Other(s)													11

Appendix Table B-7. Analysis of Question 7:
 "How many days do you usually spend on
 your property? (Individual landowners only.)"

	Jan.- Mar.	Apr.- June	July- Sept.	Oct.- Dec.
<u>Antrim</u> ¹				
Total days	538	3,161	6,529	2,786
Total respondents	85	200	261	227
Average days per respondent . .	6.3	15.8	25.0	12.3
Percent of respondents ²	18.9	44.4	58.0	50.4
<u>Kalkaska</u> ³				
Total days	780	3,656	6,004	3,603
Total respondents	87	237	271	246
Average days per respondent . .	8.9	15.4	22.2	14.6
Percent of respondents ²	18.9	51.5	58.9	53.5
<u>Both</u> ⁴				
Total days	4	45	55	40
Total respondents	1	2	2	2
Average days per respondent . .	0.8	9.0	11.0	8.0
Percent of respondents ²	20.0	40.0	40.0	40.0
<u>ALL</u> ⁵				
Total days	1,322	6,862	12,588	6,429
Total respondents	173	439	534	475
Average days per respondent . .	7.6	15.6	23.6	13.5
Percent of respondents ²	19.0	48.0	58.4	52.0
Average days visited: all questionnaire respondents . . .	1.4	7.5	13.8	7.0

¹ 65 no responses and 404 analyzed responses.

² Percent of respondents to the question of each county or of both counties who indicated they visited their land during each separate quarter.

³ 65 no responses and 433 analyzed responses.

⁴ 1 no response and 5 analyzed responses.

⁵ 131 no responses and 842 analyzed responses.

Appendix Table B-8. Analysis of Question 8: "When was the title(s) to the land acquired?"

	Total Returns	No Resp.	Total- Anal. Resp.	1950-1959										1960-1969		1970-1979		1980-1989		1990-1999		2000-2009		Before 2010
				1950- 1954	1955- 1959	1960- 1964	1965- 1969	1970- 1974	1975- 1979	1980- 1984	1985- 1989	1990- 1994	1995- 1999	2000- 2004	2005- 2009	2010- 2014	2015- 2019	2020- 2024	2025- 2029	2030- 2034	2035- 2039	2040- 2044	2045- 2049	
Antrim: Total	469	23	446	141	137	76	37	31	38	20	4													
Percent Anal.				31.6	30.7	17.0	8.3	7.0	6.3	4.5	0.9													
Kalkaska: Total	498	36	462	153	114	70	56	46	23	20	19													
Percent Anal.				33.1	24.7	15.2	12.1	10.0	5.0	4.3	4.1													
Both: Total	6	0	6	3	2	1	1	0	1	0	0													
Percent Anal.				50.0	33.3	16.7	16.7	0.0	16.7	0.0	0.0													
ALL: Total	973	59	914	297	252	147	94	77	52	40	23													
Percent Anal.				32.5	27.6	16.1	10.3	8.4	5.7	4.4	2.5													

Appendix Table B-9. Analysis of Question 9: "Please use check marks to indicate uses you have made in the past, are presently making, or plan on making in the future on your land." (The table below gives an analysis of all questionnaires on which respondents had checked any combination of answers that indicated some present or planned future use of the respondent's land.)

	Antrim ¹		Kalkaska ²		Both ³		ALL ⁴	
	Total ⁵	Percent Anal.	Total ⁵	Percent Anal.	Total ⁵	Percent Anal.	Total ⁵	Percent Anal.
Summer residence	178	39.7	174	37.0	3	50.0	355	38.4
Hunting and fishing	208	46.4	236	50.2	3	50.0	447	48.4
Use of nearby public areas	106	23.7	116	24.7	2	33.3	224	24.2
Family outings and picnics	123	25.9	133	28.3	2	33.3	258	28.0
Water sports	58	12.9	46	9.8	1	16.7	105	11.4
Winter sports	77	17.2	62	13.2	2	33.3	140	15.2
Other recreational	23	5.1	27	5.7	0	0.0	50	5.4
Christmas trees	108	24.1	122	26.0	4	66.7	234	25.3
Pulpwood	108	24.1	103	21.9	5	83.3	216	23.4
Lumber	123	27.5	92	19.6	3	50.0	218	23.6
Other forest uses	10	2.2	17	3.6	0	0.0	27	2.9
Field and row crops	42	9.4	22	4.7	0	0.0	64	6.9
Horticultural crops	18	4.0	12	2.6	1	16.7	31	3.4
Livestock and dairy	27	6.0	14	3.0	0	0.0	41	4.4
Poultry and swine	13	2.9	10	2.1	0	0.0	23	2.5
No specific use	114	25.4	124	26.4	2	33.3	240	26.0
Good investment—expect price to rise	102	22.8	96	20.4	3	50.0	201	21.8
Good investment—plan to subdivide	28	6.3	25	5.3	2	33.3	55	6.1
Retirement	165	36.8	155	33.0	3	50.0	323	35.0
Soil Bank	10	2.2	18	3.8	0	0.0	28	3.0
Other miscellaneous uses	23	5.1	24	5.1	1	16.7	48	5.3

¹ 21 no responses and 448 analyzed responses.

² 28 no responses and 470 analyzed responses.

³ 0 no responses and 6 analyzed responses.

⁴ 49 no responses and 924 analyzed responses.

⁵ Total number of checks per each individual item on the check list.

Appendix Table B-10. Analysis of Question 10:
 "Please check if you desire to receive additional
 information from agencies about any practice listed below."

<u>Check List of Answers</u>	<u>Column No. Below</u>									
Harvest forest products such as pulpwood	1									
Thin out stands of hardwood	2									
Plant trees or shrubs for wildlife food or cover	3									
Develop or improve areas for deer feed	4									
Construct ponds	5									
Stock fish	6									
Improve present fish habitat	7									
Beautify property	8									
Plant Christmas trees or pines ¹	9									
Other(s)	10									

	<u>Column Number</u>									
	1	2	3	4	5	6	7	8	9	10
<u>Antrim</u> ²										
Total	124	113	151	128	127	75	34	125	10	26
Percent Anal.	41.6	37.9	50.7	43.0	42.6	25.2	11.4	41.9	3.3	8.7
<u>Kalkaska</u> ³										
Total	104	71	167	149	97	61	32	108	6	23
Percent Anal.	34.1	23.3	54.8	48.9	31.8	20.0	10.5	35.4	2.1	7.5
<u>Both</u> ⁴										
Total	4	2	4	4	3	2	1	4	0	1
Percent Anal.	80.0	40.0	80.0	80.0	60.0	40.0	20.0	80.0	0.0	20.0
<u>ALL</u> ⁵										
Total	232	186	322	281	227	138	67	237	16	50
Percent Anal.	38.2	30.1	53.0	46.2	37.3	22.7	11.0	39.0	2.6	8.2

¹This category was not included in the questionnaire. It was added during the coding process of "other(s)" category.

²171 no responses and 298 analyzed responses.

³193 no responses and 305 analyzed responses.

⁴1 no response and 5 analyzed responses.

⁵365 no responses and 608 analyzed responses.

Appendix Table B-11. Analysis of That Part of Question 10 Which Afforded an Opportunity for Respondents to Write Their Name and Address for Future Contact by Agencies: "NOTE: If you have indicated above that you would like to receive further information, you may sign your name and address below. You may personally contact the agencies if you do not desire to sign."

	Total Returns	No Response to Entire Question 10	Total Analyzed Responses	Name Was Given	Name Not Given	Total who Asked for Help
Antrim: Total Percent Anal.	469	161	308	282 91.2	26 8.4	298
Kalkaska: Total Percent Anal.	498	187	311	281 90.4	30 0.0	305
Both: Total Percent Anal.	6	1	5	5 100.0	0 0.0	5
ALL: Total Percent Anal.	973	349	624 ^a	568 ^b 91.0	56 9.0	608 ^a
Percent of ALL:				58.4	5.8	

^aThere were 608 respondents who checked at least one item on the check-list of types of help. There were 624 respondents to the entire question, however, for 16 respondents included their name and address even though they had not checked any item on the check-list.

^bThis total also includes about 19 respondents who included their name and address elsewhere than in Question 10, such as in the space for comments on the back page of the questionnaire.

Appendix Table B-12. Analysis of Question 11: "Are you a Cooperator with the Antrim or Kalkaska Soil Conservation District?"

	Antrim ¹		Kalkaska ²		Both ³		ALL ⁴	
	Total	Percent Anal.	Total	Percent Anal.	Total	Percent Anal.	Total	Percent Anal.
Yes	59	15.1	111	28.2	2	33.3	172	21.7
No	303	77.5	265	67.3	4	66.7	573	72.4
Comment indicated would like to be a Cooperator . . .	4	1.0	2	0.5	0	0.0	6	0.8
Comment indicated used to be a Cooperator but is no longer	7	1.8	0	0.0	0	0.0	7	0.9
Asked what a Cooperator is. .	15	3.8	23	5.8	0	0.0	38	4.8
Other written comments . . .	3	0.8	3	0.8	0	0.0	6	0.8

¹78 no responses and 391 analyzed responses.

²104 no responses and 394 analyzed responses.

³0 no responses and 6 analyzed responses.

⁴182 no responses and 791 analyzed responses.

Appendix Table B-13. Analysis of Question 12: "Have you received help in the past from any governmental agency in installing land improvement practices on your property? . . . If you have received help in the past, please indicate below the type of assistance you received and the agency from which you received the help."

	Antrim ¹		Kalkaska ²		Both ³		ALL ⁴	
	Total	Percent Anal.	Total	Percent Anal.	Total	Percent Anal.	Total	Percent Anal.
Had received help	65	15.4	83	18.6	2	33.3	150	17.1
Had not received help	357	84.6	364	81.4	4	66.7	725	82.9
Soil Conservation Service ⁵ . .	4		6		0		10	
Soil Conservation District . .	7		13		0		20	
Resource Development Agency .	5		4		0		9	
A. C. P.	14		39		1		54	
State forester	5		6		0		11	
Mich. Dept. of Conservation .	0		7		0		7	
Uncodable or unspecific . . .	27		25		0		52	
Failed to list agency	9		5		1		15	
Harvest forest products ⁵ . . .	0		3		0		3	
Timber stand improvement . .	12		13		0		25	
Wildlife plantings	1		12		0		13	
Ponds built	4		4		0		8	
Christmas trees	6		4		0		9	
Reforestation	30		51		0		81	
Other types of help	36		33		2		71	

¹47 no response and 422 analyzed responses.

²51 no responses and 447 analyzed responses.

³0 no responses and 6 analyzed responses.

⁴98 no responses and 875 analyzed responses.

⁵Percentage figures for all responses to agencies and type of help received are based on total number of respondents who had received help.

Appendix Table B-14. Analysis of Question 13, an Eight-Part Opinion
 Question: "Please check the answer regarding each local
 community facility or regulation that best expresses your opinion."

	No Resp. ¹	No Opinion	Too High	Appro- priate	Only a Written Comment	
<u>Tax Rates:</u>						
Antrim: Total	80	59	120	200	11	
Percent Anal.	17.1	12.6	25.6	42.6	2.3	
Kalkaska: Total	91	80	85	232	9	
Percent Anal.	18.3	16.1	17.1	46.6	1.8	
Both: Total	1	0	3	2	0	
Percent Anal.	16.7	0.0	50.0	33.3	0.0	
ALL: Total	172	139	208	434	20	
Percent Anal.	17.7	14.3	21.4	44.6	2.1	
	No Resp.	No Opinion	Poor	Satis- factory	Excel- lent	Only a Written Comment
<u>Cooperation of local people toward absentees:</u>						
Antrim: Total	118	68	36	144	100	4
Percent Anal.	25.2	14.5	7.7	30.7	21.3	0.9
Kalkaska: Total	117	69	33	154	120	4
Percent Anal.	23.5	13.9	6.6	30.9	24.1	0.8
Both: Total	1	0	0	5	0	0
Percent Anal.	16.7	0.0	0.0	83.3	0.0	0.0
ALL: Total	236	137	69	303	220	8
Percent Anal.	24.3	14.1	7.1	31.1	22.6	0.8
<u>County Road System:</u>						
Antrim: Total	97	41	26	205	91	10
Percent Anal.	20.7	8.7	5.5	43.7	19.4	2.1
Kalkaska: Total	112	42	21	203	114	5
Percent Anal.	22.5	8.4	4.2	40.8	22.9	1.0
Both: Total	1	0	0	5	0	0
Percent Anal.	16.7	0.0	0.0	83.3	0.0	0.0
ALL: Total	210	85	47	413	205	15
Percent Anal.	21.6	8.7	4.8	42.4	21.1	1.5

Appendix Table B-14--Continued

	No Resp.	No Opinion	Poor	Satis- factory	Excel- lent	Only a Written Comment
<u>Snow removal:</u>						
Antrim: Total	146	96	24	120	77	4
Percent Anal.	31.1	20.5	5.1	25.6	16.4	0.9
Kaskaska: Total	161	97	17	113	106	6
Percent Anal.	32.3	19.5	3.4	22.7	21.3	1.2
Both: Total	2	0	0	4	0	0
Percent Anal.	33.3	0.0	0.0	66.7	0.0	0.0
ALL: Total	309	193	41	237	183	10
Percent Anal.	31.8	19.8	4.2	24.4	18.8	1.0
<u>Police Protection:</u>						
Antrim: Total	147	124	35	119	37	6
Percent Anal.	31.3	26.4	7.5	25.4	7.9	1.3
Kaskaska: Total	175	138	46	97	36	7
Percent Anal.	35.1	27.7	9.2	19.5	7.2	1.4
Both: Total	4	0	0	2	0	0
Percent Anal.	66.7	0.0	0.0	33.3	0.0	0.0
ALL: Total	326	262	81	218	73	13
Percent Anal.	33.5	26.9	8.3	22.4	7.5	1.3
<u>Fire Protection:</u>						
Antrim: Total	171	147	34	91	22	3
Percent Anal.	36.5	31.3	7.2	19.4	4.7	0.6
Kaskaska: Total	186	153	35	82	36	7
Percent Anal.	37.3	30.7	7.0	16.5	7.2	1.4
Both: Total	3	1	0	2	0	0
Percent Anal.	50.0	16.7	0.0	33.3	0.0	0.0
ALL: Total	360	301	69	175	58	10
Percent Anal.	36.9	30.9	7.1	17.9	6.0	1.0
<u>Medical, dental, legal and clerical services:</u>						
Antrim: Total	162	125	11	133	32	5
Percent Anal.	34.5	26.7	2.3	28.4	7.0	1.1

Appendix Table B-14--Continued

	No Resp.	No Opinion	Poor	Satis- factory	Excel- lent	Only a Written Comment
Kalkaska: Total	195	144	8	114	36	2
Percent Anal.	39.2	28.9	1.6	22.9	7.2	0.4
Both: Total	3	0	0	3	0	0
Percent Anal.	50.0	0.0	0.0	50.0	0.0	0.0
ALL: Total	360	269	19	250	68	7
Percent Anal.	36.9	27.6	2.0	25.6	6.9	0.7
<u>Retail business:</u>						
Antrim: Total	145	83	17	182	39	2
Percent Anal.	30.9	17.7	3.6	38.8	8.3	0.4
Kalkaska: Total	164	85	26	179	41	6
Percent Anal.	32.9	17.1	5.2	35.9	8.2	1.2
Both: Total	3	0	0	3	0	0
Percent Anal.	50.0	0.0	0.0	50.0	0.0	0.0
ALL: Total	312	166	43	364	80	8
Percent Anal.	32.1	17.1	4.4	37.4	8.2	0.8

¹For all of Table B-14, this "No Response" column indicates the number of respondents to any part of Question 13 who did not respond to the part under consideration in each row. The total number of no responses to each part of the question is the figure in the appropriate row of the "No Response" column added to the following list of no responses to any part of Question 13.

Antrim: 37 no responses to any part of Question 13, subtracted from 469 total returned questionnaires, leaves 432 total respondents to at least one part of Question 13.

Kalkaska: 46 no responses from 498 total returned questionnaires leaves 452 total respondents to at least one part of Question 13.

Both: 0 no responses from 6 total returned questionnaires leaves 6 total respondents to at least one part of Question 13.

ALL: 83 no respondents from 973 total returned questionnaires leaves 890 total respondents to at least one part of Question 13.

APPENDIX C

METHOD OF CLASSIFYING TOWNSHIPS ACCORDING TO CERTAIN RESOURCE CHARACTERISTICS AND TABULAR ANALYSIS BY TOWNSHIP GROUPINGS TO SELECTED QUESTIONS

Explanation

Survey or government townships were classified according to the percent of their total area that was in lakes and ponds, in public lands or in private nonresident land of 5,000 or more acres, and in First-Class and Second-Class Agricultural Land. The references from which these percents were based have been mentioned in Chapter IV, pages 63 through 71. For most townships, the amount of water in lakes and ponds was totaled from Humphrys and Green, but for the townships that include the large lakes in western Antrim County the 1940 Census figures on water acreages were used.

For each of the five groupings of townships, the following information has been included in Appendix Table C-2.

1. Percents of total land area in lakes and ponds, towns, public land, large nonresidential holdings of 5,000 or more acres, and nonresidential holdings from 10 to 4,999 acres.
2. Acres of nonresident land recorded from tax rolls, and acres of land represented by the questionnaire's responses.
3. Average acres responded.
4. Total, average, and percentage figures of fenced and posted lands.
5. Percent of group and of individual ownerships.
6. Analysis of Question 6 about why land was purchased in the two study counties.
7. Analysis of Question 7 about the number of days nonresidents visited their land.

8. Analysis of Question 8 about the time of title acquisition.
9. Analysis of Question 9 about land use, including only statistics about the present or planned future use of the land.

The percentage figures in Appendix Table C-2 which pertain to Questions 6 through 9 are not based on the number of respondents to each question as are the tables of Appendix B. Rather, the percentage figures in Appendix Table C-2 are based upon the total number of check marks to the alternative answers of each question.

Appendix Table C-1. Method of Classifying Townships
According to Certain Resource Characteristics

Group of Townships ¹	Classification Description and Townships In- cluded in Each Classification ²	<u>Percent of Total Land and Water Area</u>		
		In Lakes or Ponds	In Public or Private of 5,000 or More Acres	In 1st Class and 2d Class Agr. Land
A	HIGHLY SIGNIFICANT RESOURCES, USUAL- LY GOOD AGRICUL- TURAL LAND, VERY LITTLE PUBLIC LAND			
	Twp. 31 N, 8 W	12.2	0.0	45-35
	Twp. 30-31 N, 9 W	21.7	0.0	0-40
	Twp. 30 N, 8 W	33.7	4.1	38-24
	Twp. 30-29 N, 9 W	23.1	0.3	20-20
	Twp. 29 N, 8 W	35.2	0.0	17-50
	Twp. 29 N, 9 W	36.5	0.6	20-20
	All twps. in Group A	26.0	0.8	23-32
B	SIGNIFICANT WATER RESOURCES, FAIR TO GOOD AGRICULTURAL LAND, SOME PUBLIC LAND			
	Twp. 32 N, 8-9 W	2.2	0.1	54-23
	Twp. 31 N, 7 W	1.3	5.8	0-70
	Twp. 30 N, 7 W	3.1	5.8	10-60
	Twp. 29 N, 7 W	1.6	2.4	10-70
	Twp. 28 N, 8 W	5.5	8.3	11-78
	Twp. 26 N, 7 W	1.9	1.9	10-70
	All twps. in Group B	2.6	4.1	16-62

Appendix Table C-1--Continued

Group of Townships ¹	Classification Description and Townships In- cluded in Each Classification ²	Percent of Total Land and Water Area		
		In Lakes or Ponds	In Public or Private of 5,000 or More Acres	In 1st Class and 2d Class Agr. Land
C	SIGNIFICANT WATER RESOURCES, POOR TO FAIR AGRICUL- TURAL LAND, MOD- ERATE TO MUCH PUBLIC LAND			
	Twp. 28 N, 6 W	4.6	19.5	10-70
	Twp. 28 N, 5 W	4.8	72.6	0-40
	Twp. 27 N, 5 W	2.2	69.3	0-20
	Twp. 27 N, 6 W	1.9	29.0	0-60
	All twps. in Group C	3.3	47.6	3-48
D	NONE TO SOME WATER RESOURCES, POOR TO GOOD AG- RICULTURAL LAND, MODERATE TO MUCH PUBLIC LAND			
	<u>Fractured public land</u>			
	Twp. 28 N, 7 W	0.5	38.5	0-90
	Twp. 27 N, 7 W	1.0	20.3	10-50
	<u>Moderate amount of relatively contiguous public land</u>			
	Twp. 26 N, 8 W	0.5	30-7	20-40
	Twp. 25 N, 8 W	0.8	22.0	10-70
	Twp. 25 N, 7 W	0.1	41.1	0-70
	Twp. 30 N, 6 W	0.1	44.3	0-70
	Twp. 31 N, 5 W	0.2	44.1	10-40
	Twp. 30 N, 5 W	0.2	21.0	10-70
	<u>Some relatively con- tiguous public land</u>			
	Twp. 29 N, 6 W	0.4	9.0	0-100
	Twp. 31 N, 6 W	0.1	14.9	10-50

Appendix Table C-1--Continued

Group of Townships ¹	Classification Description and Townships In- cluded in Each Classification ²	Percent of Total Land and Water Area		
		In Lakes or Ponds	In Public or Private of 5,000 or More Acres	In 1st Class and 2d Class Agr. Land
(D)	<u>Much public land, Manistee River; and large private nonresidential lands</u>			
	Twp. 25 N, 6 W	0.1	86.0	0-0
	Twp. 26 N, 6 W	0.6	61.8	0-30
	Twp. 26 N, 5 W	0.1	80.3	0-0
	<u>Much public land, some large non- residential lands; little or no water</u>			
	Twp. 25 N, 5 W	0.0	87.4	0-10
	Twp. 27 N, 8 W	1.1	85.3	0-40
	Twp. 29 N, 5 W	0.3	84.3	0-10
	All twps. in Group D	0.4	48.2	4-46

¹Group E was the 37 questionnaires returned from nonresidents who owned land in more than one township.

²Sub-classifications in Group D have been described only to facilitate the researcher's attempts to classify townships. No tabular analysis in Appendix Table C-2 has broken down questionnaire responses to the sub-classification level.

Appendix Table C-2. Summary of Responses by Classification of Townships

Question Number Analyzed	Classification of Townships					
	A	B	C	D	Two or More	Total
--	Total land and water (acres)	99,600	142,100	93,400	364,400	699,500
	Total lakes and ponds ¹	25,900	3,700	3,100	1,400	34,100
	Percent in lakes and ponds	26.0	2.6	3.3	0.4	4.9
	Percent in land	74.0	97.4	96.7	99.6	95.1
	Percent land in towns	2.9	0.9	0.0	0.6	0.8
	Percent public land	0.7	3.8	47.6	40.9	29.7
	Percent large private land over 5,000 acres	0.0	0.0	0.0	7.3	4.0
	Percent land small private 5,000 acres and below	96.3	95.3	52.4	58.5	69.5
--	Acres of nonresident land recorded from tax rolls	16,900	41,500	23,900	115,400	197,700
	Percent of private land owned by nonresidents of over 10 acres	23.8	31.5	50.6	54.7	42.9
13	Acres of nonresident land responded	10,400	21,600	10,600	35,000	86,200
	Percent of recorded nonresident land that responded	61.5	52.0	44.4	32.5	47.9
	Average acres responded	79.6	95.2	97.0	74.2	88.9
4	Total acres fenced or posted	2,900	7,300	4,300	8,800	25,500
	Percent of total respondent acres that were fenced or posted	27.9	33.8	40.6	25.1	29.6
	Average acres fenced or posted	71.9	108.3	224.0	107.3	116.4
1	Percent group owners	10.7	11.0	16.7	9.6	11.2
	Percent individual owners	87.8	87.2	81.5	88.7	87.4
6	Bought when a resident ²	6.5	5.3	1.2	2.9	3.9
	Prices better	6.5	12.8	16.5	11.2	11.7
	Highways better or closer	1.9	3.8	2.9	2.9	3.1
	Wanted to retire	20.8	15.1	14.7	12.4	14.3
	Always wanted land in county	10.2	7.5	3.5	4.8	6.1
	Hunting/fishing better	13.0	13.3	21.2	18.4	16.1
	Resort or other recreation	11.1	7.8	5.3	6.1	7.0
	Forest products	8.3	11.3	8.8	13.0	12.0
	Agricultural prospects	1.9	0.5	1.8	1.4	1.3
	Public areas	4.6	6.0	10.6	11.5	9.2
	Other reasons	15.3	16.6	13.5	15.4	15.4
7	Total days visited:					
	Jan-Feb-Mar	120	391	217	524	1,322
	Apr-May-Jun	1,144	1,808	808	2,868	6,862
	Jul-Aug-Sept	2,772	2,917	1,347	5,092	12,588
	Oct-Nov-Dec	803	1,526	755	3,072	6,429
7	Average days visited per respondent:					
	Jan-Feb-Mar	6.3	8.7	9.9	6.6	7.6
	Apr-May-Jun	18.8	24.1	15.5	15.0	15.6
	Jul-Aug-Sept	35.1	32.5	22.5	20.4	23.6
	Oct-Nov-Dec	12.6	13.3	15.7	13.3	13.5
7	Percent of total responses per quarter: ²					
	Jan-Feb-Mar	8.5	11.3	12.1	10.5	10.7
	Apr-May-Jun	27.4	28.6	28.6	25.7	27.1
	Jul-Aug-Sept	35.4	31.2	33.0	33.2	32.9
	Oct-Nov-Dec	28.7	28.9	26.4	30.6	29.3

Appendix Table C-2--Continued

Question Number Analyzed		Classification of Townships					
		A	B	C	D	Two or More	Total
8	Percent of total responses per time period of acquisition: ²						
	60-65	32.6	32.9	27.1	30.1	32.0	29.5
	55-59	23.2	25.4	21.5	23.7	32.0	25.0
	50-54	17.4	14.5	13.1	15.7	14.0	14.6
	45-49	5.1	11.0	11.2	10.3	10.0	11.9
	40-44	8.0	9.2	7.5	8.0	4.0	7.7
	30-39	8.0	4.8	3.7	5.2	6.0	5.2
	20-29	3.6	0.9	9.3	5.0	0.0	4.0
	Before 20	2.2	1.3	6.5	2.1	2.1	2.2
9	Percent of total responses per use of the land: ²						
	Summer residence	14.2	10.6	12.5	9.7	7.5	10.8
	Hunting/fishing	10.3	13.7	13.9	15.1	8.6	13.6
	Use of public areas	5.9	6.8	9.2	6.8	4.6	6.8
	Family outings and picnics	6.3	8.1	8.3	8.0	8.0	7.8
	Water sports	6.3	3.0	4.2	2.0	3.4	3.2
	Winter sports	4.2	4.2	4.4	4.3	4.6	4.2
	Other recreation uses	0.8	2.8	2.8	1.6	0.6	1.5
	Total recreation uses	47.9	47.7	55.3	47.5	37.4	47.9
	Christmas trees	4.4	7.5	4.4	8.0	10.3	7.1
	Pulpwood	5.2	6.3	5.0	6.9	11.5	6.5
	Lumber	7.9	6.7	2.8	6.6	10.3	6.6
	Other forest uses	0.8	0.9	1.7	0.6	0.6	0.8
	Total forest uses	18.4	21.3	13.9	22.2	32.8	21.1
	Field and row crops	2.3	2.5	1.1	1.7	2.3	1.9
	Horticultural crops	1.9	0.6	0.7	0.7	2.3	0.9
	Livestock and dairy	1.9	1.0	0.8	1.3	1.1	1.2
	Poultry and swine	0.6	0.6	0.6	0.9	0.0	0.7
	Total agricultural uses	6.7	4.7	3.1	4.6	5.7	4.8

¹These totals of water in lakes and ponds differ by 2,100 fewer acres than the totals given on page 64 herein. Table 5 used Humphrys' Michigan Lake Inventory Bulletins exclusively. However, township totals cannot be determined easily when there are very large lakes, such as in western Antrim County. For all of the townships in Region A and some of Region B the 1940 Census figures for total water areas had to be used. All other township totals came from Humphrys' work.

²Percentage figures given for these series are the percent of the total number of check marks for each alternative of a question divided by the total number of check marks for all alternatives of that question. The totals in each column for the analysis of a separate question would equal 100.0 percent if the rounding-off had been to more decimal places.

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