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To the Graduate Council:

I am submitting herewith a thesis written by David Ridgway Mosena, entitled "The Classification of Second Homes: A Proposed System Based on an Inventory and Selected Analysis of Second Homes in Sevier County, Tennessee." I recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science in Planning.

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THE CLASSIFICATION OF SECOND HOMES: A PROPOSED SYSTEM BASED ON AN INVENTORY AND SELECTED ANALYSIS OF SECOND HOMES IN SEVIER COUNTY, TENNESSEE

A Thesis

Presented to

the Graduate Council of

The University of Tennessee

In Partial Fulfillment

of the Requirements for the Degree

Master of Science

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by

David Ridgway Mosena

September 1971

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ABSTRACT

Second homes, primarily used as vacation housing, have substantially increased in number in the United States over the past ten years. They differ from primary dwelling units in physical design, types of tenancy, types of occupants, and in the pattern and intensity of their use. Since second home growth may have both positive and negative effects on the economic, social, physical, and environmental character of a particular area, local and regional planning agencies must take them into consideration.

The purpose of this study was to construct a classification system for second homes in order to facilitate the collection and analysis of second home data for use in planning studies. A secondary purpose was to experience the process of data collection and analysis on a local scale.

Information necessary for the construction of a second home classification system came from a literature review and from primary data collected in a rural county case study area where second homes have become an increasingly significant land use. Electrical records of the local utility system were used to identify second homes in the county. A questionnaire sent to second home owners identified in the electrical records provided the bulk of the data.

Based upon the information obtained from the literature review and the case study data, a classification system has been proposed, the five major elements of which are site, structure, occupant, tenancy, and activity. Several other findings resulted from the case study. The

electrical records of the utility system proved successful in the inventory of second homes. Electricity consumption was found to be useful as a general indicator of second home occupancy. Wide variation among second home characteristics within the case study area indicated the importance of a micro approach since varied characteristics have different implications for second home planning. Further research is necessary to develop alternative data sources, to understand activity effects and causal relationships between second homes and their host communities, and to predict the focus of future development pressures.

TABLE OF CONTENTS

CHAPTER PAGE

LIST OF TABLES

TABLE PAGE

LIST OF FIGURES

CHAPTER I

INTRODUCTION

A. Statement of the Problem

The Problem

During the past ten to fifteen years, second homes (also commonly referred to as vacation homes, leisure homes, seasonal homes, cabins, cottages, chalets, and so on) have become an increasingly significant land use in the United States. Estimates of the current national stock approach three million units or nearly five percent of the total housing stock, with over five percent of all U.S. households owning a second home. Annual additions to the existing stock are estimated at between 150,000 and 200,000 units. The dollar volume of sales for second homes and second home lots was estimated at 1.5 billion dollars in 1969. One survey of producers and sellers of second homes reported an increase in second home sales of over 700 percent between 1955 and 1965. Most participants in this market are optimistic concerning the future trends of second home development.[1]

In addition to the magnitude of second home development, further significance may be found in this land use due to the spatial location of its occurrence. Primarily associated with recreation and leisure time activities, second home development is occurring mainly in rural, sparcely

[1] A more detailed discussion of these estimates of second home market activity and their sources is presented in Chapter II.

populated areas with high recreational amenities and attractive environmental surroundings. Such areas are traditionally the least likely to subscribe to planning tools designed for orderly growth and development of a high quality.[2] Land use controls and development standards are frequently non-existent in areas having a high potential for second home growth. One second home developer incurred no local objections to "hand-tailoring" construction techniques for utility systems since there existed "neither codes nor zoning" and only new roads had to be recorded on the plan.[3] Practical Builder magazine states that the "minimum building code requirements in most outlaying resort areas greatly simplify construction problems."[4] A survey of "224 dealers, builders, and manufacturers of vacation homes" conducted by the Stanley Works Tool Company found that building codes "were not an important concern" for 67 percent of the respondents.[5] While voluntary enforcement of restrictions has occurred in some second home areas, such an occurrence is generally a deviation from the norm.[6] Tombaugh states that "situations are growing in which poorly planned recreational subdivisions have diminished the qualities of prime recreational attractions . . ."[7]

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[2]Richard Lee Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing (Ithaca, N.Y.: Department of Housing and Design, Cornell University, 1969), p. 196.

[3]"This Builder-Owned Lake Resort Opened the Door to the Sale of 300-Highpriced Vacation Houses!" House and Home, October, 1966, p. 100.

[4]"Big Surge in Leisure Housing," Practical Builder, November, 1965, p. 20.

[5]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 196.

[6]Ibid., p. 198.

[7]Larry W. Tombaugh, "Factors Influencing Vacation Home Locations," Journal of Leisure Research, II (Winter, 1970), 54.

Numerous positive and negative effects of second home development on local communities have been suggested as likely occurrences. Among the more commonly mentioned positive benefits are the expansion of local tax bases, local retail expenditures made by second home owners and users, the expansion of the recreation industry and associated service industries in general, and the sale of land for second homes which might have only marginal value for alternative uses. Possible negative effects include increased demands placed on local governments for public services such as "water and sewer systems, police and fire protection, and improved highway access . . .," reduced or precluded public access to bodies of water, the possible creation of "rural slums," social problems related to the influx of urban dwellers into small rural communities on a temporary basis, and the possibility of despoliation of the natural environment.[8]

Relative to other more typical land uses comprehensive empirical data on second homes are almost non-existent. Of the data that do exist, some have been produced by a limited number of private market studies conducted by firms either in or contemplating entrance into the second home market. Several studies with a broader, more public orientation have been conducted within the university community. Other very general data have been gathered to a limited degree by some state and federal governmental agencies including the U.S. Bureau of the Census and the U. S. Bureau of Outdoor Recreation.[9] An introductory body of knowledge

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[8]Richard Lee Ragatz, "Vacation Housing: A Missing Component in Urban and Regional Theory," Land Economics, XLVI (May, 1970), 126.

[9]Chapter II presents a summary of the national second home market as seen through several major second home studies conducted in recent years.

concerning second homes is growing; however, many basic questions are as yet unanswered. Further research into more detailed questions regarding the nature and use of second homes will require systematic data collection. The specific problem to which this thesis addresses itself is that of providing a structural framework within which to collect and analyze such data for use in planning for future second home growth and development.

Relevance to Planning

A systematic planning process to guide the course of second home development must be adhered to if local communities are to take advantage of the benefits of second home development and at the same time protect themselves from possible negative effects associated with such development. Specific information needs must be met for local, county, regional, and statewide plans to successfully incorporate second homes as elements of their plans. To assure efficiency and relevancy in the collection and analysis of second home data, the planner needs a well organized structural framework within which to function. A system of classifying second homes into their component and related elements would provide such a structural framework. It would also provide second home planning studies or other planning efforts which included collection and analysis of second home data with the conceptual basis for a more selective and meaningful analysis.

B. Purpose of This Study

The purpose of this study is two-fold. Its primary purpose is to develop a formalized second home classification system, thereby providing

a systematic framework within which to collect and analyze second home data. The underlying assumption upon which the need for such a classification system is based is that second homes, as temporary dwelling units supplemental to permanent residences, exhibit specific characteristics sufficiently different from those of permanent dwelling units to require singular attention in planning studies. In order for planners and public officials to make logical decisions regarding all aspects of future second home development and their relationship to other sectors of the community they must better understand these specific characteristics. The information required for decision-making necessitates the routine, systematic inventory of second home data in a manageable form. Interpretation of such data requires that the total product be defined and broken down into its component parts, which in turn must be analyzed and classified in a logical manner to produce an "orderly whole" from a "disorderly mass."[10] The classification system developed in this thesis is proposed to provide a framwork within which to carry out the logical organization of second home data for planning studies.

The second purpose of this study is to collect and analyze a body of data from a single county case study area in which second homes comprise a significant land use. Data collected and analyzed on an individual county scale should support the findings of previous second home research and possibly suggest alternatives to previously established trends. In addition, the engagement in practical second home field

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[10]Ernest Cushing Richardson, Classification: Theoretical and Practical, (Hamden, Connecticut: Shoe String Press, 1964), p. 1.

research in a county which presently collects no data on second homes may point up some of the major problems to be encountered in such research for future planning studies.

C. Second Homes Defined

An initial task in the development of a classification system for any set of elements is to structure a working definition of the main elements in question. A variety of definitions may be found in the second home studies conducted to date. The term "second homes" itself is not consistently used although the elements in question are essentially the same for all.[11] While the terms "vacation, seasonal, and weekend homes" have been used in previous studies, it is felt that connotations associated with such terms suggest particular times of usage to which this study does not wish to commit itself. Other terms such as "cabins, cottages, and chalets" carry colloquial connotations which infer structural types further limiting their meaning. While this study addresses itself to dwelling units used primarily for recreational and leisure time purposes, a broader term has been selected at the outset to avoid arbitrary limitations that might not be discovered until further analysis of the product has been undertaken.

For purposes of this study, second homes are herein defined as dwelling units primarily (but not necessarily) used by their owners, guests, and renters as vacation, weekend, or holiday residences generally for recreational purposes. This preliminary definition includes single family dwelling units such as cabins, cottages, chalets, farm houses,

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[11] For a listing of definitions of second homes used by several recent studies, see Appendix A.

mobile homes, floating homes, and multi-family dwelling units such as duplexes and condominiums. Motels, hotels, tourist cabins, campers, tents, or dwellings used for migratory or seasonal farm labor are not included in this definition. The question of permanence may be raised with regards to mobile and floating homes. While such dwelling units may not always be considered permanently located on a discrete geographic site, they are included in this preliminary definition in order to better understand them as elements of the larger set in question.

The primary distinguishing factor in this definition of second homes is the usage of the structure. Physical characteristics alone are often misleading since many second homes are capable of functioning as permanent residences and on occasion have served as both during different periods of time. This study will address itself to the above types of dwelling units (or others that may be discovered in the course of the research) that function as second homes, i.e., are used as occasional dwelling units by persons whose permanent place of residence is located elsewhere. While some urban dwelling units could fit into this definition, the present study is limited to housing located in primarily rural and resort community settings. This definition will be reexamined at the end of this study.

D. Approach of This Study

Method

As previously stated, the primary purpose of this study is to formulate a second home classification system. The methodology used to achieve this objective is first to structure a broad preliminary definition

of second homes as a point of departure, as was done in the above section. The second step is to gather information on the nature and use of second homes from two major sources: a literature review and the collection of primary data. This information is used as a basis of support for the classification system to follow. Chapter II presents a review of several major second home studies previously conducted in the United States, along with other supportive second home literature. Chapter III describes the procedures and results of an inventory of second homes in the study area, while Chapter IV analyzes further second home and user data collected in addition to this inventory. Based on the knowledge gained from these two major sources of information, Chapter V develops a system for the classification of second homes in planning studies. Major problems encountered in field research and data analysis are reported, in addition to any significant findings. Indepth descriptions of specific methodologies are presented in the chapters to which they relate.

Scope

The classification system presented in this study, based upon both a literature search and the primary data collection in a case study area, is hopefully flexible enough to function conceptually in a wide variety of second home areas. The information gained from the primary data collection in the case study area represents local conditions only. Inferences are not made from the case study area to the national second home market. While the investigation of second homes in the case study area is limited by local and regional characteristics, it is hoped that

such a demonstration study may have meaning for second home planning on a much broader scale.

Limitations

The primary limitation of this study is the availability of second home data. This is clearly pointed up in both the review of national second home surveys and the collection of data at the local level. Other major limitations include the infancy of research into the subject of second home development and the associated lack of empirically founded causal relationships among many of the data items characterizing second homes, their uses, and their users. This study is further limited by the vagueness of the term "second homes" and the lack of a well-structured definition of this land use. While second homes, as herein defined, might also conceivably be located in urban areas, this study is limited to second homes located in predominately sparcely populated rural areas and small recreation oriented communities. As with detailed methodologies, more specific descriptions of the various limitations associated with the conduct of this study are described at logical points throughout the text.

CHAPTER II

SECOND HOMES: A NATIONAL OVERVIEW

A. Introduction

This chapter presents a review of some recent second home studies and other related literature. The scope of the subject matter covered is broad, including reviews of the national second home market, the existing national stock, factors influencing second home demand and location, and characteristics of second homes, their owners, and their use.

B. National Market Activity and Trends

Recent Market Activity

Nationwide second home market activity may be characterized as both highly active and relatively recent. While second homes have been a component of man's housing stock since early recorded history, the current rapid growth and development of the market in the United States is a recent phenomenon.[1] Second home demand has fluctuated with "periods of affluence and improvements in transportation" since the late nineteenth century.[2] During the 1950's demand began to rise steadily with unprecedented growth taking place in the 1960's. Maxwell C. Huntoon, Jr.,

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[1] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 104.

[2] Ibid.

Senior Editor of House and Home magazine, "marks 1960 as the real turning point of the second home market."[3] Numerous scattered reports attest to the second home market's accelerated growth over the past ten years.

Three unpublished surveys by Richard Ragatz indicate the relatively recent increase in second home market activity. One survey of "home builders, retail dealers of building materials, and manufacturers of pre-fabricated homes" found that 42.9 percent of those surveyed started selling second homes after 1962, while only "19.1 percent of the respondents sold such units before 1958."[4] A second survey of National Association of Homebuilders members found that "over one-fourth of the respondents started since 1964, and almost three-fourths entered the market since 1960."[5] Ragatz's third survey of "developers of vacation home communities" found that two-thirds of the developer's initial starts were made since 1960.[6] A 1967 second home study by the U.S. Bureau of the Census reported that roughly one-fourth of the national second home inventory has been built since 1960.[7]

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[3]Urban Land Institute. Land: Recreation and Leisure, (Washington: Urban Land Institute), 1970, p. 9.

[4]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 105.

[5]Ibid., p. 106.

[6]Ibid., p. 107.

[7]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, (Washington: U. S. Government Printing Office, 1969), p. 7.

U.S. News and World Report estimated the national dollar volume of second home sales for 1969 at 1.5 billion dollars, a 67 percent increase since 1965. They also reported an 86 percent increase in the sale of land for second homes over the same period.[8] Sales figures supplied by Ragatz's three surveys showed that the number of sales of those responding to the surveys rose from 232 units in 1955 to 2023 in 1965.[9] Annual second home starts were estimated at 150,000 units in 1969.[10] One estimate by a residential development research and consulting firm placed the level of 1970 second home starts at 20 percent of the total U.S. housing stock.[11] More conservative estimates range from 10 to 15 percent.[12]

While not traditionally counted as such, recent second home market activity is reflected in the sale of mobile homes and houseboats, both of which may serve as second homes. The Mobile Home Manufacturers Association estimated that from "8% to 10% of the 400,000 mobile home

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[8]"83 Billion Dollars for Leisure: Now the Fastest-Growing Business in America," U.S. News and World Report, September 15, 1969, p. 58.

[9]"A Market for Relaxation Stirs a Hive of Activity," Business Week, July 19, 1969, p. 66.

[10]Ibid.

[11]Ibid.

[12]Richard L. Ragatz and Gabriel M. Gelb, "The Quiet Boom in the Vacation Home Market," California Management Review, XII (Spring 1970), 58.

units sold" in 1969 were second homes.[13] Houseboat sales have risen from three million dollars in 1963 to 35 million dollars in 1969.[14] With the exception of the U.S. Bureau of the Census data, all of the above figures represent new market growth and do not take into account sales of used second homes or the conversion of dwelling units from permanent residences to second homes. Such figures are not available although such conversions have been observed by the author.

An Urban Land Institute symposium on second homes divided the market into two basic categories.[15] One category, called the "'lot and cabin market'" is primarily composed of the sale of individual lots and the construction of single homes on a scattered lot basis. The other market category is composed of complete second home communities including a variety of supportive services and facilities such as community water and sewer, retail commercial facilities, and a variety of recreational facilities such as golf courses, ski slopes, swimming pools, beaches, lodges, club houses, and boat marinas. Second home market data sources do not distinguish between these two categories. It is assumed that the above housing starts, market entry, and sales figures cover both categories. However, some scattered reports provide a separate indicator of market activity for the development of second home communities.

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[13]"A Market for Relaxation Stirs a Hive of Activity," Business Week, p. 67.

[14]Ibid.

[15]Urban Land Institute, Land: Recreation and Leisure, pp. 11-12.

In 1968, Newsweek reported that "at least 100 such communities (had) sprung up around the country in the last ten years."[16] Boise Cascade Corporation is currently involved in the development of over two dozen of them.[17] Land they purchased near Ocean City, Maryland for $250 per acre sells as second home lots for $8000 to $20,000 per acre.[18] U.S. Land, Inc., now owned by Boise Cascade, specialized in the development of second home communities around artificial lakes which they also developed. In 1964, their first year in business, they reported lot sales of 1.5 million dollars. In 1967, their annual sales figure for lots ranging in price from $2995 to $16,000 was 30.5 million dollars, and they estimated 60 million dollars in sales for 1968.[19] A recent development at Beech Mountain, North Carolina by the Carolina-Caribbean Corporation, which opened in 1967, purchased land for $100 an acre and sold 1600 lots in 1967 for 4 million dollars. By August of 1968 sales were up 40 percent.[20] While these reports might appear somewhat biased, the literature search for this study uncovered no negative reports on second home market activity.

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[16]"Away From It All: The Second-Home Boom," Newsweek, August 5, 1968, p. 58.

[17]Charles E. Dole, "Recreational Land Developer Bullish About Future," Christian Science Monitor, January 15, 1971, p. 11.

[18]Ibid.

[19]"Away From It All: The Second-Home Boom," Newsweek, August 5, 1968, p. 58.

[20]Ibid.

Market Trend

In a word, the climate of the second home market is "optimistic." Not only are sales on an upward trend, but the factors influencing second home development (to be discussed later in this chapter) also exhibit upward trends. The established trend in second home development since the 1940's, measured in absolute figures, has been steadily upward. In addition, the average annual rate of construction has also increased from 20,000 per year in the 1940's to 150,000 per year in 1970.[21] Developer's optimism for the future of the market may be further indicated by heavy capital investments in second home developments, such as the Carolina-Caribbean Corporation's construction of a private airport at Beech Mountain, North Carolina.[22] R. V. Hansberger, Chairman of Boise Cascade stated that "for the long run, the company is definitely bullish," with regards to second home development.[23] Reporting on second home development in Michigan, Larry Tombaugh stated:

> There is no reason to suspect that the present rate of vacation home growth will diminish in the near future provided economic growth is sustained near present levels and that the existing social and political order does not change significantly.[24]

In Ragatz's three surveys mentioned above, responses concerning the market's future were very favorable.[25]

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[21]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 7.

[22]Urban Land Institute, Land: Recreation and Leisure, p. 32.

[23]Dole, "Recreational Land Developer Bullish About Future," p. 11.

[24]Larry William Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," (unpublished Ph.D. dissertation, University of Michigan, 1968), p. 116.

[25]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 132.

Consumer's preferences for second homes have also exhibited an upward trend. A recent household survey conducted in Houston found that 39 percent of those households sampled were seriously considering purchasing recreation property.[26] The U.S. Bureau of the Census study states, "in April, 1967, an estimated 300,000 households in the United States that did not have a second home reported there was at least a seven out of ten chance that they would buy or build a second home for their own use within the next two years."[27] Of nearly 300,000 respondents to a 1967 Better Homes and Gardens survey, real estate supplemental to the permanent residence was the most frequent answer to a question on future household investment choices.[28] An estimate of future demand for second homes was prepared by Morton Hoffman Associates in the form of second home starts for each five-year period from 1970 to 1985. The annual number of second home starts in 1970 was set at 150,000 and increased by 50,000 over each five-year period to a projected estimate of 300,000 annual starts in 1985.[29] While some of the future growth of the market will be absorbed by the sale of used second homes, one unpublished survey in Minnesota indicated that "approximately half the second homes acquired over the next several years are likely to be new units."[30]

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[26]Ragatz and Gelb, "The Quiet Boom in the Vacation Home Market," p. 58.

[27]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 8.

[28]Ragatz and Gelb, "The Quiet Boom in the Vacation Home Market," p. 58.

[29]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 134.

[30]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 8.

Since it is common for buyers to purchase lots for second home development up to several years in advance of construction, another indicator of the future second home market is land sales for that purpose. Unfortunately, very little data is available on this subject, but Wendell H. Martin states that "the demand for second home lots exceeds that for developed second home properties."[31]

C. Nationwide Second Home Inventory

Existing Stock

The number of second homes in the United States can only be estimated. No single or combination of data sources are available to yield exact figures of standing stock. Only rough estimates have been made based upon sample surveys of the population. The most comprehensive nationwide inventory of second homes was made by Ragatz. Based on the U.S. Census of Housing for 1960, he used the following formula: Vacation Homes = Vacant Units Held for Occasional Use + Seasonal Vacant Units - Units Held for Migratory Workers.[32] From this formula, Ragatz obtained an estimate of 1,897,822 second homes for 1960. He qualified this figure by stating that due to a "high degree of vacancy during time of census and also the remoteness of the units," this figure "probably represents an understatement of total stock in 1960."[33]

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[31] Wendell H. Martin, "Remote Land: Development or Exploitation?" Urban Land, XXX (February, 1971), p. 3.

[32] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 108.

[33] Ibid., p. 109.

The definitions of the data categories used in the above formula appear identical for both the 1960 and the 1970 U.S. Census of Housing.[34] The "Vacant Seasonal Units" category includes "units for herders or loggers" for both 1960 and 1970. These data (which Ragatz considers insignificant) do not fit into the definition of second homes as presented in Chapter I. While the "Vacant Units Held for Occasional Use" category was designed "to identify homes reserved by their owners as second homes," by definition, some of the units in this category would also be counted under the "seasonal" category, thereby requiring the addition of the two groups to arrive at an estimate of the total.[35] The 1970 U.S. Census of Housing included a question based on a five percent sample of the population which asked if "any member of the household owned a second home which he occupied sometime during the year." This question "obtained information about the number of households with second homes and not the number of second homes itself."[36] As of this writing, the tabulation for the category "Vacant Units Held for Occasional Use" for 1970 has not been published by the Bureau of the Census, preventing a comparison of the 1960 and 1970 second home data.

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[34]United States Department of Commerce, Bureau of the Census, United States Census of Housing, 1960, States and Small Areas, United States Summary, (Washington; U.S. Government Printing Office, 1963), p. LIX, HC(1), No. 1; and United States Department of Commerce, Bureau of the Census, 1970 Census User's Guide, Part I, (Washington: U.S. Government Printing Office, 1970), p. 117.

[35]United States Department of Commerce, Bureau of the Census, 1970 Census User's Guide, Part I, p. 117.

[36]Ibid., p. 116.

Another estimate of the existing stock of second homes reported by Ragatz was obtained from studies conducted in 1965 by the American Telephone and Telegraph Company.[37] A survey of 9231 households with Bell Telephones revealed that 6.4 percent of them owned second homes. Applying this percentage to the total number of households in the United States that owned telephones it was estimated that 5.2 percent of all households owned 2,970,000 second homes. A study conducted by the University of Michigan Survey Research Center in 1964 estimated the existing stock at 2,350,000 for the year 1963.[38] The 1967 second home study by the U.S. Bureau of the Census estimated the existing stock of second homes at 1,700,000.[39] Different definitions and sampling procedures may account for the wide variation in estimates. Most of the current literature seems to favor an estimate of approximately 3,000,000 units or more for 1970.

Location Analysis

In the study of second homes it is of primary importance to the field of planning to determine their spatial distribution in order to determine:

> where they might become a significant land use, where additional capital might be allocated for economic development, and where local communities might start preparing for the related social and economic costs and benefits.[40]

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[37] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 111.

[38] Ibid.

[39] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 1.

[40] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 135.

The only comprehensive nationwide second home data on which to base a spatial analysis are found in the U.S. Census of Housing. Ragatz applied location quotients on a state-by-state basis to second home figures derived from the 1960 U.S. Census of Housing.[41] The results of his analysis disclosed two "major regional clusters." The largest in terms of absolute numbers of second homes was composed of the states of Maine, New Hampshire, and Vermont. The second major cluster was composed of the states of Minnesota, Wisconsin, and Michigan. Two minor clusters identified by Ragatz's analysis were the Northeastern states of New Jersey, Massachusetts, Rhode Island, New York, and Delaware, and the Rocky Mountain states of Idaho, Montana, Wyoming, and Colorado. Florida, Washington, and North and South Dakota were the only other states with location quotients over 1.00. The lowest quotients were found in the Southeastern and Midwestern states. The U.S. Bureau of the Census survey divided the country into four regions and reported the percentage distribution of second homes in each: 38% in the Northeast, 30% in the North Central, 15% in the West, and 17% in the South.[42]

An analysis of the absolute distribution of second homes by Ragatz based on 1960 Census data revealed that 34.0 percent were concentrated in the top four states and 59.3 percent in the top ten states, listed here in the order of decreasing quantity of second homes: New York,

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[41] Ibid., pp. 136-141.

[42] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. II.

12.86%; Michigan, 8.52%; New Jersey, 6.34%; California, 6.29%; Massachusetts, 4.57%; Wisconsin, 5.61%; Pennsylvania, 4.44%; Minnesota, 4.01%; Texas, 3.96%; Florida, 3.76%.[43] An analysis of second homes compared with total owner-occupied, single-family housing units revealed that sparcely populated states with high recreational attractions, such as Maine, New Hampshire, and Vermont had second homes making up a significantly greater proportion of all owner-occupied single-family housing units than other states.[44] In an analysis of the trends of distribution among the 50 states between 1950 and 1960, Ragatz observed a "leveling off of the distribution among states" and a "significant shift of the distribution to the Southwestern states."[45] Since the decade of the 1960's has experienced rapid second home development, further shifts in these distribution patterns might be expected.

D. Factors Influencing the Demand for Second Homes

Increased Income

The rapid growth and development of the second home market has been influenced or made possible by several relatively recent developments in the United States. Ragatz cites two major contributing factors which provide the opportunity for second home ownership, the first of which is "sufficient income to allocate from the household budget to a non-vital

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[43] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 142.

[44] Ibid., pp. 146-147.

[45] Ibid., p. 152.

item."[46] Disposable income, adjusted for 1958 prices, increased 104 percent between 1950 and 1969.[47] Such increases have provided many households with the financial means with which to purchase non-essential items such as second homes.

Increased Leisure Time

The second major factor which has made second home growth possible according to Ragatz is "adequate time away from the place of employment to expend this income on leisure-time activities."[48] In general, the amount of time spent away from one's place of employment is increasing in the United States. Major workweek reductions occurred in the early 20th century with the 1963 level dropping to an average of 40.5 hours per week for workers in manufacturing.[49] "Paid vacations, on the other hand, have grown in both coverage and length during the postwar period," and their further growth seems likely.[50] Other increases in leisure time are the result of an increase in the number of federal holidays, and the January 1971 shift of several national holidays to Monday, providing

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[46] Ibid., p. 21.

[47] U.S. Department of Commerce, Bureau of the Census, Statistical Abstracts of the United States, 1970, (Washington: U.S. Government Printing Office), 1970, p. 316.

[48] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 21.

[49] Juanita M. Kreps, Lifetime Allocation of Work and Leisure, U.S. Department of Health, Education and Welfare, Social Security Administration, (Washington: U.S. Government Printing Office, 1968), p. 20.

[50] Ibid., p. 23.

workers with a minimum of five three-day weekends annually. Other more flexible working hour arrangements, such as the four-day, 40-hour week, while not necessarily reducing the total number of hours worked, have concentrated working time to allow for larger blocks of leisure time. Earlier retirements have increased total leisure time available to individuals, as has increased life expectancy. Male life expectancy at birth in 1900 was 46.3 years; in 1969, it was 66.6 years, increasing 5.8 years since 1940 alone.[51]

Investment Potential

Another factor which Ragatz calls a "motivating factor" for purchasing a second home is that of investment potential. Martin reports that "investment potential" is one of the three most common motivations for purchasing a second home.[52] Equity appreciation makes up part of this motivating factor. Two-bedroom condominiums in Vale, Colorado sold for $20,000 in 1963. Today a similar unit sells for $45,000.[53] Jamaica Beach, Inc. on the Gulf Coast of Texas has experienced a land appreciation of "300 percent in the past decade."[54]

In addition to equity appreciation, other factors make second homes an attractive investment. One is the potential for rental income. Many second home communities offer some form of rental arrangement whereby the local management handles the rental of the property for a portion of

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[51]"The Future Population of the United States," Population Bulletin, (February, 1971), p. 9.

[52]Wendell H. Martin, "Remote Land: Development or Exploitation?", p. 4.

[53]Maxwell C. Huntoon, Jr., "The Dollars and Sense of Condominiums," American Home, January, 1970, p. 70.

[54]"Away From It All: The Second-Home Boom," Newsweek, p. 59.

the profits when the owner is absent. Such arrangements can substantially reduce the cost of owning a second home and in some high-use recreation areas provide the owners with a small profit over and above the cost of owning the second home. At Beech Mountain the management will handle rental of the second home owner's property "for a 50 percent cut of the rent."[55] Second home owners at Jamaica Beach "have been known to recoup their entire investment in a few years by renting for the three summer months."[56] Of course second home owners may also undertake the rental of their property entirely on their own. In his review of several surveys which included questions concerning second home rental behavior, Ragatz concluded that between "one-quarter and one-third of owners rent out their vacation homes during some time of the year."[57] This figure will obviously vary from region to region as it may be influenced by many other factors.

In addition to rental income, substantial federal income tax advantages result from renting second home property. Since renting the second home a certain portion of the year classifies it as rental property for tax purposes, annual depreciation deductions may be taken on the structure and its furnishings. A percentage equal to the percent of the year during which the structure was available for rent may be charged off

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[55] Ibid.

[56] Ibid.

[57] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 49.

of "taxes, insurance, and maintenance, and a percentage of the cost of a housekeeper or maid."[58] Rental agent and advertising costs may also be deducted. And if the second home owner still loses money after equity appreciation, rental income, and tax advantages, annual losses may "usually be balanced off" against his regular income.[59] Such financial incentives may often provide sufficient motivation to purchase a second home in and of themselves.

Improved Transportation Technology

Another factor which has facilitated second home ownership is improved access. All second home reports and studies reviewed for this thesis discussed the distance between the primary home and the second home, generally measured in driving time or distance. While some second home developments such as those in Vale and Aspen, Colorado depend heavily on air transportation for their business, a large majority of second home users depend on the automobile for transportation to and from the second home. The Northern New England Vacation Home Study-1966 conducted by the U.S. Bureau of Outdoor Recreation found that 98 percent of those households surveyed traveled to and from their second home by private automobile.[60]

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[58]"Making Your Vacation Home Pay," Sales Management, September 1, 1968, p. 34.

[59]Ibid.

[60]United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, (Washington: U.S. Government Printing Office, 1966), p. 5.

So predominate is the automobile as a mode of transportation to the second home that many studies dispense with a discussion of mode of travel and speak in terms of "driving time" or distance in miles.[61]

In light of this fact, the nation's highway system would appear to be a major influencing factor in second home development. While comprising less than one percent of the nation's total highway mileage, the Interstate Highway System's 41,000 miles will carry an estimated 20 percent of the nation's traffic.[62] The U.S. Bureau of Outdoor Recreation predicts that the Interstate Highway System will be a "major stimulous to long distance travel, particularly for recreation purposes."[63] Surfaced rural roads in the U.S. have increased from 694,000 miles in 1930 to 2,362,000 miles in 1968, while highways receiving federal-aid increased from 641,000 miles in 1950 to 911,000 miles in 1968.[64] Increases in automobile ownership and the popularity of air travel, both commercial and private, will further facilitate access to second homes.

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[61]Richard N. Brown, Jr., U.S. Department of Agriculture, Economic Impact of Second-Home Communities: A Case Study of Lake Latonka, Pa., (Washington: U.S. Government Printing Office, 1970), p. 36; Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 169; Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 47; United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 4; and Donald J. White, "A Country Place," The Conservationist, XXIII (February-March, 1969), 12.

[62]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 50.

[63]U.S. Department of the Interior, Bureau of Outdoor Recreation, Projections to the Years 1976 and 2000: Economic Growth, Population, Labor Force and Leisure, and Transportation, (Washington: U.S. Government Printing Office, 1962), p. 95.

[64]United States Department of Commerce, Bureau of the Census, Statistical Abstracts of the United States, 1970, p. 537.

Other Influencing Factors

In addition to the major factors listed above, numerous other factors exist which are held to have varying degrees of influence on the development of second homes. One cited by Ragatz is the increased interest in outdoor recreation in general. The Citizens Committee for the ORRRC Report stated that "whatever measuring rod is used, it is clear that Americans are seeking the outdoors as never before."[65] They predict a tripling in the "over-all demand for outdoor recreation" by the year 2000.[66] It is assumed that this increased interest in outdoor recreation in general will influence interest in second homes.

The flexibility of suppliers to meet the demands for second homes has also been suggested as an influencing factor. Improved housing technology and advances in prefabrication have made the second home available to much of the middle income class of the United States. Shell homes, prefabricated modular units, mobile homes, and a variety of "do-it-yourself" kits are becoming increasingly popular. They are generally lower in price, frequently require less lag time between purchase and occupancy than conventionally constructed dwelling units, and are often made of low-maintenance materials which provide the owners with greater amounts of free time. One prefabricated second home advertised by Designaire Home Corporation requires a "four-man crew two days to install on-site."[67]

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[65]Citizens Committee for the ORRRC Report, Action for Outdoor Recreation for America, (Washington: Citizens Committee for the ORRRC Report, 1963), p. 9.

[66]Ibid., p. 8.

[67]"Vacation and Leisure Homes," Automation in Housing, June, 1970, p. 58.

Second home marketing techniques also have some degree of influence on the growth of the second home market. Marketing techniques include expense-paid promotional vacations, dinners, and weekend visits to second home communities and sites for prospective buyers. Mail and telephone solicitations are widely used in addition to a variety of advertisements in all forms of the media. According to Wendell Martin, "Many developers publish their own newspaper or newsletter to maintain and increase communication with project investors."[68] It is typical for developers of second home communities to spend from five to eight percent of the gross sales volume on advertising and promotional activities.[69]

Another factor is increased ease of financing. Although it remains one of the major inhibitors to second home ownership, improvements have occurred. In recent years, "mortgage lenders have had an all-important change of attitude toward the second house."[70] However Business Week reports that it is still "not uncommon for 30% to 60% of the buyers to pay cash."[71] Section 302 of the Housing and Urban Development Act of 1968

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[68]Martin, "Remote Land: Development or Exploitation?" p. 7.

[69]Ibid.

[70]"A Growing Second-Home Market Promises More Opportunities than Ever Before," House and Home, February, 1966, p. 80.

[71]"A Market for Relaxation Stirs a Hive of Activity," Business Week, p. 66.

"authorizes the financing of new seasonal housing with mortgages insured by the Federal Housing Administration" with a maximum mortgage value of "$15,000 and 75 percent of the appraised value of the property."[72] However, Congress has yet to appropriate funds for implementation of this section.[73] Increasingly, second home developers are providing financing within their own development and marketing firms. Thus, while second home financing is an area with much room for improvement, progress has been made further stimulating development.

Dole cited "growing congestion at national and state operated parks" as another factor encouraging the development of second homes.[74] Status ascribed to the owning or use of a second home is another factor. Ragatz states that, "a certain amount of status appeal is attached to a vacation home and, consciously or unconsciously, has some effect on the potential consumer."[75] And finally, due to increases in the availability of private corporately owned land for recreational activities including second homes, the sale of public lands for recreational purposes, and the creation of

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[72]Report of the Committee on Banking and Currency, United States Senate, Housing and Urban Development Act of 1968, (Washington: U.S. Government Printing Office, 1968), p. 36.

[73]John I. Chandler, Federal Housing Administration, East Tennessee Office, private interview, May 1971.

[74]Dole, "Recreational Land Developer Bullish About Future," p. 11.

[75]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 50.

artificial bodies of water around the country, the absolute number of available sites for second homes has increased (less the sites withdrawn through market transactions each year).

E. Factors Influencing the Location of Second Homes

Environmental/Recreational Factors

To further aid the planners understanding of the national second home market and how it functions, an analysis of the factors which have influenced second home location decisions is useful. The most significant factor influencing second home locations appears to be the physical or natural environment and its accompanying recreational attractions. Since many recreational activities common in certain areas are directly dependent upon natural environmental features such as mountains or bodies of water, the physical environment and its potential for recreational activities appear as a single interdependent set of factors. Skiing is a recreational activity which emphasizes this point. While snow covered mountains are often not sufficient in themselves to attract second homes, snow covered mountains containing developed skiing facilities have been prime second home attractors. Therefore, the natural environment must be considered as a factor in second home location in relation to associated recreational activities.

Tombaugh discusses second home location in terms of two elements:

> (1) The physical environment in which the vacation home is, or will likely be built, and (2) the distance of the vacation home site from the structure that the household views as 'home'.[76]

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[76] Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 6.

Probably the greatest single second home environmental attractor is water. Many, if not a clear majority of the nation's second homes, are located on inland lakes and reservoirs, streams and rivers, and the Atlantic, Pacific, and Gulf Coasts. Tombaugh found that 89 percent of the second homes surveyed in his study were "located on or within a five-minute walk of some body of water."[77] The Northern New England Vacation Home Study-1966 stated that "bodies of water were mentioned most often as one of the important site attractions."[78] In his review of several second home owner's and market surveys, Ragatz found water to be the most important environmental attraction.[79]

In addition to water oriented environments, prime environmental attractors influencing second home locations include "views and scenery, forests or woods, mountains or hills, skiing potential, and hunting and fishing potential," although it seems that "availability of water for recreation is the single most important criterion in selecting a vacation home site."[80] Further factors include proximity to developed recreational facilities, site access, site orientations, and environmental quality. The Northern New England study revealed that three-fourths of the second home occupants surveyed "mentioned the quality of the vacation home site

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[77]Tombaugh, "Factors Influencing Vacation Home Locations," p. 56.

[78]United States Department of the Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, p. 6.

[79]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 183.

[80]Ibid., p. 182.

as the principal reason for their choice."[81] With regard to water quality, Tombaugh states that it is a known "variable in determining density of development."[82] Ragatz also noted that recreational attractions appear to be a more influential factor than such things as "property costs, property taxes, or climate."[83]

Distance from Primary Home

The second major factor influencing second home location is the distance between it and the primary residence of the second home owner or user. While there are exceptions, as a rule the number of second homes in a particular area is inversely related to the distance the second home owner or user must travel from his permanent residence. Tombaugh found that almost 65 percent of the second homes he surveyed were within 200 miles of the owner's permanent residence.[84] He stated that the "restricting effect of distance (could) readily be seen beyond 300 miles, where the proportion of vacation homes dropp(ed) off abruptly."[85] The U.S. Bureau of the Census study found that of the second home owners responding, "about 30 percent (were) located within 50 miles of the owner's primary residence, nearly 60 percent (were) within 100 miles, and about 80 percent (were) within 200 miles."[86] This survey also found

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[81]United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, p. 6.

[82]Tombaugh, "Factors Influencing Vacation Home Locations," p. 56.

[83]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 182.

[84]Tombaugh, "Factors Influencing Vacation Home Locations," p. 56.

[85]Ibid., p. 57.

[86]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 4.

that second homes were closer to primary residences in the Northeast as compared with the other three regions of the country. The proximity of population measured in distance was found to be an important variable in explaining residential development of reservoir shorelines in the Southeast U.S.[87] From his survey of "developers of vacation home communities" Ragatz found that the median distance traveled from the primary home to the second home was 100 miles and the median travel time two hours.[88] The results of a non-resident landowner survey conducted by the Co-operative Extension Resource Development Project for Southwestern New York measured driving time rather than distance and found that "77 percent of the non-resident land owners lived within two hours driving time" of their property.[89]

Tombaugh stated the relationship between the environmental factor (which would include recreational activities or potential) and distance as follows:

> . . .physical landscape features such as woods and lakes are viewed as magnets acting on people desiring recreational experiences. The attractional force is reduced by the distance that must be traveled to get to the vacation home. These two factors working together on a given household determine where its cabin will be located.[90]

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[87]Raymond J. Burgy, III, Thomas G. Donnelly, and Shirley F. Weiss, Factors Influencing the Residential Utilization of Reservoir Shorelines in the Southeast, (Chapel Hill, North Carolina: Water Resources Research Institute of the University of North Carolina, 1970), p. viii.

[88]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 169.

[89]White, "A Country Place," p. 12.

[90]Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 12.

Naturally, tradeoffs exist between these two location factors as some people may be willing to travel further for a more unique or higher quality natural environment, or as people's incomes and leisure time permit greater travel allowances.

Other Location Factors

Leisure time interests, disposable income, retirement plans, age of the household head, and family size are all related factors influencing second home location decisions to varying degrees. Tombaugh, through the use of a regression technique called the Multiple Classification Analysis, studied a number of variables presumed to relate to second home location decisions. He found that, of the variables studied, "income, occupation, age and primary home location - do influence vacation home locations, both in terms of environmental types and of distances between the vacation home and the primary residence."[91]

Other factors which may have some degree of significant influence on location decisions include friends or family relatives owning second homes, market receptivity to demand, the proximity of development to supportive services, alternative possibilities available for the consumers choice, the proximity of urban areas and retail commercial facilities, property taxes, construction and maintenance costs, and climate. Tombaugh also cites the "total information available to the household about vacation homes" as an important locational variable.[92] More research is necessary to ascertain the relative significance of many of

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[91] Ibid., p. 110.

[92] Ibid., p. 34.

these variables, however, there seems to be little doubt about the significance of the two major factors mentioned first, the physical environment and its recreational attractions, and the distance of this environment from the primary residence of prospective second home owners or users.

F. Characteristics of Second Home Owners

Age of Heads of Households

Further insight into the nature of second homes may be gained from a review of who owns or uses them. Of the available data on second home user characteristics, the majority has concerned itself with owners only, excluding renters and guests of owners and renters. The first characteristic presented is the age of the household head. The U.S. Bureau of the Census second home survey reported that 21 percent of all second home owners are over 65 years of age; 71 percent are between the ages of 35 and 65 years old; and 8 percent are under 35 years of age.[93] Comparing these figures with all heads of households in the U.S., the percentage figures for the same age groups respectively are 19, 57 and 24 percent.[94] The Southwestern New York survey of non-resident landowners found that 71 percent of the respondents were over 45 years of age.[95] Ragatz reported the household head to be in his late thirties or forties at the

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[93] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 5.

[94] Ibid.

[95] White, "A Country Place," p. 12.

time of purchase of a second home, while he found existing second home owners to be between 40 and 60 years of age.[96] He further stated, however, that "younger families tend to have the greatest absolute potential for vacation home ownership."[97] Tombaugh's study revealed an average age of household heads of 45.5 years at the time of purchase.[98]

Marital Status and Family Size

The U.S. Bureau of the Census reported that one to two person households own approximately one-half of all second homes. The majority of second home owners consist of husband-wife families, one-third of whom have children under 15 years of age. Roughly 35 percent of all second home owners have children under 15 years of age.[99] Of the remaining households, one-third are three or four person households, and one-fifth are five or more person households. The Northern New England study reported that 88 percent of the second home household heads were married, 4 percent were single, and 8 percent were widows or widowers.[100] The average size of families who own second homes in the three New England states surveyed was 3.8 persons.[101] Tombaugh stated that the "distribution

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[96]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 67.

[97]Ibid.

[98]Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 62.

[99]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 5.

[100]United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Second Home Study-1966, p. 4.

[101]Ibid.

for vacation home owners is plainly schewed toward the larger families."[102] Ragatz found that family size was generally larger for second home owners than for other families.[103]

Household Income

A variety of incomes have been reported for second home owners in the studies reviewed here. The U.S. Bureau of the Census found that households with second homes had medium incomes of $9600 as compared with $5900 for households without second homes.[104] They found that 50 percent of second home owners earn annual incomes equal to or greater than $10,000, while 20 percent earn less than $5000. The Northern New England study reported that family income for second home owners exceeded $10,000 for almost 50 percent of the respondents. Second home owning families with incomes under $3000 accounted for 4.5 percent of the respondents, while 9.1 percent had incomes in excess of $25,000.[105] Fifty-two percent of the second home owner respondents in Southwestern New York reported annual incomes between $7500 and $15,000.[106] From

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[102]Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 67.

[103]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 80.

[104]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 5.

[105]United States Department of the Interior, Bureau of Outdoor Recreation, Northern New England Second Home Study-1966, p. 4.

[106]White, "A Country Place," p. 12.

the data which he surveyed, Ragatz summarized that $12,000 or more is the annual income of most new second home buyers.[107] He further stated that the "greatest absolute number of vacation home owners probably have annual incomes of less than $15,000."[108] Ragatz also noted that do-it-yourself second home builders generally had lower incomes, and that families who bought in second home communities tended to have the highest incomes.[109] He reported a direct correlation between income and the probability of second home ownership, and also stated that income was probably the most widely diverse of all characteristics used to describe second home buyers.[110] Tombaugh found that second home owner incomes in his sample were "considerably higher than those of the general population of Michigan."[111] While these studies were all generated during roughly the same period, care must be exercised when comparing income data due to regional economic variations and inflation.

Education and Occupational Status

Of the second home owners surveyed in the Southwestern New York study, 76 percent completed high school and 27 percent held college

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[107] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 75.

[108] Ibid.

[109] Ibid., p. 95.

[110] Ibid., p. 75.

[111] Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 77.

degrees.[112] Ragatz found that second home owner household heads tended to be better educated than the average household heads for the nation.[113] He also reported that second home owners had a "higher rate of professionals, managers, and officials" than the remainder of society.[114] Tombaugh reported similar findings for the state of Michigan.[115]

Primary Home Ownership

The U.S. Bureau of the Census reported that "about 80 percent of the households with second homes also own their primary homes" compared with a 63 percent rate of permanent home ownership in the general population.[116] In addition to verifying this item, Ragatz found that the permanent homes of persons who also owned second homes had a higher market value than the homes of the rest of society.[117] Most second home owners came from suburban areas of major cities.[118]

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[112] White, "A Country Place," p. 12.

[113] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 90.

[114] Ibid.

[115] Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 58.

[116] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 6.

[117] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 93.

[118] Ibid., p. 95.

The above summarization characterizes the typical second home owner as a married, middle-aged suburbanite with an above-average sized family, income, education, and a higher-than-normal occupational status. However, the results of the individual sample surveys Ragatz analyzed to draw these conclusions had significant variations among them. These variations point up the fact that this majority representation should not completely overshadow the fact that second homes have also been a recent luxury of the lower middle income ranges. Increased adaptability of the market is broadening the scope of potential for second home ownership rather than narrowing it.

G. Physical Characteristics of Second Homes

Structural Types

Following a survey of second home ownership characteristics is a brief summary of the characteristics of the physical second home structures themselves. Second homes exhibit a wide variety of structural types, including conventional single-family housing, apartments or condominiums, old farm houses, one-room hunting cabins, mobile homes, and houseboats. The Southwestern New York survey reported that 36 percent of the respondents referred to their second home as a "hunting cabin," 26 percent as an "old farmhouse," and 15 percent as "conventionally" built housing. Eight percent were mobile homes and three percent were prefabricated structures.[119] The U.S. Bureau of the Census reported that 33 percent of all second homes were "houses," 57 percent were referred

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[119]White, "A Country Place," p. 13.

to as "cottages," and ten percent as other types "such as cabins or ski lodges."[120] Such lay terminology supplied by second home owners may be of limited value in classifying second homes according to structural type. Only a very general statement can be made at this point. Second homes are predominately single-family detached dwelling units which vary in architectural style, as indicated by such terms as "cabin, cottage, ski lodge," and so on.

Size

A more standardized basis for comparison is the size of second homes. The Southwestern New York study found that 68 percent of the second homes in their sample were under 1000 square feet in size.[121] The U.S. Bureau of the Census reported 26.0 percent of the nation's second homes under 500 square feet in floor area, 43.3 percent were between 500 and 1000 square feet, 20.3 percent were between 1000 and 2000 square feet, and 7.0 percent were over 2000 square feet.[122] From the three surveys he conducted Ragatz found that a majority of second homes had floor areas of less than 1000 square feet, but that a significant variation occurred.[123] In the two surveys in which "home manufacturers were represented" there was a much higher rate of occurrence of units of less than 1000 square feet. However, in the survey of developers of second home communities, 68.4 percent of the units were

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[120] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 2.

[121] White, "A Country Place," p. 13.

[122] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 26.

[123] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 216.

reported as over 1000 square feet and 32.2 percent were over 1500 square feet.[124]

Numbers of Rooms

The U.S..Bureau of the Census reported 4.0 rooms per unit as the median number per second home. Two rooms or less were reported for 17.1 percent of the structures, 20.0 percent had three rooms, 26.3 percent had four rooms, 18.7 percent had five rooms, and 17.9 percent had six or more rooms.[125] Ragatz, reporting the results of the Lumber Co-operator's survey, stated that "25.0 percent of the units in the survey contained two rooms," while "37.2 percent of the vacation homes in their survey had more than three rooms."[126]

Age of Structures

The Northern New England study collected data on ages of second homes. They found that "44 percent of the houses in the sample had been built 25 years ago or more," and that "almost one-quarter of the homes had been constructed during the past ten years."[127] The U.S. Bureau of the Census obtained similar findings for the nation. They reported that 26.0 percent of the second homes in the U.S. were built after 1960,

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[124] Ibid., p. 217.

[125] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 26.

[126] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 218.

[127] United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, p. 3.

25.6 percent from 1950 to 1959, 13.0 percent from 1940 to 1949, and 35.4 percent before 1940.[128]

Facilities

Second home facilities are another characteristic worthy of mention. According to the U.S. Bureau of the Census, 91.1 percent of all second homes have electricity, 58.3 percent have complete plumbing facilities, 97.3 percent contain a kitchen or cooking equipment, 20.8 percent have central heating, and 65.0 percent have noncentral heating.[129] Ragatz summarized his findings on second home facilities by stating:

> Most have electrical and plumbing facilities, refrigerators, and stoves. About one-half seem to have some type of furnace, insulation for year-round use, and even a television. Also, a considerable number are air-conditioned and have a garage. Units found in vacation home communities are the most complete and come closest to providing all the facilities and accessories found in the permanent home.[130]

Dollar Value

Although reported second home value figures are only roughly comparable due to the lack of standardized reporting procedures, such figures still provide a crude basis for comparison. In the Southwestern New York study, 79 percent of the structures cost "less than $5000 to build."[131] The Northern New England study reported a range from "a few

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[128] United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 26.

[129] Ibid.

[130] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 221.

[131] White, "A Country Place," p. 13.

hundred dollars to more than $200,000," with a mean value of $10,659.[132] The U.S. Bureau of the Census reported a median value of $7800, with 31.5 percent valued at less than $5000; 33.5 percent at $5000 to $9999; 14.1 percent from $10,000 to $14,999; 8.6 percent from $15,000 to $19,999; 4.3 percent from $20,000 to $24,999; and 8.0 percent over $25,000.[133] From his analysis, Ragatz concluded that "a large percentage of vacation homes are originally sold for less than $5000," but he warned that many of these represent shell homes and underestimate the value of the final product ready for habitation.[134] He also concluded that second homes built in complete second home communities or developments were substantially higher in price. He places the average cost of a second home in the United States at roughly $8000, but describes the range as running from "manufactured shells costing less than $2500" to the "conventionally constructed units in the complete vacation home community which often sell for more than $20,000."[135]

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[132]United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, p. 3.

[133]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 27.

[134]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 228.

[135]Ibid., p. 229.

H. Second Home Usage

Type of Use

One final area of observation concerns the use of second homes. All of the second home literature reviewed in this thesis presents second homes as leisure housing supplemental to the owner's or user's permanent residence and generally associated with a wide range of recreational activities. As mentioned earlier, in a majority of cases second home recreation is oriented toward water-based activities. In the Northern New England study, "swimming in lakes and streams ranked highest among all outdoor recreation activities, with pleasure walking a close second."[136] In the Southwestern New York study, the most frequently chosen leisure time activity second home owners engaged in was working on the property.[137] The second most popular category listed was just resting. (This was most likely influenced by the fact that 71 percent of the respondents to the survey were over 45 years of age.) The use of the second home and the recreational activities associated with it are influenced by a variety of factors including recreational opportunities at or near the site, climate, topography, and other physical environmental assets, and the income, interests, age, education, and physical condition of the parties involved.

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[136] United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study-1966, p. 8.

[137] White, "A Country Place," p. 13.

Frequency of Use

The U.S. Bureau of the Census study included questions regarding the frequency with which second home owners used the facility. They found that seven percent of the second homes surveyed were rented out for varying periods of time during the year.[138] Eight percent of the second homes surveyed were not visited by their owners during the previous year, but only 16 percent of these were rented out. The others remained vacant and were held exclusively for the owner's use. Of the second homes surveyed that were owned more than one year, 47 percent were occupied from 30 to 90 days during the year. Twenty-eight percent were used less than 30 days, and six percent were used more than 180 days. Three-fourths of the respondents indicated that they planned to use the second home more frequently in the year to come.[139] Ragatz estimated annual occupancy of the second home at from three to four months.[140] This occupancy generally takes the pattern of several full weeks and a larger number of weekends and holidays. Tombaugh also reported this tendency, observing that there were two groups of summer users in Michigan, "those that spend two to four weeks at their cottage and those who are there throughout the summer."[141]

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[138]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 6.

[139]Ibid.

[140]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 101.

[141]Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 97.

Season of Use

The season of use of second homes is a function of, at least in part, the recreational and environmental characteristics associated with the area. Areas with a high concentration of water oriented recreational activities might experience high rates of summer usage, while snow skiing areas would be expected to experience higher rates of usage in the winter months. The Southwestern New York study indicated that fall was the most popular season of occupancy, with summer in second place, spring third, and winter fourth. The fall bias may be attributed to a high interest in hunting reported by respondents.[142] The Bureau of the Census report found that summer was the most popular season for second home owners in the nation as a whole, with 70 percent of the sample responding that they used the second home primarily in the summer months. Twenty-six percent of the respondents used the second home during two or three seasons.[143] Tombaugh reported that in the state of Michigan, "All indications are that Michigan vacation homes are used in all seasons, with particularly heavy use in the summer and fall."[144] He went on to state that household heads frequently commuted to work from the second home during the summer months. Others resided at their primary homes during the work weeks and joined their families at the second home on the weekends. As the renting and communal

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[142]White, "A Country Place," p. 13.

[143]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 6.

[144]Tombaugh, "The Location of Vacation Homes in Michigan: A Socio-Economic Study of Environmental Preferences," p. 97.

ownership of second homes increases, and as recreational activities become more intense in the "off" season, second home occupancy might be expected to become less seasonal and more constant throughout the year.

CHAPTER III

SEVIER COUNTY, TENNESSEE: SECOND HOME INVENTORY

A. Introduction

This chapter describes Sevier County, Tennessee, the study area for the primary second home field research outlined in Chapter I, and the factors encouraging second home development there. The methodology used to conduct an inventory of second homes in Sevier County is discussed along with its limitations. A description of the inventory findings follows, including the spatial location of second homes within the study area, as well as the patterns and rates of recent second home growth in the county.

B. The Case Study Setting

Sevier County, Tennessee is a predominately rural county of 28,241 people lying roughly near the center of the border between Tennessee and North Carolina.[1] It is 605 square miles in size and includes three incorporated towns: Sevierville, the county seat with a 1970 population of 2661 people; Gatlinburg, a thriving tourist town with a 1970 permanent resident population of 2329 people, and approximately 2,700,000

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[1]Richard A. Engels, Tennessee Population and Housing, 1950-1970-Part I: Summary Indicators, (Knoxville, Tennessee: Center for Business and Economic Research, University of Tennessee, 1971), Table 1.

annual visitors; and Pigeon Forge, another tourist town with 1361 permanent residents in 1970.[2]

Part of Sevier County lies in the Ridge and Valley region of East Tennessee which "consists of a series of low parallel ridges and broad valleys with fairly regular drainage patterns." The remainder of the county is in the Blue Ridge region, a rugged section of mountains, streams, and coves. The Great Smoky Mountains National Park, rising to 6642 feet in elevation, makes up 124,704 acres of this area.[3] In the Ridge and Valley region of Sevier County, "twelve hundred acres of shoreline along Douglas Lake (a Tennessee Valley Authority reservoir) are available to the vacationing public."[4] The county has a "humid temperate climate with hot summers," although somewhat cooler in the mountains.[5] Annual precipitation ranges from 40 inches in the north of the county to 80 inches in the mountains along the southern edge.[6]

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[2]The figure for the annual visitors to Gatlinburg is an estimate provided by the Gatlinburg Chamber of Commerce.

[3]Tennessee State Planning Commission, East Tennessee Office, Economic and Population Study, Sevierville and Sevier County, Tennessee, (Knoxville, Tennessee: Tennessee State Planning Commission, 1964), p. 3.

[4]U.S. Department of Agriculture, Soil Conservation Service, An Appraisal of Potentials for Outdoor Recreational Development, (Fort Worth, Texas: U.S. Department of Agriculture, Soil Conservation Service, 1970), p. 6.

[5]Tennessee State Planning Commission, East Tennessee Office, Economic and Population Study, Sevierville and Sevier County, Tennessee, p. 6.

[6]Ibid.

In 1964, 44.8 percent of the total land area of Sevier County was in farms.[7] This represented a decline from 53 percent in 1950.[8] While agriculture has declined, the economic base of the county has shifted to tourism and manufacturing with tourism now the dominant industry in the county. Nevertheless, Sevier County retains a predominately rural character with 90.6 percent of the population still classified as rural.[9]

C. Factors Encouraging Second Home Development in Sevier County

Environmental/Recreational Factors

From the second home literature reviewed in Chapter II comes a logical framework for a brief analysis of the local factors encouraging second home development in Sevier County. The physical setting, as described in the above section, hosts two major environmental assets generally considered as primary second home attractors, a lake and mountains. The topography adjacent to Douglas Lake is attractive for second home development, as is much of the undeveloped land along streams and atop ridges in the northwestern Ridge and Valley portion of the county. Douglas Lake, the French Broad River, and neighboring streams provide for a wide variety of water based recreational activities.

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[7]Mary G. Currence, ed., Tennessee Statistical Abstract, 1969, (Knoxville, Tennessee: Center for Business and Economic Research, University of Tennessee, 1969), p. 16.

[8]Tennessee State Planning Commission, East Tennessee Office, Economic and Population Study, Sevierville and Sevier County, Tennessee, p. 33.

[9]Engels, Tennessee Population and Housing, 1950-1970 - Part I:Summary Indicators, Table 3.

Attractive second home sites also exist among the higher mountains and coves of the southeastern portion of the county up to the boundary of the National Park. A U.S. Department of Agriculture Soil Conservation Service report appraising the potential for recreational developments in Sevier County rated "scenery" and "natural beauty" as "excellent," and listed "mountains, trails, timber, streams, fishing and wildlife, caves, natural and historical areas" as some of the county's primary recreational attractions.[10]

In addition to the natural environmental assets of Sevier County, recreational facilities abound. The city of Gatlinburg, through which passed approximately 40 percent of the National Park's 6,778,500 1970 visitors, is a highly developed recreational center including a winter sports complex, the Gatlinburg Ski Resort. Recreation areas in Sevier County (including the Great Smoky Mountains National Park) total 127,702 acres or 33.4 percent of the total land area of the county.[11] Of the 190 recreation areas in the county, 150 are reported adjacent to water in the form of lakes, reservoirs, streams, and rivers.[12] Of these same areas, 186 reported an estimated 5,232,314 visitors in 1968.[13] In their appraisal of potential for recreational development, the Soil

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[10]U.S. Department of Agriculture, Soil Conservation Service, An Appraisal of Potentials for Outdoor Recreational Development, p. 5.

[11]Tennessee Department of Conservation, Tennessee Statewide Comprehensive Outdoor Recreation Plan - 1969, Statistical Summary: County Supply, Final Report - Appendix II-B, (Kansas City, Missouri: Midwest Research Institute, 1969), p. 404.

[12]Ibid. The Tennessee Department of Conservation defines "recreation area" as "a unit of recreation enterprise, public or private, that is administered for outdoor recreation." Tennessee Statewide Comprehensive Outdoor Recreation Plan - 1969, p. 409.

[13]Ibid., p. 405.

Conservation Service rated the potential for the development of "vacation cabins, cottages, and homesites" as "very high, with a score of 133 out of a possible score of 150."[14]

Proximity to Potential Second Home Markets

As was noted in Chapter II, the distance between the second home and the primary residence is a key variable in second home location decisions. In analyzing factors encouraging second home development in Sevier County the same basic question might be restructured to consider the distance the environmental/recreational factor is from potential second home markets or population centers. The 1970 population of Sevier County and the four East Tennessee counties it borders was 418,501 people. The 16 county East Tennessee Development District, including the metropolitan region of Knoxville, contained 700,985 people. The 34 counties generally referred to as East Tennessee had a population of 1,480,051 people.[15] In addition to neighboring county populations, Sevier County is in relative proximity to several major urban centers in the southeast U.S. In keeping with the distance findings of earlier second home research, (see footnotes 85 and 86, Chapter II), a circle with a radius of 250 miles and Sevierville at the center would encompass the following cities: Cincinnati, Ohio; Charleston, West Virginia; Roanoke, Virginia; Greensboro, Winston Salem, Charlotte, and Ashville, North Carolina; Greenville and Columbia, South

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[14] U.S. Department of Agriculture, Soil Conservation Service, An Appraisal of Potentials for Outdoor Recreational Development, p. 5.

[15] Engels, Tennessee Population and Housing, 1950-1970 - Part I; Summary Indicators, Table 1.

Carolina; Atlanta, Augusta, Macon, and Columbus, Georgia; Birmingham and Gadsden, Alabama; Chattanooga, Nashville, and Knoxville, Tennessee; and Louisville and Lexington, Kentucky. In addition to being within acceptable driving distances of a large potential second home market, Sevier County is within reasonable flying time of most of the eastern U.S.

Ease of Access

Having established the existence of the two primary factors encouraging second home location decisions in Sevier County, the natural environment and its recreational opportunities, plus its proximity to major population centers, a third factor encouraging second home development in the county is the ease of physical access between the first two factors. For the recreational opportunities of Sevier County to be enjoyed by the nearby populations the area must be readily accessible to them. Sevier County is served by the Interstate Highway System as well as major secondary highways. Interstate 40, the major east-west highway coming out of North Carolina and traveling the length of Tennessee, will pass within 10 miles of Sevierville through the northwestern portion of the county. Major north-south arterials, Interstates 75 and 81, pass through adjoining counties linking major metropolitan centers of the eastern U.S. In addition to highway access, Sevier County is served by a regional airport with direct connections to major eastern U.S. cities. The metropolitan airport is located in Alcoa, Tennessee, 28 miles from Sevierville. In addition, a smaller local airport capable of accepting small jets is located at Sevierville.

At the local level, four-lane Highway 441 links Knoxville, 26 miles to the west, with the National Park, passing through the three incorporated towns in the county. The Tennessee Statewide Comprehensive Outdoor Recreation Plan - 1969 reports that of the 190 recreation areas surveyed in Sevier County, 189 of them report their location as an average of one mile from a main, all weather highway.[16] The Soil Conservation Service study reported that "access to all parts of the county is excellent."[17] While many other related factors may also provide some encouragement for the location of second homes in Sevier County, environmental/recreational factors, proximity to potential second home markets, and ease of access appear to be the most basic.

D. Sevier County Second Home Inventory

Methodology

The first step in the primary second home data collection process for this thesis was that of conducting an inventory of existing second homes in the study area. Preliminary research for available data usable in a county-wide second home inventory revealed the scarcity of existing material with which to work. Sevier County has no building permit regulations and keeps no building records. County tax records make little distinction between types of structures or their uses. The search for an existing second home data base in Sevier County included local and

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[16] Tennessee Department of Conservation, Tennessee Statewide Comprehensive Outdoor Recreation Plan - 1969, Statistical Summary -- County Supply, Final Report - Appendix II-B, p. 405.

[17] U.S. Department of Agriculture, Soil Conservation Service, An Appraisal of Potentials for Outdoor Recreational Development, p. 7.

regional planning bodies, local realtors and boards of realtors, chambers of commerce, local homebuilders associations, departments of municipal and county government, local utility systems, and state departments of highways, conservation, and planning.

For purposes of conducting a second home inventory the records of the Sevier County Electric System formed the most comprehensive and useful source of information.[18] The electrical records were chosen for building the foundation of a second home data base for two reasons. First, they provided the most reliable indicators to distinguish between dwelling units used as permanent residences and those used as second homes. Second, they were found to be the most comprehensive data source available containing comparable information on the greatest number of residential dwelling units in Sevier County.[19]

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[18] An earlier attempt was made by the author to inventory second homes with the assistance of the U.S. Post Office. Rural mail carriers on each of Sevier County's 14 postal routes agreed to tabulate and locate second homes on maps according to the author's definition. A test run using a controlled group of previously identified second homes proved unsatisfactory due to the fact that second homes were frequently in remote areas where there were few and sometimes no neighboring permanent residences, precluding the need to deliver mail in these areas, and therefore resulting in the mail carrier's lack of familiarity with these areas.

[19] The choice of using electrical records as a comprehensive data source for second home information is supported by the findings of the U.S. Bureau of the Census which reported 91.1 percent of all second homes in the U.S. serviced by electricity. U.S. Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 26.

Meter books, used to record the consumption of electricity, contained several useful pieces of information for the study of second homes. Each page of a meter book represented one electric meter and contained the following information: (1) the designation of the structure as residential, commercial, or industrial; (2) the geographic location of the dwelling unit within the Sevier County Electric System; (3) the name and permanent mailing address of the billee; (4) the month and year in which electric service was connected; and (5) the amount of electricity consumed per month for a period of two years, measured in kilowatt hours. The distance of the second home owner or user's primary residence from the second home was obtained by calculating the distance from the second home to the billing address. Also, rates of second home development were calculated from the dates of installation of electric service for dwelling units since meter connections generally occurred at or near the end of the construction of a dwelling unit.

The above information was helpful in identifying second homes in two respects. First, assuming that most, if not all, billees were also the owners or principal users of the property in question, each residence in the Sevier County Electric System whose billing address was other than the address of the structure represented by the electric meter indicated a potential second home. Secondly, patterns of sporadic usage of residences exhibited by fluctuating monthly electricity consumption figures in the meter books also indicated possible second homes.

A pre-test on a controlled group of previously identified second homes uncovered several inadequacies in the use of billing addresses and electricity consumption as indicators of second homes. Although numerous residential structures' addresses differed from billing addresses, there were no means available to verify that such a phenomenon positively represented a second home. Sporadic use of electricity as an indicator of second homes was found to exclude those units which had a more continual pattern of occupancy. Since electricity consumption figures were only broken down by months, it was impossible to distinguish a second home consuming a high rate of electricity during occasional visits from a small permanent residence with a very low rate of electricity consumption.

To bridge this information gap between indications of second homes and positive identification, an employee of the Sevier County Electric System who had extensive personal knowledge and familiarity with the electric system was retained to form the missing link. Eighty-two meter books covering the four years from September of 1966 through August of 1970 were manually surveyed page-by-page.[20] Each meter book page indicating a second home was verified and marked by the electrical system employee who relied upon his personal knowledge of the system where necessary. The following information was either transferred directly or inferred from the electrical records and recorded on code sheets:

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[20]Electrical data prior to 1966 were recorded by the Sevier County Electric System using a different account numbering system and therefore virtually unrelatable to the post-1966 data. Meter books containing data since August, 1970 were in continual use throughout the study period and unavailable for reference.

1. The name and address of the billee
2. A geographic location code assigned to each dwelling unit
3. The electricity consumption in kilowatt hours from September, 1966 through August, 1970
4. The approximate year built (estimated from the date of meter installation)
5. The structural type: a. single-family detached; b. multi-family attached, c. farm house, d. mobile home (identified as such by the electric system employee)
6. The distance from the primary home to the second home (calculated by measuring the distance between the address of the second home and the address of the billee)[21].

All of this information, with the exception of the name and address of the billee, was card-punched for use in later analysis. No electricity was supplied to floating homes on Douglas Lake by the Sevier County Electric System. Data on floating homes in the Sevier County portion of Douglas Lake was obtained from the Tennessee Valley Authority.[22]

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[21]Only data concerning the inventory, location, and rates of development of second homes are discussed in this chapter. Other data collected at this point in the study are discussed in Chapter IV.

[22]Tennessee Valley Authority, Division of Reservoir Properties, Annual Recreation Development and Use Survey - 1967, 1968, 1969, and 1970, (Knoxville, Tennessee: Tennessee Valley Authority).

Limitations

The use of the electrical records of the Sevier County Electric System for a second home inventory must be considered in light of several limitations, the most obvious of which is that second homes not served by the Electric System were excluded from the study. While this exclusion did have the effect of biasing all other research based upon this inventory data against second homes not receiving the services of the Electric System, officials of the Electric System estimated that those excluded amounted to no more than a few percent of the county's second homes.

A second limitation is that the method of data collection was susceptible to human error due to the fact that some of the second homes were identified as such based solely on the personal knowledge of the electric system employee participating in the study. While the data gathered in this manner were substantially more complete and reliable than any other data available in the study area, such a practice might prove unacceptable in a much larger or more densely developed area.

A third limitation is the fact that the geographic boundary of the area served by the Sevier County Electric System does not coincide with the political configuration of the county itself. Figure 1 presents a map of Sevier County designating those portions of the county not served by the Sevier County Electric System and therefore excluded from this study. Approximately 78 square miles of land in the northern portion of the county is served by the Knoxville Utilities Board, and approximately 19 square miles in the eastern portion is served by the Jefferson County Utility System. The portion of Sevier County served

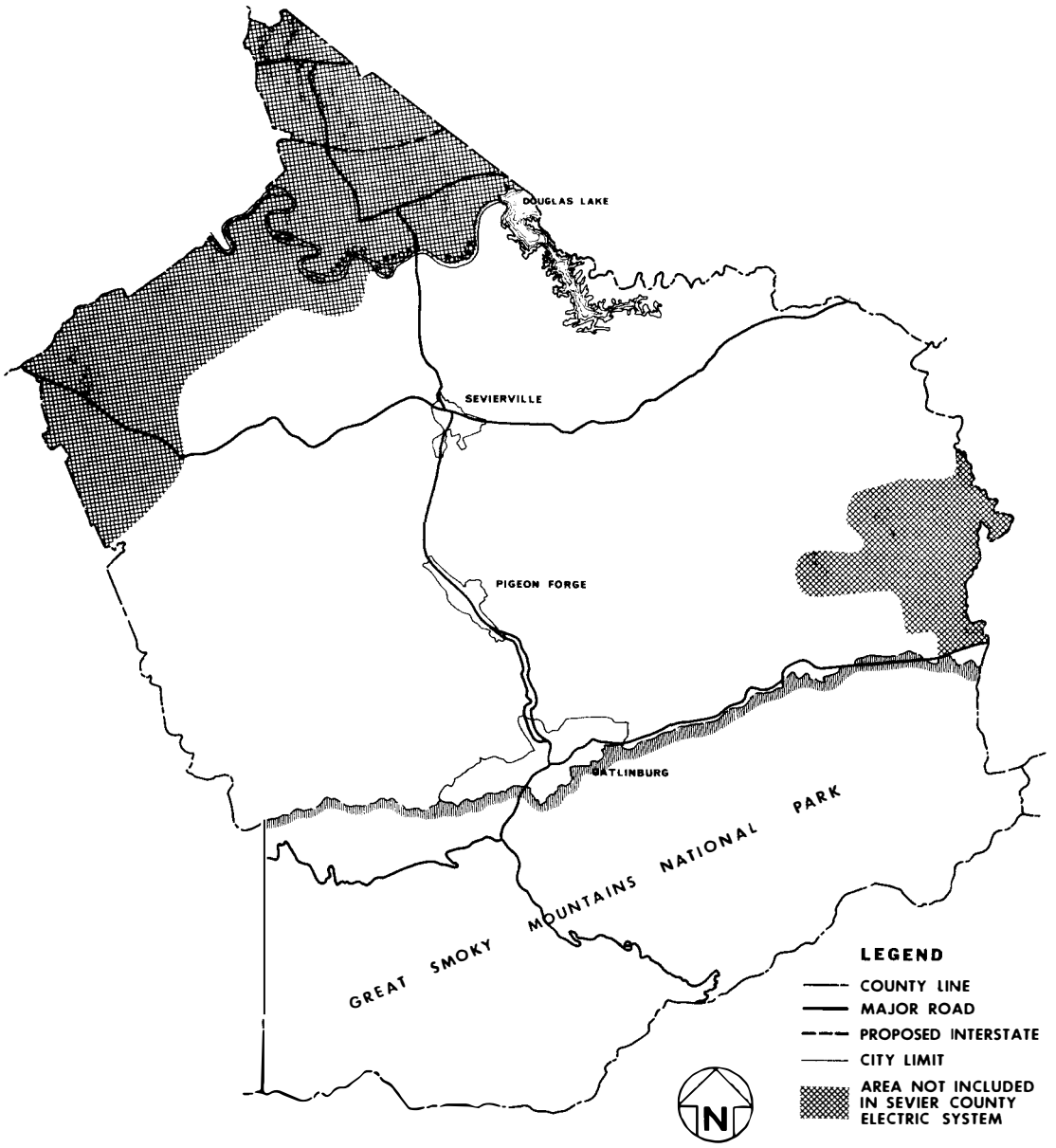

Figure 1. Sevier County Second Home Study Area.

by the Sevier County Electric System accounts for roughly 83.9 percent of the land area of the county. Officials of the Electric System estimated that a maximum of only 25 second homes, or roughly four percent of the number found within the Electric System's jurisdiction, may exist in the portions of the county served by the two other utility systems. This study is limited to those areas within the political boundary of Sevier County served by the Sevier County Electric System, as displayed in Figure 1. Since this area is assumed to include approximately 96 percent of the second homes in the county, all further references will refer to the study area as Sevier County.

A further limitation on the use of electrical records for a second home inventory in Sevier County results from the fact that a small but undetermined number of second home owners who primarily use their second homes in the summer months have electrical service discontinued during the winter rather than pay a monthly minimum charge for electricity when the structure is vacant. This practice also occurs when second homes are on the market for sale for extended periods of time. Since the electrical data were collected during the winter these second homes were excluded from the study. Officials of the Electric System estimated the number of second home customers discontinuing electrical service on a seasonal basis as amounting to approximately four percent of their second home customers. It should be noted that all of these limitations have the effect of understating the inventory results, to a small but unknown degree.

Inventory Results

From the analysis of electrical records and the Tennessee Valley Authority data on floating homes, a total of 651 second homes were counted in Sevier County as of August, 1970. This number accounts for 6.2 percent of the total 1970 housing stock of the county. Of this figure, 639 of the second homes were land-based dwelling units identified in the analysis of electrical records and 12 units were floating homes located in the Sevier County portion of Douglas Lake. Due to the limitations previously mentioned, these figures represent an understatement of the Sevier County second home stock in 1970. Based on estimates by the Electric System officials of the second homes excluded from the study for the reasons listed above, the total number of second homes in Sevier County in 1970 would most likely be in excess of 700 units.[23]

A comparison of this inventory figure with figures contained in the U.S. Census of Housing also indicate an understatement produced by the electrical data. Using Ragatz's formula for deriving second homes from the U.S. Census of Housing, Sevier County would contain 632 units in 1960.[24] The 1970 U.S. Census of Housing figures have not been released as of this writing. However, applying the percentage increase in total dwelling

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[23]The Tennessee Department of Highways' 1968 "General Highway Map: Sevier County, Tennessee" notes 204 "seasonal dwellings." This figure excluded second homes in incorporated towns and compares with a 1970 figure of 369 second homes outside of incorporated towns identified in the electrical data inventory.

[24]See footnote 32, Chapter II.

units between 1960 and 1970 to the 1960 second home figure yields a 1970 second home estimate of 813 units.[25] These figures clearly portray the difficulties of establishing inventory levels of existing second home stocks where data are relatively scarce and incomplete. From this point forward, this study refers only to the 651 second homes which have been geographically located in the study area and for which additional data have been collected.

D. Spatial Distribution of Second Homes

The 639 land-based second homes identified above were assigned individual geographic location code numbers and plotted on a county highway map. The floating homes were not pinpointed with regards to specific mooring locations on the lake. After studying the spatial distribution of second homes and their patterns of concentration and dispersion, Sevier County was broken down into nine geographic areas for the purpose of facilitating a more detailed discussion. While there was no means of determining which second homes were located in second home communities from the electrical data, other field research did locate four second home communities within the county. Since future second home development might be expected to occur more rapidly and in higher densities within these communities, they are mentioned in the analysis as well.[26] Figure 2 graphically presents the spatial distribution of

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[25] Engels, Tennessee Population and Housing, 1950-1970 - Part I: Summary Indicators, Table 3.

[26] Information on second home communities was obtained through private interviews with their sales representatives conducted by the author, Summer, 1971.

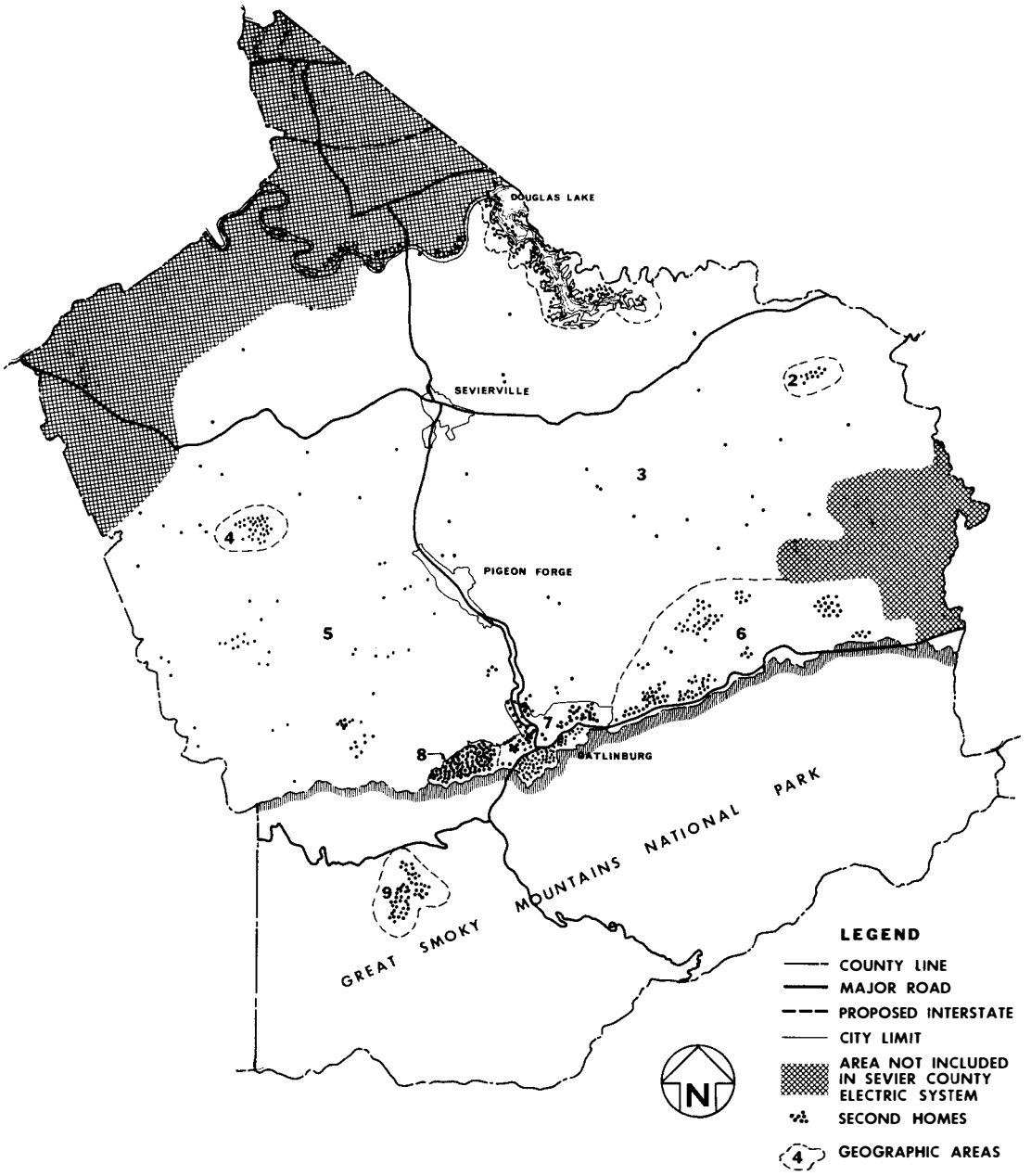

Figure 2. Spatial Distribution of Second Homes in Sevier County by Geographic Area, 1970.

second homes within each of the nine areas. The uneven distribution of second homes among the nine areas has no significance as the breakdown was designed only to facilitate a descriptive analysis of the data.

Area 1 includes the second homes either floating on, adjacent to, or within a short distance of Douglas Lake. Forty-three of the 55 second homes in this area were found adjacent to or near the lake and 12 were on the water. English Mountain, a new second home community located atop a 3600 foot mountain by the same name was designated Area 2 and contained 11 second homes receiving electricity. The remaining land in the study area to the east of Highway 441 and not included in Area 6 was designated as the Ridge and Valley East and contained 30 second homes, generaly located along streams and creeks. Chilhowee Mountain in the western portion of the county constitutes Area 4 and contains 34 second homes built on a scattered-lot basis across the top of Chilhowee and Bluff Mountain. Area 5 was designated as the Ridge and Valley West and constitutes the remaining land not in other areas that lies to the west of Highway 441. This area contained 74 scattered-lot second homes located in a variety of settings including atop ridges, in deep valleys, along streams, and in wooded, rolling farm land. A new second home community called the Norton Creek Community Association is currently being developed in this area but contains only three second homes at present.

The concentration of 125 second homes around a mountainous area known as Pitman Center formed Area 6. Cobbly Nob, a second home community in this area which is also in the early stages of development, contains only 15 second homes. The town of Gatlinburg was divided into

Areas 7 and 8. Area 7, the eastern half of the town, contained 173 second homes and is referred to as the Gatlinburg area. Mount Harrison, the site of the Gatlinburg Ski Resort and fully within the corporate limits of Gatlinburg, constitutes Area 8 and contains 97 second homes. The majority, if not all, of these dwellings are under the development of Chalet Properties, Inc., a fourth second home community located in Sevier County. Area 9 is a cluster of 52 second homes in an area called Elkmont, built before the formation of the Great Smoky Mountains National Park in 1934.[27] These dwelling units have been allowed to remain intact for their owner's use on a life-time lease arrangement with the federal government. No new development is permitted inside the boundaries of the Park.

E. Rates of Second Home Development

Rates of second home development from September, 1966 through August, 1970 were obtained from the electrical data by summing the total number of second homes in each geographic area receiving electricity in each of the four years and comparing the rates of change. These rates must be viewed in light of the qualifications previously mentioned. In addition, while they may be somewhat understated on the whole, there is also the danger of slight overstatement. As mentioned earlier, electrical service was occasionally discontinued for extended periods of dormancy, such as during the winter months or when a structure was on the market for sale.

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[27] Officials of the Great Smoky Mountains National Park stated that 62 second homes are located at Elkmont, indicating that ten units were not receiving electricity from the Sevier County Electric System at the time the inventory was made.

When electrical service was reinstated, the second home appeared as a new unit on the records of the Electric System, thereby inflating second home growth for that geographic area and time period. Again, such occurrences were considered to be few; however, frequent enough so that these figures should be regarded as approximates rather than absolutes.

Table I presents the numbers of second homes and annual percentage changes in geographic areas for the years in which data were available. While second homes in Area 1 increased only 12.3 percent over the four year period, land-based dwelling units increased by 38.7 percent, a figure not represented in Table I due to the aggregation of both floating homes and land-based second homes in the same category. All of the areas, with the exception of Areas 4 and 9, show varying increases in each of the four years. Only slight growth has occurred in Area 4, while Area 7 experienced a large increase between 1967 and 1968, followed by growth at a decreasing rate in 1969 and 1970. Closer analysis of a number of related factors would be necessary to fully explain the reasons for these fluctuations. Area 2, while low in absolute figures, has shown a steady increase in second homes.[28] Areas 5, 6, 7, and 8 account for the majority of absolute growth.[29] Each of these areas is relatively closer to the National Park than the others(except for Area 9 which is in

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[28]According to sales representatives of the English Mountain second home community, 25 dwelling units were located there in August, 1971, a 127 percent increase over the 1970 figure.

[29]Sales representatives of the Chalet Properties, Inc., the second home community making up Area 8, stated that there were 160 second homes on Mount Harrison in August 1971, an increase of 63 units or 64.9 percent.

TABLE I

SECOND HOMES AND PERCENTAGE INCREASES IN SEVIER COUNTY BY GEOGRAPHIC AREA, 1966-1970

Year	Geographic Area									
	1*	2	3	4	5	6	7	8	9**	Total
1967	49	0	18	30	49	80	119	48	46	439
1968	51	1	23	31	58	92	156	53	51	516
% Increase	4.1	100.0	27.8	3.3	18.4	15.0	31.1	10.4		17.5
1969	55	4	26	34	68	103	163	78	52	532
% Increase	7.8	300.0	13.0	9.7	17.2	12.0	4.5	47.2		3.1
1970	55	11	30	34	74	125	173	97	52	651
% Increase	0.0	175.0	15.4	0.0	8.8	21.4	6.1	24.4		22.4

Source: Electrical records, Sevier County Electric System, collected by the author, Spring, 1971.

*The growth of land-based second homes in this area is higher than these figures indicate due to the loss of six floating homes during the four-year period.

**Changes in this category are due to seasonal variations in services demanded, as there is no new construction allowed in this area.

Area names: (1) Douglas Lake, (2) English Mountain, (3) Ridge and Valley East, (4) Chilhowee Mountain, (5) Ridge and Valley West, (6) Pitman Center, (7) Gatlinburg, (8) Mount Harrison, and (9) Elkmont.

the Park) and Areas 5, 6, and 8 contain second home communities, a possible indicator of preferential development areas. According to these figures the number of second homes in Sevier County increased 48.3 percent between 1966 and 1970. This figure compares with a 16.5 percent increase in total county population between 1960 and 1970, and a 29.9 percent increase in total dwelling units during the same period.

In addition to rates of second home growth over this four year period, indications of future second home development may be obtained from the amount of land sold for the purpose of second home development. Such figures were only available from second home communities. Table II presents the land sold for second home development and the remaining land for sale in terms of numbers of lots, averaging in size from one-third to two-thirds of an acre. According to the figures in Table II, 1010 lots have been sold in second home communities.[30] Remaining lots for sale total 8200. Of further significance is the fact that three of these four second home communities have been developed since 1966.

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[30]None of these second home communities have regulations requiring construction within a certain time period. Lots may be held for speculation, therefore the number of lots sold is not necessarily a precise indicator of future second home growth.

TABLE II

SECOND HOMES BUILT, LOTS SOLD BUT UNDEVELOPED, AND REMAINING LOTS FOR SALE IN SECOND HOME COMMUNITIES, SEVIER COUNTY, AUGUST, 1971

Second Home Community	Geographic Area	Second Homes Built	Lots Sold but Undeveloped	Remaining Lots for Sale
English Mountain	2	25	300	7000
Norton Creek	5	3	30	30
Cobbly Nob	6	15	180	1000
Chalet Properties, Inc.	8	160	500	170
Total		203	1010	8200

Source: Approximate figures supplied during private interviews with sales representatives of each second home community, conducted by the author, August, 1971.

CHAPTER IV

AN ANALYSIS OF SECOND HOMES IN SEVIER COUNTY

A. Introduction

Chapter IV follows the previous discussion of an inventory of second homes in Sevier County with an analysis of a number of characteristics of second homes, their users, and their use. The data for this chapter deal solely with Sevier County and were collected from three sources: the electrical records of the Sevier County Electric System, the property tax records of Sevier County, and from a mail-out questionnaire sent to owners of second homes in Sevier County. Methodologies used and their limitations are briefly discussed along with a comment on questionnaire response. Second home data for this chapter are organized into four major groupings: tenancy characteristics, structure characteristics, owner distribution, and usage analysis. Where relevant, raw data are presented in tabular form along with a discussion of the research findings.

B. Methodology and Limitations

Methodology

Three sources provided data for the analysis carried out in this chapter. Data obtained from the electrical records of the Sevier County Electric System (discussed in the preceding chapter) provided figures on the distance between the primary home and the second home, and on

the structural types of second homes in the county. The 1970 property tax records of Sevier County were a second data source. Using the names of the billees of each second home contained in the electrical records, second home properties were identified on the tax rolls and figures for assessed valuation and acreage were recorded.

The bulk of the data for the discussion of second homes in this chapter were obtained from a mail-out questionnaire sent to each of the 639 land-based second homes identified in the second home inventory. Billing addresses were used as addresses for the questionnaires. A cover letter explaining the project and the need for information on second homes accompanied the questionnaires. At the end of two weeks, nonrespondents were mailed a second questionnaire and a different cover letter urging their response.[1] Two more weeks were allowed for receiving questionnaires, then the data were transferred to code sheets and card-punched. The questionnaire dealt with three major types of questions: those concerning characteristics of second home tenancy, those concerning the physical features of second home structures, and a major question concerning the frequency of second home use and the number of persons involved. A question was also included on modes of travel used to visit second homes. Data from these three sources are presented and discussed in a series of tables and within the text of this chapter. The analysis of second home use is based on electricity consumption measured in kilowatt hours and responses to the question on second home occupancy. These two sets of data are compared to determine the predictability of second home occupancy

[1]Appendix B contains copies of the questionnaire, the accompanying cover letter, and the second mailing cover letter, respectively.

from electricity consumption data.[2]

Limitations

The above methodology contains several limitations. First, by mailing questionnaires to billees on electrical records the data collected are biased against second home renters, as indicated by the low number of questionnaires returned by them. This raised a further problem when occupancy data were called for. Respondents who owned and used their second homes a portion of the year, but also rented them out at other times, could only report their occupancy of the dwelling unit, thereby understating the total amount of use for that particular second home by the amount of rental occupancy. While data were collected on the length of rental periods responses were categorical and not related to any particular time of year.

A further limitation concerning the questionnaire data is that time and financial constraints necessitated selectivity in the request for information. Several other major types of questions concerning second homes could have been asked, such as population characteristics of second home owners. However, time and money did not allow further data collection.

Inherent in a questionnaire of this type is the limitation that respondents to the questionnaire were providing their own opinions, as opposed to actual fact. Although the data are discussed in exact terms, this consideration must be kept in mind, especially when considering occupancy data which required that the respondent recall his

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[2]The specific methodology used for this analysis is discussed along with the findings at a later point in this chapter.

average levels of second home visitation by season for the preceding year. Such data should be regarded as providing general trends and approximates rather than exact figures.

The data collected from the Sevier County property tax records are incomplete due to the inability to identify some second home properties by the names of the billees on the electrical records. Assessed valuation and acreage figures were obtained only for those 379 respondents to the questionnaire. Of those responding, tax data were located and recorded for 317 or 83.6 percent of them. A further limitation of the tax data is the fact that acreage figures were not given below one acre. While many second home lots on the market are one-third to one-half of an acre in size, all lots one acre or less were grouped together in the tax records causing a further generalization.[3]

Questionnaire Response

Of the 639 questionnaires mailed out 260 or 40.7 percent were returned in usable form within two weeks. After a second mailing to all nonrespondents the level of questionnaires received rose to 379 or 59.3 percent of the total sample at the end of four weeks. Considerable variance occurred in the proportions of respondents to the questionnaire in each of the nine geographic areas of the county. Table III lists the numbers and percentages of respondents to the questionnaire by geographic area. Occasionally respondents failed to answer one or more particular questions. Since the number of respondents answering each question

[3]Lots for sale in second home communities in Sevier County start at one-third of an acre and go up. This information was obtained in private interviews with sales representatives of second home communities, August, 1971.

TABLE III

NUMBER OF RESPONDENTS TO SECOND HOME QUESTIONNAIRE BY GEOGRAPHIC AREA

Respondents	Geographic Area 1	2	3	4	5	6	7	8	9	Total
Sample Size	43	11	30	34	74	125	173	97	52	639
Respondents as % of Sample	21 48.8	7 63.6	10 33.3	13 38.2	40 54.1	70 56.0	112 64.7	68 70.1	38 74.1	379 59.3

Source: Compiled from questionnaire responses received by the author, Spring, 1971.

lends some validity to the conclusions drawn from them by increasing the size of the sample upon which they are based, percentages of the number of respondents answering a particular question will be included where questionnaire results are presented in tabular form.

C. Tenancy Characteristics

Ownership vs. Rental

Each recipient of a second home questionnaire was asked if he owned or rented the dwelling unit in question. Since it is more likely that second home owners would receive the electric bill for second home properties even if they rented the dwelling units out for substantial periods of time, the method of data collection biased the sample in favor of second home owners as opposed to renters. Of the 379 parties responding to the questionnaire, 374 or 98.7 percent of them indicated that they owned the second home in question.[4] Of the five questionnaires returned by renters, two came from Area 5 and three from Area 7. From this point forward, this study will refer to the respondents as second home owners, except where specifically discussing renters.

Joint Ownership of One Second Home

One variation of second home ownership is joint ownership of a single second home by two or more parties. Table IV presents responses to this question, indicating that 48 second home owners owned their second homes jointly with other parties. Of these 48 respondents,

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[4]This figure includes the second homes in Area 9 on life-time leases from the federal government.

TABLE IV

NUMBER OF SECOND HOMES JOINTLY OWNED BY TWO OR MORE PARTIES

	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Number of Second Homes Jointly Owned	2	0	1	0	2	7	12	13	11	48
Average Number of Parties per Joint Ownership	2.0	0.0	3.0	0.0	2.0	3.0	2.3	2.2	2.8	2.5

43 of them were located in Areas 6, 7, 8, and 9. The average number of parties with jointly owned second homes was 2.5 each. There was assumed to be no duplication among these responses since only one of the owners received the electric bill, and thus the questionnaire. A problem did occur in measuring other variables for these cases since answers to the remaining questions were only obtained from the one party responding. This is of special significance when considering occupancy patterns for these second home units.

Ownership of More than One Second Home

In addition to several parties jointly owning one second home in Sevier County, some individual parties own several second homes. Table V presents responses to a question to that effect, indicating that 33 of the 365 respondents to this question own more than one second home in Sevier County. These second homes were distributed across the nine geographic areas somewhat more evenly than the joint ownership cases with a high of nine responses in Area 7 and eight responses in Area 5. The average number of second homes owned by parties owning more than one was 2.3 units each.

Owners Who Rent Their Second Homes

While not being able to collect information concerning second home renters, data were collected on the number of second home owners who rented their second homes to parties outside their immediate family. Table VI indicates that 89 or 24.3 percent of the 367 respondents to this question rented their second homes out sometime during the past 12 months. Of these 89, 73 were located in Areas 7 and 8. In Area 7

TABLE V

RESPONDENTS OWNING MORE THAN ONE SECOND HOME

	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Respondents Owning More than One Second Home	2	3	2	0	8	4	9	4	1	33
Average Number of Second Homes Owned	2.0	2.0	2.5	0.0	2.5	2.7	2.3	2.3	2.0	2.3

Source: Second home questionnaire data collected by the author, Spring, 1971. N = 365 (96.3%).

TABLE VI

SECOND HOME OWNERS WHO RENTED THEIR SECOND HOMES TO PERSONS OUTSIDE THEIR IMMEDIATE FAMILIES DURING THE PAST 12 MONTHS

Second Home Owners	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Number of Owners Renting Their Second Homes	2	2	0	0	2	6	32	41	4	89
Percent	9.5	28.6	0.0	0.0	5.4	8.7	29.4	60.3	12.1	24.3
Number of Owners Not Renting Their Second Homes	19	5	10	13	35	63	77	27	29	278
Percent	90.5	71.4	100.0	100.0	94.6	91.3	70.6	39.7	87.9	75.7
Total	21	7	10	13	37	69	109	68	33	367
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 367 (96.8%).

29.4 percent of all second homes were rented out, while in Area 8 60.3 percent of the second homes were rented sometime during the year. Table VII lists lengths of time during which these second homes were rented out. In addition to containing the highest proportion of second homes rented out by their owners, second homes in Areas 7 and 8 were rented out for the longest periods of time, with 27 of the 41 units rented out in Area 8 for three months or longer.

Years in Continuous Ownership

Data were also gathered on the number of years of continuous ownership for the second home owners responding to the questionnaire. Table VIII presents years of ownership. Column percentages indicate that the majority of second home owners in each area have owned their second homes ten years or less, with the exception of Area 9. Here, 21.2 percent of the owners have held the property continuously for between 31 and 40 years, and 27.3 percent have held the property for more than 41 years. These second homes constitute some of the oldest in the county, and due to the lease arrangements with the federal government, appear to remain in the same families for many years. In other areas, short periods of continuous ownership represent the relative newness of development mentioned in Chapter III. In Areas 1, 2, 4, and 8 no respondent reported owning a second home more than 20 years. On the other hand, a few scattered second homes in Areas 5, 6, and 7 appear in the higher categories of continuous years of ownership.

TABLE VII

LENGTH OF SECOND HOME RENTAL

	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Less than one week	0	0	0	0	0	0	3	1	1	5
1-4 Weeks	1	1	0	0	0	3	13	2	3	23
1-3 Months	1	1	0	0	0	0	7	3	0	12
4-6 Months	0	0	0	0	1	1	5	9	0	16
7-9 Months	0	0	0	0	0	1	2	5	0	8
10-12 Months	0	0	0	0	0	0	1	13	0	14

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 367 (96.8%).

TABLE VIII

YEARS OF CONTINUOUS SECOND HOME OWNERSHIP

Years of Continuous Ownership	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
1-5 Years	7	7	5	3	13	35	46	46	5	167
Percent	33.3	100.0	50.0	23.1	34.2	51.5	43.0	67.6	15.2	45.8
6-10 Years	12	0	2	6	14	18	24	22	2	100
Percent	57.1	0.0	20.0	46.2	36.8	26.5	22.4	32.4	6.1	27.4
11-20 Years	2	0	1	4	5	9	23	0	9	53
Percent	9.5	0.0	10.0	30.8	13.2	13.2	21.5	0.0	27.3	14.4
21-30 Years	0	0	2	0	3	4	6	0	1	16
Percent	0.0	0.0	20.0	0.0	7.9	5.9	5.6	0.0	3.0	4.4
31-40 Years	0	0	0	0	2	2	7	0	7	18
Percent	0.0	0.0	0.0	0.0	5.3	2.9	6.5	0.0	21.2	4.9
More than 40 Years	0	0	0	0	1	0	1	0	9	11
Percent	0.0	0.0	0.0	0.0	2.6	0.0	0.9	0.0	27.3	3.0
Total	21	7	10	13	38	68	107	68	33	365
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 365 (96.3%).

Reasons for Second Home Ownership

As was stated in Chapter I, this study is directed primarily toward second homes used as recreational/leisure-time housing; however, other uses of second homes would not be ignored where discovered. One question asked second home owners to indicate their principal reason for owning a second home. The 327 answers to this question are presented in Table IX which indicates that 284 or 86.9 percent of these parties held second home properties for recreational/leisure-time use. This percentage varied greatly across the range of geographic areas, with only 55.8 percent of the respondents in Area 8 citing recreational/leisure-time use as their principal reason for second home ownership. In Areas 7 and 8, 6.3 and 34.9 percent of the respondents, respectively, cited investment income as the principal reason for ownership. Occasional responses, mostly in these same two areas, listed business purposes as their principal reason, while a total of eight persons in the sample cited other reasons for second home ownership. The most common other reason for second home ownership cited was that of farming the property, followed by obtaining the second home specifically for a retirement residence.

Plans for Converting Second Homes to Permanent Residences

All respondents were asked to indicate their plans for retirement with regard to permanent use of the second home they now owned. Table X presents second home owner's plans for converting their second homes to permanent residences. Seven respondents stated that they planned to convert their second homes to permanent residences prior to their retirement. Thirty-six were indefinite on the subject, and 211 or 83.1 percent of the

TABLE IX

REASONS FOR SECOND HOME OWNERSHIP

Reason for Ownership	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Recreational/Leisure-Time Use	19	6	8	12	33	62	88	24	32	284
Percent	90.5	85.7	100.0	92.3	86.8	89.9	91.7	55.8	100.0	86.9
Investment Income	0	1	0	0	1	3	6	15	0	26
Percent	0.0	14.3	0.0	0.0	2.6	4.3	6.3	34.9	0.0	8.0
Business Purposes	1	0	0	0	0	2	2	4	0	9
Percent	4.8	0.0	0.0	0.0	0.0	2.9	2.1	9.3	0.0	2.8
Other	1	0	0	1	4	2	0	0	0	8
Percent	4.8	0.0	0.0	7.7	10.5	2.9	0.0	0.0	0.0	2.4
Total	21	7	8	13	38	69	96	43	32	327
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 327 (86.3%).

TABLE X

SECOND HOME OWNER'S PLANS FOR CONVERTING SECOND HOMES INTO PERMANENT RESIDENCES BEFORE RETIREMENT

Plans for Conversion Before Retirement	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Yes	0	0	0	0	1	1	3	2	0	7
Percent	0.0	0.0	0.0	0.0	4.6	2.1	3.9	3.9	0.0	2.7
Indefinite	2	0	1	0	7	8	9	9	0	36
Percent	16.7	0.0	25.0	0.0	31.8	17.0	11.7	17.7	0.0	14.2
No	10	7	3	9	14	38	65	40	25	211
Percent	83.3	100.0	75.0	100.0	63.6	80.9	84.4	78.4	100.0	83.1
Total	12	7	4	9	22	47	77	51	25	254
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 254 (67.0%).

254 respondents to this question had no plans to convert their second homes to permanent residences.

Conversion figures rose considerably when respondents were asked their plans for conversion of the second home after retirement. Table XI shows that 60 or 18.3 percent of the respondents to this portion of the question indicated positive plans for retiring in their second homes. The majority of these were second homes located in Areas 6 and 7. In addition to these, 113 or 34.4 percent of the respondents stated that they were indefinite with regard to retirement plans and their second homes, while 155 or 47.3 percent had no plans for retirement in their second homes. The figures for those respondents indefinite about their plans were highest in Areas 6, 7, and 8.

D. Physical Characteristics

Structural Types

Second homes in Sevier County were broken down into five structural categories: single-family detached, multi-family attached, farm houses, mobile homes, and floating homes. Structural information was available for all 651 of the second homes inventoried. Since farm houses could also be classified as single-family detached dwelling units, the breakdown actually contains only four truly different types of structures. These were listed separately because the data allowed this distinction to be made. Table XII presents structural types of second homes, showing that of the 651 second homes in the county, 93.1 percent of them were single-family detached dwelling units. Three multi-family attached units existed in the form of condominium apartments in Area 8. Four

TABLE XI

SECOND HOME OWNER'S PLANS FOR CONVERTING SECOND HOMES INTO PERMANENT RESIDENCES AFTER RETIREMENT

Plans for Conversion After Retirement	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Yes	9	0	3	2	7	16	16	7	0	60
Percent	42.9	0.0	33.3	18.2	23.3	26.2	16.5	10.8	0.0	18.3
Indefinite	5	3	4	3	11	19	32	32	4	113
Percent	23.8	42.9	44.5	27.3	36.7	31.2	33.0	49.2	14.8	34.4
No	7	4	2	6	12	26	49	26	23	155
Percent	33.3	57.1	22.2	54.5	40.0	42.6	50.5	40.0	85.2	47.3
Total	21	7	9	11	30	61	97	65	27	328
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 328 (86.5%).

TABLE XII

STRUCTURAL TYPES OF SECOND HOMES

Structural Type	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Single-Family Detached	33	11	24	33	66	120	173	94	52	606
Percent	60.0	100	80.0	97.1	89.2	96.0	100.0	96.9	100.0	93.1
Multi-Family Attached	0	0	0	0	0	0	0	3	0	3
Percent	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.5
Farm Houses	0	0	4	0	4	0	0	0	0	8
Percent	0.0	0.0	13.3	0.0	5.4	0.0	0.0	0.0	0.0	1.2
Mobile Homes	10	0	2	1	4	5	0	0	0	22
Percent	18.2	0.0	6.7	2.9	5.4	4.0	0.0	0.0	0.0	3.4
Floating Homes	12	0	0	0	0	0	0	0	0	12
Percent	21.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
Total	55	11	30	34	74	125	173	97	52	651
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971. N = 651 (100.0%).

farm houses were located in Area 3 and four in Area 5. Twenty-two or 3.4 percent of the second homes were found to be mobile homes.[5] Ten of these mobile homes were located in Area 1 in the vicinity of Douglas Lake. The next largest number was five located in Area 6.[6] The 12 floating homes were located on Douglas Lake in Area 1. Further structural breakdowns beyond this very rough categorization were impossible without a more indepth structural survey of some kind.

Age of Structures

Other physical characteristics besides structural type also formed a basis for physical comparison of second homes. Table XIII presents the years in which second homes were built from data supplied by 371 respondents to this question. According to these figures one-half of the second homes in Sevier County have been built since 1960. Almost all of the second home owners responding in Areas 2 and 8 indicated that their units had been built since 1960. The second highest category contained 60 second homes built before 1930. Fourteen percent of the units were built between 1930 and 1940, while 13.7 percent were built between 1950 and 1960. Area 9 exhibited the oldest second homes in the county with 83.8 percent constructed before 1930. Areas 5 and 7 also had a relatively large number of second homes built prior to 1930. Area 7 expanded considerably during the decade of the 1930's and again during the 1950's.

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[5]Mobile homes counted in the inventory using electrical records were only included when they were blocked up or otherwise secured in a state of semi-permanence, generally with septic tank hookup and not removed from the site on a seasonal basis.

[6]Not included in the study area, but discovered in the research into electrical records was a mobile home development on a Jefferson County branch of Douglas Lake containing 38 mobile homes receiving electricity and used for second homes.

TABLE XIII

YEARS IN WHICH SECOND HOMES WERE BUILT

Year	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Before 1930	1	0	2	0	13	2	11	0	31	60
Percent	4.8	0.0	20.0	0.0	34.2	2.9	10.0	0.0	83.8	16.2
1930-1940	1	0	1	1	7	9	28	0	5	52
Percent	4.8	0.0	10.0	7.7	18.4	13.2	25.5	0.0	13.5	14.0
1940-1950	1	0	1	4	5	3	8	0	1	23
Percent	4.8	0.0	10.0	30.8	13.2	4.4	7.3	0.0	2.7	6.2
1950-1960	5	0	1	3	4	14	22	2	0	51
Percent	23.8	0.0	10.0	23.1	10.5	20.6	20.0	3.0	0.0	13.7
After 1960	13	7	5	5	9	40	41	65	0	185
Percent	61.9	100	50.0	38.5	23.7	58.8	37.3	97.0	0.0	49.9
Total	21	7	10	13	38	68	110	67	37	371
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 371 (97.9%).

Square Feet of Structures

The Statistical Package for the Social Sciences subprogram "CODEBOOK" was used to calculate the means, medians, and ranges of square footage values for second homes in each of the nine geographic areas and for the total sample.[7] The results of these calculations are shown in Table XIV. The median for the total sample was 1,137.3 square feet. Figures ranged from 240 square feet for a second home in Area 5 to 10,000 square feet for a second home in Area 8. The highest median value, 1432.5 square feet, was found in Area 8 and the lowest, 670 square feet, in Area 4.

Internal Facilities

One question asked second home owners to check off the internal facilities their second homes contained from a list of four basic items: piped water inside, an indoor toilet, an indoor bathtub or shower, and a kitchen or cooking equipment. Table XV presents their responses, indicating that in the total sample 96.2 percent had piped water inside, 94.1 percent had indoor toilets, 94.1 percent had indoor bathtubs or showers, and 99.5 percent had a kitchen or cooking equipment in their second home. The distribution of these items over the nine geographic areas exhibited considerable variation. For example, Areas 2 and 8 contained 100 percent of the facilities listed while in Area 4 only 58.3 percent of the second homes had the first three items listed. Second homes in Areas 1 and 5 also contained fewer of the first three

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[7]Norman Nie, Dale H. Bent, and C. Hadlai Hull, Statistical Package for the Social Sciences, (New York: McGraw-Hill Book Company, 1970), p. 115.

TABLE XIV

MEANS, MEDIANS, AND RANGES OF SQUARE FEET IN SECOND HOMES

Geographic Area	Means of Square Feet Values	Medians of Square Feet Values	Ranges of Square Feet Values
1	757.9	722.5	320-2400
2	1454.3	1250.0	780-3000
3	1061.1	1047.5	300-1800
4	882.8	670.0	360-2000
5	1228.4	930.0	240-4500
6	1329.1	1150.0	256-4750
7	1230.6	1005.3	384-4500
8	1745.8	1432.5	560-10,000
9	1640.7	1414.0	800-4000
Total	1335.8	1137.3	240-10,000

Source: Second home questionnaire data collected by the author, Spring, 1971. N = 340 (89.8%).

TABLE XV

INTERNAL FACILITIES IN SECOND HOMES

Internal Facilities	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Piped Water Inside	18	7	9	7	31	69	112	68	37	358
% of Second Homes with this Facility	85.7	100.0	90.0	58.3	86.1	100.0	100.0	100.0	100.0	96.2
Indoor Toilet	16	7	9	7	28	68	111	68	36	350
% of Second Homes with this Facility	76.2	100.0	90.0	58.3	77.8	98.6	99.1	100.0	97.3	94.1
Indoor Bathtub/Shower	16	7	9	7	27	67	112	68	37	350
% of Second Homes wtih this Facility	76.2	100.0	90.0	58.3	75.0	97.1	100.0	100.0	100.0	94.1
Kitchen/Cooking Equipment	21	7	10	12	35	69	111	68	37	370
% of Second Homes with this Facility	100	100	90.0	100	97.2	100	99.1	100	100	99.5

Source: Second home questionnaire data collected by the author, Spring, 1971.
N's = 358 (96.2%); 350 (94.1%); 350 (94.1%); 370 (99.5%).

facilities than the average for the sample. Other areas were relatively near the average figures.

Acreage

Sevier County property tax records supplied acreage figures for 291 of the 379 second homes responding to the questionnaire. Table XVI presents these figures, indicating that of 291 cases recorded, 228 or 78.4 percent of these properties were one acre or less in size. Areas 1, 3, 5, and 6 had considerable proportions of the second home properties ranked as 2 acres or larger. A total of 17 second homes, all from these four areas, had properties in excess of 51 acres. Recently developed second home communities in Areas 2, 7, and 8 had a combined total of only three lots larger than one acre in size.

Assessed Valuation

Figures for assessed valuation of second homes were also obtained from the tax records of Sevier County. While not providing a true representation of either cost or market value, assessed valuation figures may provide some approximate means of ranking second homes in Sevier County according to their monetary worth. The Sevier County Tax Assessor uses the following formula for calculating assessed value from the estimated cash value of a piece of property estimated in an appraisal:

Cash Value x 0.80 = Appraised Value

Appraised Value x 0.30 = Assessed Value

Therefore, by working backwards from the assessed value through this formula, the estimated cash value of the second home and its acreage could be obtained. Rather than go through this process for the entire

TABLE XVI

ACREAGE OF SECOND HOME PROPERTIES

Acreage	Geographic Area									
	1	2	3	4	5	6	7	8	9*	Total
1 Acre or Less	7	7	2	10	13	38	93	58		228
Percent	35.0	100.0	22.2	83.3	40.6	66.7	97.9	98.3		78.4
2-10 Acres	7	0	0	2	6	7	2	1		25
Percent	35.0	0.0	0.0	16.7	18.8	12.3	2.1	1.7		8.6
11-50 Acres	5	0	3	0	4	9	0	0		21
Percent	25.0	0.0	33.3	0.0	12.5	15.8	0.0	0.0		7.2
51-100 Acres	0	0	2	0	5	3	0	0		10
Percent	0.0	0.0	22.2	0.0	15.6	5.3	0.0	0.0		3.4
101-500 Acres	1	0	2	0	4	0	0	0		7
Percent	5.0	0.0	22.2	0.0	12.5	0.0	0.0	0.0		2.4
Total	20	7	9	12	32	57	95	59		291
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		100.0

Source: Sevier County property tax records data, 1970, collected by the author, Spring, 1971. N = 291 (76.8%).

*No acreage figures were available for property in Area 9.

sample, assessed value figures were related to one another for purposes of comparison with the cash value calculated for selected figures.

Table XVII presents means, medians, and ranges for assessed values in each geographic area and for the total sample. The same computer program was used for this calculation as for the square foot calculations described earlier. Assessed values for second homes in Sevier County ranged from $75.00 in Areas 1 and 5, to $28,500.00 in Area 7. The median assessed value for the total sample was $1919.99. Area 4 had the lowest median assessed value at $862.50, and Area 8 had the highest at $4706.25. Applying the above formula for assessed value in reverse to the median assessed value for Sevier County produces the estimated cash value of the second home and its property:

Appraised Value x 0.30 = $1919.99 (Assessed value)

Appraised Value = $1919.99 ÷ 0.30

= $6399.97

Cash Value x 0.80 = $6399.97 (Appraised Value)

Cash Value = $6399.97 ÷ 0.80

= $7999.96

Applying this same formula to the extreme assessed values found in the range figures produced cash value figures for second homes in Sevier County ranging from $312.58 to $118,750.00.

E. Owner Distribution

Distance from the Primary Home to the Second Home

Distance figures between the second home and the primary residence were calculated from the addresses of the second homes located in Sevier

TABLE XVII

MEANS, MEDIANS, AND RANGES OF ASSESSED VALUES FOR SECOND HOMES

Geographic Area	Means of Assessed Values ($)	Medians of Assessed Values ($)	Ranges of Assessed Values ($)
1	1493.25	1185.00	75.00-6000.00
2	1808.57	2058.75	375.00-3000.00
3	1483.33	1237.50	675.00-3975.00
4	2975.00	862.50	150.00-21,900.00
5	1780.94	1312.50	75.00-9075.00
6	1779.54	1504.69	105.00-7500.00
7	3228.55	2737.50	225.00-28,500.00
8	4649.43	4706.25	600.00-9000.00
9	1403.23	1435.71	750.00-1800.00
Total	2680.95	1919.99	75.00-28,500.00

Source: Second home questionnaire data collected by the author, Spring, 1971. N = 317 (83.6%).

County and the addresses of the billees on the records of the Sevier County Electric System. Table XVIII presents these figures by geographic area and mileage categories. For the total sample of 639, 65.7 percent of the second home owners maintained their permanent residence within 49 miles of their second home. Areas 1 through 5 and 9 had the large majority of their second home owners living within 49 miles. Seventy-six, or 11.9 percent of the second home owners had primary residences between 500 and 999 miles away. This constituted the third largest category. Areas 6, 7, and 8 contained the second homes for most of these distant residents. Areas 5 through 8 contained more second home owners living further from Sevier County than other areas, with Area 8 containing the greatest number of second home owners living the greatest distance from the county.

Mode of Travel to the Second Home

While some variation existed among distance from second home figures, modes of travel from the primary home to the second home were much more uniform throughout the sample. This information was collected from the questionnaire for all of the 379 respondents to the survey. Three-hundred and thirty-two or 95.5 percent of the respondents listed the automobile as their primary mode of transport to their second home. Eight or 2.1 percent of the respondents listed air travel while the remaining nine respondents marked both the automobile and the airplane. Those indicating that they traveled to their second homes primarily by air were located in Areas 5 through 9, four of them in Area 8. No other modes of transportation were reported.

TABLE XVIII

DISTANCE FROM THE PRIMARY HOME TO THE SECOND HOME

Miles	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
0-19 Miles	10	1	7	20	24	29	6	2	0	99
Percent	23.3	9.1	23.3	58.8	32.4	23.2	3.5	2.1	0.0	15.5
20-49 Miles	31	9	13	12	33	49	103	30	41	321
Percent	72.1	81.8	43.3	35.3	44.6	39.2	59.5	30.9	78.8	50.2
50-99 Miles	0	0	0	0	2	3	7	4	1	17
Percent	0.0	0.0	0.0	0.0	2.7	2.4	4.0	4.1	1.9	2.7
100-199 Miles	1	0	0	0	2	11	10	14	1	39
Percent	2.3	0.0	0.0	0.0	2.7	8.8	5.8	14.4	1.9	6.1
200-299 Miles	1	0	0	0	2	9	11	14	4	41
Percent	2.3	0.0	0.0	0.0	2.7	7.2	6.3	14.4	7.7	6.4
300-399 Miles	0	0	3	1	1	4	5	10	0	24
Percent	0.0	0.0	10.0	2.9	1.4	3.2	2.9	10.3	0.0	3.8
400-499 Miles	0	0	7	0	4	1	1	4	1	18
Percent	0.0	0.0	23.3	0.0	5.4	0.8	0.6	4.1	1.9	2.8
500-999 Miles	0	1	0	1	6	18	28	18	4	76
Percent	0.0	9.1	0.0	2.9	8.1	14.4	16.2	18.6	7.7	11.9
1000 Miles or More	0	0	0	0	0	1	2	1	0	4
Percent	0.0	0.0	0.0	0.0	0.0	0.8	1.2	1.0	0.0	0.6
Total	43	11	30	34	74	125	173	97	52	639
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971. N = 639 (100.0%).

F. Second Home Usage Analysis

Electricity Consumption

Raw kilowatt hour readings on the meter books of the Sevier County Electric System were recorded on code sheets, categorized, and card punched for each of the nine geographic areas from 1966 to 1970. The Statistical Package for the Social Sciences program "CROSSTABS" was applied to this data to "compute bivariate joint frequency distributions," that is, to display the frequency distribution of electricity according to its position on two variable scales; the 12 months of the year, and ten categories of electricity consumption.[8] The resulting computer output produced 36 tables, one for each of the nine geographic areas for each of the four years. Table XIX displays the ten categories into which electricity consumption figures were broken down for purposes of manageability. The mode, a measure of central tendency "which is simply the most frequent score or scores" was identified for each month, as well as other large percentages approaching the mode.[9] These figures provide an approximation of the pattern of electricity consumption by geographic area, by month, and by year.

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[8] Ibid.

[9] Herbert M. Blalock, Jr., Social Statistics, (New York: McGraw-Hill Book Company, Inc., 1960), p. 61.

TABLE XIX

CATEGORIES OF KILOWATT HOURS OF ELECTRICITY

Category	Kilowatt Hour Ranges
0	0
1	1 - 19
2	20 - 49
3	50 - 99
4	100 - 249
5	250 - 499
6	500 - 999
7	1000 - 2499
8	2500 - 4999
9	5000 or more

Source: Category breakdown designed by author for use with electrical data.

A close analysis of electricity consumption frequencies by month, year, and location within Sevier County revealed one characteristic common to all areas. For each of the four years from 1966 through 1970, in spite of the growth of second homes in the county during this period, the pattern and level of consumption of electricity on a monthly basis was consistently similar from year to year within each geographic area. Because of this fact, a one-year set of figures for the nine areas is a fair approximation of the patterns of electricity consumption for second homes in Sevier County. Tables containing these data for the year 1969-1970 appear in Appendix C.

While each geographic area conformed to a very similar pattern of consumption during each of the four years, patterns of consumption between the areas varied considerably. Modal figures for Area 1 produced a seasonal fluctuation which peaked during the summer months in consumption categories 4 and 5. The trend fell to 0 consumption during the winter months. While the mode performed in this fashion, it is significant to note that modal percentages ranged from approximately 25 to 35 percent, indicating that a considerable portion of other second homes in this area had different levels and patterns of consumption. One such trend can be seen in the consumption figures which rose during the winter, and fell back to the middle range categories in the spring and summer. Very few second homes fell into the 0 category during the spring, summer, or fall. Area 2 contained only four second homes receiving electricity which exhibited highly independent patterns and levels of consumption, with two of the four falling into the same category only a few times during the year. In contrast to the pattern of consumption in Area 1,

Area 3 exhibited a wider variety of behavior. Modes remained in the 0 category from September through April, then rising only slightly. At the same time, however, other figures slightly less than the mode exhibited a high summer and low winter consumption pattern. Others rose during the winter months falling to categories 5 and 6 during the spring and summer. Modal values in Area 4 exhibited a seasonal fluctuation which peaked during the summer in categories 3 and 4 and fell to the 0 category during the winter from December through April. Here again, modes were averaging from one-fourth to one-third of the sample, and considerable variation occurred throughout the remaining categories. Area 5 presented a similar summer-winter seasonal fluctuation. Modal values were considerably higher, several times over 50 percent, indicating a greater tendency for the total sample to follow this pattern. Relatively high percentages occurred in the 0 category in every month. The highest modes reached categories 4 and 5 during the months of July through October, with the level of 0 readings higher in the late spring and early summer.

A more rigid summer-winter seasonal pattern was found in Area 6 with modes dropping to the 0 categories from categories 4 and 5 in November, and jumping sharply back to categories 4 and 5 in May. Also in Area 6, a smaller second trend showed increased consumption of electricity during the winter months, rising to categories 8 and 9 in January and February. Area 7 also indicated a fairly rigid summer-winter seasonal pattern, but with an even higher deviation during the winter months, indicated by such figures as 13.7 percent of the frequencies of January falling into category 8. Fall, spring, and summer

consumption remained heavy in categories 4, 5, and 6. Modal values were approximately one-fourth to one-third of the frequencies in the sample indicating a fairly high degree of deviation from the central tendency. A reverse to the high summer-low winter pattern was found only in Area 8. Here, absolute consumption figures were the highest in the county with the fall mode appearing in category 6 and rising steadily into the winter with 51.3 percent of the sample in category 9 during January. Consumption of electricity remained high during the spring, dropping back to the fall level during the summer. Of further significance is the fact that modal values were high, often above 50 percent, while consumption in the lowest categories never reached above four percent. Area 8 exhibited the highest degree of uniformity throughout the frequency distribution. Area 9 also exhibited a fairly uniform pattern for a large portion of the sample. The summer-winter seasonal pattern existed with high modal values in the 0 category late in the spring. Levels of consumption appeared highest in the fall, reaching categories 5 and 6, with categories 4 and 5 predominant during the summer.

Occupancy Patterns

Question 12 of the second home questionnaire asked recipients to fill in the table indicating the number of full weeks, weekends, and holidays during which they occupied their second home and the associated numbers of persons per visit by season for the preceding 12 months.[10]

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[10]Note that this question called for an estimate made by the occupant, and was necessarily held to a low level of detail since it relied on the respondent's ability to recall his actions over that past year. The responses may not match up exactly with the electricity consumption data in terms of time frames; however, the generality of these approximations are only intended to serve as indicators of trends. The mismatch in time is therefore considered insignificant.

This information was also coded, card punched, and processed with the Statistical Package for the Social Sciences program "CROSSTABS" using geographic area and season as the two variables. Table XX presents the cross tabulation of the number of full weeks second homes were occupied for each of the nine geographic areas by season. A fundamental pattern was exhibited by the occupancy of second homes for each of the nine geographic areas with the exception of Area 8. For the total county, 18.9 percent of the occupancy occurs during the spring, 52.1 percent during the summer, 19.8 percent in the fall, and 9.1 percent during the winter. The occupancy patterns of each of the nine geographic areas varied from area to area, with Area 8 deviating the farthest from the total sample. Area 1 showed a preference for spring occupancy as opposed to fall, with almost no use during winter. Areas 2 and 3 both indicated no occupancy during the winter with 89.3 percent of the occupancy in Area 3 occurring during the summer season. Area 4 exhibited a higher than average occupancy for winter, while Areas 5, 6, and 7 followed a pattern relatively near the average. Area 8 exhibited the highest winter occupancy of the sample, but with summer still the highest season of use in this area as well. Area 9 showed a high preference for summer, a low one for winter, and ranked spring and fall equally.

As would be expected, figures for the average number of persons visiting the second homes during these weeks, as presented in Table XXI, exhibited a similar pattern to the occupancy figures. These figures represent the average number of people visiting all of the second homes in the area for each period of visitation, not the average number of

TABLE XX

NUMBER OF FULL WEEKS OF SECOND HOME OCCUPANCY

Full Weeks of Occupancy	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Spring	23	2	3	13	47	59	112	54	27	340
Percent	28.8	25.0	10.7	19.4	24.7	16.3	17.2	24.3	13.0	18.9
Summer	46	4	25	22	101	202	313	73	149	935
Percent	57.5	50.0	89.3	32.8	53.2	56.0	49.5	32.9	72.0	52.1
Fall	9	2	0	20	36	68	145	49	27	356
Percent	11.3	25.0	0.0	29.9	18.9	18.8	22.9	22.1	13.0	19.8
Winter	2	0	0	12	6	32	62	46	4	164
Percent	2.5	0.0	0.0	17.9	3.2	8.9	9.8	20.7	1.9	9.1
Total	80	8	28	67	190	361	632	222	207	1795
Percent	100	100	100	100	100	100	100	100	100	100

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 300 (78.9%).

TABLE XXI

AVERAGE NUMBER OF PERSONS PER FULL WEEK OF SECOND HOME OCCUPANCY

Numbers of Persons per Visit	Geographic Area 1	2	3	4	5	6	7	8	9	Total
Spring	35	4	5	14	52	111	183	86	47	537
Percent	29.9	25.0	19.2	20.6	26.5	21.2	24.4	21.0	23.9	23.3
Summer	57	8	21	28	80	234	290	138	105	961
Percent	48.7	50.0	80.0	41.2	40.8	44.7	38.6	33.7	53.3	41.7
Fall	22	4	0	14	49	129	170	77	39	504
Percent	18.8	25.0	0.0	20.6	25.0	24.7	22.6	18.8	19.8	21.9
Winter	3	0	0	12	15	49	108	109	6	302
Percent	2.6	0.0	0.0	17.6	7.7	9.4	14.4	26.6	3.0	13.1
Total	117	16	26	68	196	523	751	410	197	2304
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 300 (78.9%).

people per second home. The only significant variation was that they fluctuated less and showed a slightly higher level of visitation during winter and a lower level during summer than occupancy figures.

Table XXII presents occupancy data for weekends and/or holidays rather than full weeks. The pattern for the total sample ranked summer as the season with the highest occupancy figures, with 32.9 percent of the total. Spring followed with 25.2 percent, then fall with 24.8 percent, and winter with 17.2 percent. Differences among the nine geographic areas were again a matter of degree with the same general trend being followed by all areas except Area 8. Area 8 was the only area in which summer did not rate the highest usage. Here winter ranked highest, while no other season received less than 20 percent of the total occupancy for the year. The most significant difference between the full week occupancy pattern and the weekend and/or holiday data was that occupancy was more evenly distributed across the four seasons for weekend and/or holiday occupancy. While the seasonal pattern remained, it fluctuated at a lower degree.

The average number of persons per visit to second homes in Sevier County during weekends and/or holidays is presented in Table XXIII. The same overall trend may be seen with 28.2 percent of the persons visiting during the summer, 27.4 percent in the fall, 26.6 percent in spring, and 17.9 percent in winter. As before, the numbers of persons per visit were more constant by season than the numbers of days of occupancy. Only slight variations occurred between spring, summer and fall, and less persons per visit during the winter.

TABLE XXII

NUMBER OF WEEKENDS AND/OR HOLIDAYS OF SECOND HOME OCCUPANCY

Weekends and/or Holidays of Occupancy	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Spring	154	23	24	35	138	202	299	157	106	1138
Percent	29.2	24.5	25.5	28.5	27.2	23.3	24.9	22.0	27.0	25.2
Summer	160	33	27	55	172	305	395	167	175	1489
Percent	30.4	35.1	28.7	44.7	33.9	35.1	32.9	23.4	44.5	32.9
Fall	133	25	26	24	147	214	312	149	90	1120
Percent	25.2	26.6	27.7	19.5	29.0	24.7	26.0	20.8	22.9	24.8
Winter	80	13	17	9	50	147	196	242	22	776
Percent	15.2	13.8	18.1	7.3	9.9	16.9	16.3	33.8	5.6	17.2
Total	527	94	94	123	507	868	1202	715	393	4523
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 300 (78.9%).

TABLE XXIII

AVERAGE NUMBER OF PERSONS PER WEEKENDS AND/OR HOLIDAYS OF SECOND HOME OCCUPANCY

Persons per Weekends and/or Holidays	Geographic Area									
	1	2	3	4	5	6	7	8	9	Total
Spring	67	15	21	23	72	179	260	203	76	916
Percent	27.7	25.0	33.3	27.1	27.3	25.1	25.2	28.0	28.8	26.6
Summer	70	13	17	35	79	230	265	170	92	971
Percent	28.9	21.7	27.0	41.2	29.9	32.3	25.7	23.5	34.8	28.2
Fall	64	17	18	18	83	178	310	179	76	943
Percent	26.4	28.3	28.6	21.2	31.4	25.0	30.0	24.7	28.8	27.4
Winter	41	15	7	9	30	125	197	172	20	616
Percent	16.9	25.0	11.1	10.6	11.4	17.6	19.1	23.8	7.6	17.9
Total	242	60	63	85	264	712	1032	724	264	3446
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Second home questionnaire data collected by the author, Spring, 1971.
N = 300 (78.9%).

Electricity Consumption as an Indicator of Second Home Use

The seasonal fluctuations observed in electricity consumption suggest that these data might be useful as an indicator of second home usage.[11] Such an indicator would provide planners and other interested parties with available data which would generally be much less costly to obtain than occupancy figures through some form of counting procedure and possibly more accurate than an interview with the occupant himself. By comparing these two sets of data, the electricity consumption figures for 1969-1970 in Appendix C and the occupancy data contained in Tables XX and XXII, pages 108 and 111, it may be seen that the general pattern of occupancy or seasonal fluctuation is clearly indicated by the consumption of electricity at the second home. Indications are that electricity consumption figures could be used as an indicator of monthly usage, as well as seasonal usage, although no monthly occupancy data were available to verify that indication. Electricity consumption data could not be used to determine occupancy on a one-to-one basis as there are too many exceptions to the general trend for such a comparison to hold true. For example, Electric System officials observed that some second homes left on lights, refrigerators, and sometimes heating systems during their absence, all of which would provide false occupancy information.[12]

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[11] As mentioned in Chapter III, officials of the Sevier County Electric System estimated that 95 percent of the second homes in Sevier County were serviced with electricity.

[12] Water consumption would be a more accurate indicator of occupancy since there would be less likelihood of use of water when the structure was vacant. However, the major problem with predicting second home usage from water consumption in Sevier County was that the majority of second homes were serviced by wells or private water systems making data much less available on a comprehensive scale.

However, if the level of detail required by planners demanded only general trends and seasonal patterns of second home occupancy, the findings of this study indicate that electricity consumption should satisfactorily provide such an indicator. Tables XXIV and XXV present occupancy levels as percentages and modal percentages of electricity consumption for the year 1969-1970 in Area 1.[13] Using these two sets of data as an example, the similarity of the trend between actual occupancy as reported by second home owners and their consumption of electricity followed the same general pattern.

G. Summary of Case Study Findings

Almost all of the respondents to this study owned their second homes. Joint ownership arrangements occurred in 13.3 percent of the second homes, predominately in Areas 7 and 8. Nine percent of the sample owned more than one second home, most of them in Areas 5 and 7. Roughly one-fourth of the respondents rented out their second homes, again primarily in Areas 7 and 8. Rental periods were also longest in these two areas. Recreational/leisure-time housing was the major reason for second home ownership. Owners in Areas 6, 7, and 8 cited investment income and business purposes as second reasons. Owners

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[13] Had more exact occupancy figures been available on an equal time-scale basis with electricity consumption figures, applications of statistical tests of correlation or association through such tools as the Pearson Product-Moment Correlation Coefficients might have established a more exact indication of the relationship between these two variables. Such tests might be run on sample data from each of the nine areas of Sevier County.

TABLE XXIV

PERCENT OF SECOND HOME OCCUPANCY IN FULL WEEKS BY SEASON, AREA 1, SPRING 1970 - WINTER, 1971

Occupancy in Percent	Spring	Summer	Fall	Winter
100				
90				
80				
70				
60				
50		57.5		
40				
30				
20	28.8			
10			11.3	
0				2.5

Source: Second home questionnaire data collected by the author, Spring, 1971.

TABLE XXV

MODAL PERCENTAGES OF SECOND HOME ELECTRICITY CONSUMPTION BY MONTH, AREA 1, 1969 - 1970

Electricity Consumption by Category	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.
9												
8												
7												
6												
5		25.0		30.6								
4			30.6		27.8	25.0	36.1	22.2				
3												
2	22.2											
1									25.0	33.3	33.3	25.0
0												

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

planning to convert their second homes to permanent residences before retirement were found mainly in Areas 7 and 8. Plans for conversion after retirement came mainly from second home owners in Areas 1, 5, 6, and 7.

Second homes in Sevier County in 1970 were predominately single-family dwellings with a median size of 1137.3 square feet and a median assessed valuation of $1919.99. The largest and most expensive second homes were located in Areas 7 and 8, while the smallest and least expensive homes were found in Areas 1 and 4. Internal facilities were most complete in Areas 2 and 8 and most lacking in Areas 1, 4, and 5. Over three-fourths of the second homes were on lots one acre or less in size. The majority of second home owners lived within 50 miles of their second homes. Those living the greatest distance away had second homes primarily in Areas 5 through 9, with Areas 7 and 8 ranking the highest. Automobiles were the primary mode of transportation for almost the complete sample. Of the few respondents who traveled by air, the highest number had second homes in Area 8.

Full weeks of second home occupancy followed a highly seasonal trend with summer the most popular season, followed by spring, fall, and winter. Weekend visits to second homes were more nearly equal over the three seasons spring, summer, and fall. The numbers of people visiting second homes on full week visits were greater per visit during the summer and least during the winter. Persons per visit for weekend trips were relatively equal during the spring, summer, and fall seasons. Heavy winter usage occurred only in Area 8. Areas 4 and 5 had the least winter occupancy.

The data make a clear distinction between second homes in second home communities and those developed on a "scattered-lot" basis. Areas 2, 5, 6, and 8 contain the county's four second home communities, all of which have been developed since 1960. Second homes in these areas appear to be larger, more costly, and have more complete internal facilities. The activity associated with Areas 7 and 8 set them apart from the rest of the sample in several ways. Here, rates of conversion were higher, numbers of units being rented out were higher, rental periods were longer, and owners resided further away, some commuting to their second homes by air. Area 8 appeared to be the most intensively used area the year round. A wide range of variations among second homes became apparent through analysis of second home data for each of the nine geographic areas rather than the county as a whole. Variation was most apparent for both second home characteristics and occupancy patterns in Areas 1 and 4 and Areas 7 and 8. Indepth statistical analysis of these and other second home variables would be necessary to obtain more precise explanations and to predict the characteristics of future second home growth within the county.

CHAPTER V

THE CLASSIFICATION OF SECOND HOMES

A. Introduction

This chapter draws upon the information presented in the previous three chapters in order to develop a classification system for second homes. Information on second homes has been drawn from the study of existing second home research and associated literature. In addition, information was obtained from public records and through the use of a mail questionnaire to second home owners in a case study area. Time and space did not allow collection or analysis of second home data on a totally comprehensive scale, nevertheless, it is felt that the topic has been covered sufficiently to permit the formation of a basic classification system. The system proposed herein suggests both a format for the classification of second home data and the major component elements of that format. While some elements of this classification system may be more useful to some planning efforts than others, the basic framework is considered sound as well as flexible enough to be adaptable to a variety of second home data requirements. Users of such classification systems must make the final decisions concerning specific detailed content.

B. Fundamentals of Land Use Classification

Requirements of an Effective Classification System

The purpose of the operation of classification is furthering one's knowledge about an object and how it relates to other objects. An objective of the operation of classification is "clarification of the meaning of a thing, or a situation, by breaking it into parts, or subclassifications, that have a cause-and-effect relationship to one another, and which help to explain on-going action and anticipated change."[1] Conklin describes classification as "placing individuals together, some in one group, others in other groups. Classes are mutually exclusive, and a complete category of classes is comprehensive with respect to the universe under consideration."[2] He states that the "individuals" to be classified must be described and then placed into classes which are defined "in terms of one or more attributes of the individuals."[3] Chapin states, "classification is a systematic means of grouping like categories of land use in the pursuit of some predetermined purposes. . ."[4] Since "individuals" give up their specific identities for the defined identity of the class into which they are placed, Conklin

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[1]William I. Goodman and Eric C. Freund, eds., Principles and Practice of Urban Planning, (International City Managers Association: Washington, D. C., 1968), p. 84.

[2]Howard E. Conklin, "Principles of Land Classification." Modern Land Policy, (Urbana: University of Illinois Press, 1960), p. 337.

[3]Ibid.

[4]F. Stuart Chapin, Jr., Urban Land Use Planning, (Urbana: University of Illinois Press, 1965), p. 271.

warns of the fact that, ". . . individual differences singular to each individual or parcel are covered up when the parcel is grouped into a class with other parcels," therefore care must be taken to be aware of "which characteristics are to be covered up and which are relevant to the classification system."[5]

Two important considerations in the development of classification systems for land use planning are, first, the needs of the immediate area with which the classification system deals, and second, the relatability of this information to other planning areas for purposes of comparison. Sparks emphasizes the "importance of comparative research" in land use planning, calling for a nationally uniform system of land use classification.[6] Any new work in the field of land use classification should therefore be cognizant of previous research and practice, keeping in mind the need for comparability as well as local planning requirements.

Several basic characteristics or qualities are essential to well designed classification systems. Sparks cites "comprehensiveness and flexibility" as the two most important.[7] He states that a comprehensive classification system should "include coded identification of all activity or lack of activity taking place on the land," and "provide for expansion without internal disturbance of the codes."[8] With flexibility,

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[5]Conklin, "Principles of Land Classification," p. 338.

[6]Robert M. Sparks, "The Case for a Uniform Land Use Classification," Journal of the American Institute of Planners, XXIV (1958), 174.

[7]Ibid., p. 176.

[8]Ibid.

Sparks states, "A uniform classification may enhance local studies by providing a convenient method for relating them to larger studies or to similar local studies in other areas."[9] Guttenberg identifies two features of classification systems. First, they must be "expandable" so that additions can be made to the systems without disturbing them, and they must be "flexible" enough so that different classifications can be combined and cross classified.[10] Clawson also recognizes the need for flexibility in classification, stating that such a system must be flexible enough so that "it can be used in great detail, or the data can be summarized into broad groups, as desired; the same basic data can be grouped differently to meet different uses."[11] Clawson goes on to describe other characteristics of "An Ideal Land Data System" stating that it should be based on a "'pure line'" basis. Concepts such as activity, natural assets, or improvements on the land should not be mixed within one classification.[12] Chapin also stresses the need for purity in classification.[13] Clawson states that "all data about land should relate to a specific area, exactly defined" and "should be based upon securing maximum detail in the basic enumeration stage, with groupings and summaries only at a later stage."[14]

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[9] Ibid.

[10] Albert Z. Guttenberg, "A Multiple Land Use Classification System," Journal of the American Institute of Planners, XXV (August, 1959), 143.

[11] Marion Clawson, with Charles L. Stewart, Land Use Information, (Baltimore: The Johns Hopkins Press, 1965), p. 161.

[12] Ibid., p. 161.

[13] Chapin, Urban Land Use Planning, p. 271.

[14] Clawson, Land Use Information, p. 162.

The 1962 Land Classification Advisory Committee of the Detroit Metropolitan Area listed four "generally accepted principles for a good land use code" as follows:

> (1) It must be broad enough to permit classification of every land use; (2) the categories must be clearly defined and mutually exclusive; (3) the categories must be susceptible to analysis or breakdown; and (4) the code must be easy to use and it must be easy to process the information resulting from its use.[15]

It appears from the several above quotations that planners generally agree upon the fundamental principles of land use classification.

Scope of Classification

Following a discussion of the requirements of good land use classification systems, we now turn to the scope or range of subjects that land use classification systems might cover. According to Clawson, when defining land use, "it is the use dimension which should be emphasized."[16] Chapin states that the planner "is still concerned with the use of land as a descriptive tool, but more fundamentally he is interested in land and space uses as they reflect specific clusters of human activities."[17] Chapin describes a typical land use survey as one which:

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[15] Land Classification Committee of the Detroit Metropolitan Area, Land Use Classification Manual, (Chicago: Public Administration Service, 1962), p. 53.

[16] Ibid., p. 29.

[17] Chapin, Urban Land Use Planning, p. 265.

> . . . seeks to obtain sufficient information to classify the activity, to define modes of activity, to determine the intensity of activity between nodes, and to identify the factors that modify activity patterns. The last task is normally the most complex and involves investigations of attitudes as the 'regulators' of behavior and thus crucial determinants of activity systems, present and future.[18]

The importance of activity analysis in classification is to understand its spatial effects on the land.

Guttenberg carries the scope of classification beyond defining land use and the activities on it. He outlines a system of "modal classification" which goes beyond the "Referential Mode" used for "describing or analyzing," and discusses what he calls the "Appraisive Mode" and the "Prescriptive Mode," used for evaluating land use and prescribing actions to be taken with regard to it.[19] In an earlier article, Guttenberg describes the "five distinct dimensions of land use" falling under the "Referential Mode" classification:

> (1) General site development; (2) site adaptation as represented by building type or other special site facility; (3) actual use, i.e., the type of activity on the premises; (4) economic 'over-use', i.e., the type of economic function performed by the enterprise conducting the activity; (5) activity characteristics - size, rhythm, realm, and material impact.[20]

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[18] Ibid., p. 253.

[19] Albert Z. Guttenberg, New Directions in Land Use Classification, (Chicago: The American Society of Planning Officials, 1965), p. 4.

[20] Guttenberg, "A Multiple Land Use Classification System," p. 144.

He also calls the planner's attention to activity, stating that the fifth category of "activity characteristics" is the "substance of many planning concerns having to do with the arrangement of activities on the land, including zoning, neighborhood planning, transportation planning, etc."[21] "Major subjects" of the fifth classification are:

> activity size, as represented by the volume of people joining in the activity daily or weekly;
> rhythm or time-shape, i.e., the typical variation of size in the course of a day or some longer period of time;
> realm or range of influence of the activity, such as neighborhood, city-wide, regional, etc.;
> material effect on the senses, such as noise, odor, vibration, etc.[22]

Within the realm of Guttenberg's "Referential Model," Clawson suggests other areas of land classification including: ". . . Natural Qualities, . . . Improvements, . . . Intensity of Its Use, . . . Tenure, . . . Data on Land Prices, Land Market Activity, and Credit, . . . Data Showing Interrelationships of Land Use Between Areas."[23] In 1941, The National Resources Planning Board identified what they saw as the important elements of land use classification as, ". . . Inherent Characteristics, . . . Present Use, . . . Use Capabilities, . . . Recommended Use, . . . Program Effectuation."[24] Land use classification systems have been proposed to cover a broad range of characteristics inherent in the land itself and occurring or potentially occurring in relation to it.

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[21] Ibid., p. 146.

[22] Ibid.

[23] Clawson, Land Use Information, pp. 145, 148, 151, 153, 154.

[24] Report of the Land Committee to the National Resources Planning Board, Land Classification in the United States, (Washington: U.S. Government Printing Office, 1941), p. 3.

C. A Proposed Second Home Classification System

The Scope of This Classification System

The second home classification system proposed here does not represent new knowledge. It merely uses the concepts and basic principles discussed above, as well as existing systems, and applies them to the data concerning second homes. This classification system is purely within Guttenberg's "Referential Mode," making no attempt to evaluate the use of land for second home development or to suggest action to be taken with regard to it. While such classifications are considered useful, they would require further study which is beyond the scope of this work.

The purpose of this classification system is two-fold. First, it presents a breakdown of the component characteristics of second homes which should serve as a general framework under which to collect further data. The classification system presented here goes into deeper detail for this particular type of residential structure than most basic classification systems do for other items, such as the classification of primary residences. However, in keeping with the requirements of "expansion" and "flexibility," these data may be used at any level of detail desired, and elements may be combined or deleted from the system without affecting the overall framework. A second purpose of this operation is that it begins to identify and present in an organized format the characteristics of second homes which may be of interest to planners. Obviously, different types of plans and planners will be concerned with different elements within the system. However, the process of breaking them down presents a more comprehensive picture of

the product, and should bring to light several major questions concerning second homes.

Individual elements within the classification system are placed in what appear to be the most logical categories. Some elements, however, may be logically grouped other ways as well. Three of the major categories were studied in Sevier County: structure, tenancy, and activity. Additional areas for which Sevier County data were not collected are included to indicate how they might fit into the total classification system.

Second Homes Redefined

Before describing the classification system in detail, a further comment should be made on the definition of second homes. Rather than being significantly different from the original definition outlined in Chapter I, field research indicates that certain aspects of that definition should be reemphasized. In reference to Appendix I, each of the definitions listed have included or excluded some different elements or types of second homes. The definition used by the U.S. Bureau of Outdoor Recreation excluded all "multiple-family houses," a class which this study retained.[25] The definition used by the U.S. Bureau of the Census, in addition to certain time constraints, excluded all properties held for "income and investment purposes only," another category which this study retained.[26] Ragatz limited his definition of

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[25]United States Department of Interior, Bureau of Outdoor Recreation, Northern New England Vacation Home Study - 1966, Appendix 1, p. 29.

[26]United States Department of Commerce, Bureau of the Census, Second Homes in the United States, p. 2.

second homes to structures "originally constructed for the purpose of leisure-time activities," as well as excluding mobile homes, houseboats, and rural farmhouses, all of which were included in this study both in the definition and in the inventory findings.[27] Tombaugh also excluded mobile homes.[28]

While the reasons for these exclusions may have served the purposes of the specific studies involved, conceptually they produced a less than comprehensive analysis of the issue at large. The major consideration here is how land is being used. Land used for leisure housing on a seasonal, intermittent, and fluctuating basis is of extreme importance for planners making decisions concerning economic development, the provision of public services, preservation of the natural environment, and other major planning concerns which may be affected by second home development. The significance of this land use is further emphasized due to its proportion in relation to other land uses. As was noted in Chapter III, second homes in Sevier County account for approximately 6.2 percent of all residential dwelling units in that county, urban and rural, and their growth rate is considerably higher.[29]

The issues would appear to be that certain parcels of land are being exposed to use at different levels of intensity on a fluctuating basis. The fact that this activity is sometimes housed in structures originally built as permanent dwellings, farmhouses, condominiums,

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[27]Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 1.

[28]Tombaugh, "Factors Influencing Vacation Home Locations," p. 54.

[29]See pages 63 and 67, Chapter III.

mobile homes, or even floating homes would not necessarily reduce the activity effects associated with them. Therefore, they should be included in a classification system of second homes in order to obtain the truest possible representation of the land use involved and its associated characteristics.

Classification Elements

The classification system presented below contains five main categories under the residential section of the land use classification system developed by the Land Classification Advisory Committee of the Detroit Metropolitan Area.[30] They are presented here to indicate how second home categories might fit into an existing land use classification system without disturbing its basic framework.

0 - Residential

091 - Second Homes

0911 - Site Characteristics

0912 - Structure Characteristics

0913 - Occupant Characteristics

0914 - Tenancy Characteristics

0915 - Activity Characteristics

The detailed classification of subelements under these five major categories is outlined below, still using the Detroit system of coding. All categories are carried to a second level of detail. Under these are suggested types of information which would form the content of these

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[30]Land Classification Advisory Committee of the Detroit Metropolitan Area, Land Use Classification Manual, p. 3.

classes. Some classes, such as 09113 - Size, are carried no further. They would call for either data groupings or discrete size figures.

PROPOSED SECOND HOME CLASSIFICATION SYSTEM

0911 - Site Characteristics

09111 - Location

- Geographic location
- Within Second home community
- Outside second home community
- Proximity to permanent residence
- Proximity to recreational attractions or facilities
- Proximity to urban center

09112 - Natural Features

- Topography
- Soils
- Surface water
- Vegetation
- Orientation

09113 - Size

09114 - Access

- Proximity to hard surfaced road
- Proximity to major highway
- Proximity to interstate highway
- Proximity to other commercial transportation

0912 - Structure Characteristics

09121 - Type

- Single-family detached dwelling
- Multi-family attached dwelling
- Mobile home
- Floating home

09122 - Size

- Floor area
- Number of rooms
- Number of floors

09123 - Facilities

- Piped water inside
- Indoor toilet
- Indoor bathtub or shower
- Kitchen or cooking equipment
- Electricity
- Central heating
- Other heating systems
- Air conditioning

09124 - Age of Structure

09125 - Value of Structure

09126 - Style of Design

- A-frame
- Log cabin
- Ski chalet

0913 - Occupant Characteristics

09131 - Age of household head

09132 - Marital status

09133 - Family size

09134 - Household income

09135 - Occupation of household head

09136 - Education of household head

09137 - Location of permanent residence

- Urban
- Suburban
- Rural

0914 - Tenancy Characteristics

09141 - Ownership

- Individual ownership
- Joint ownership
- Ownership of more than one second home
- Years of continuous ownership
- Owners who rent second homes to other parties
- Owners who rent second homes through agents

09142 - Rental

09143 - Conversion Plans

- Before retirement
- After retirement

0915 - Activity Characteristics

09151 - Second home occupancy

- Frequency
- Duration
- Number of persons/visit
- Reasons for visit

09152 - On-site activities

09153 - Off-site activities

09154 - Activity effects

- On-site effects
- Off-site effects

Obviously, higher levels of detail could be obtained as well as more numerous classes of elements at this level of detail. However, the items included here are considered basic, and their organization adaptable to further expansion to fit the specific needs. As an example, one subclass within this system is carried out to further detail below.

0915 - Activity Characteristics

09151 - Second home occupancy

091511 - Frequency

0915111 - Spring, 1970

09151111 - Full Weeks

091511111 - 0
091511112 - 1-2
091511113 - 3-4
091511114 - 5-6
091511115 - 7-8
091511116 - 9-10
091511117 - 11-12

The code numbers are discrete for each data item and are adaptable to machine processing. Data may be combined for highly detailed analysis of specific second home characteristics. A discussion of the five basic classification categories follows.

1. Site Characteristics. The first category deals with the second home site, including its location, its natural assets, size, and its relationship to other elements in its immediate environment, including orientation and access. In addition, due to the established differences among second homes supported by other studies and field research in Sevier County, notation should be made stating whether the second home is located in a developed second home community, or alone on a single lot not necessarily contiguous with other second homes or developed recreational facilities.

2. Structure Characteristics. Category number two deals with the physical characteristics of the structure itself. Most basic to this category is the type of structure concerned, ranging from a single-family house to a floating home. The four categories used in the analysis of Sevier County's second homes proved sufficient to deal with all structures inventoried in the county. However, additional structural variations could easily be added to the category. Note also that farm houses have not been included as a subclass of structural type, although data were collected on farm houses used as second homes in Sevier County. A farm house is actually a style rather than a structural variation. Ragatz discussed the highly varied style of second homes stating that they "vary from the contemporary A-frame to the ski chalet to the conventionally

designed home."[31] Studies of second home styles would fit logically under this category.

Size is another class in this category. Two main measures of structure size are included here. Floor area is considered the most accurate. Due to the flexibility of design, data on the number of rooms could be misleading since internal spaces are more likely to be arranged less rigidly than those inside of permanent residences. Planners may learn something about the demands for public services for second homes by knowing what types of facilities existing units contain, as well as what future second homes are likely to contain. While data in Sevier County were collected for only the first five of the eight items listed, the data indicate that second homes are nearly as highly developed as permanent residences and will demand similar services when in use. Such information coupled with patterns of occupancy could alert public officials to future levels of demand for various publicly provided commodities such as water, electricity, or natural gas. Other information concerning the physical attributes of second homes might include the value of structures and their ages.

3. Occupant Characteristics. In areas of social and economic planning, the category of occupant characteristics provides a set of classes within which to organize such information concerning the social characteristics of those who use the second home. Such information as age of household head, marital status, family size, family income, and

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[31] Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing, p. 207.

occupation and education of the household head are all classes of data which provide insight into planning problems. Such information, coupled with occupancy patterns would assist planners in estimating seasonal populations resulting from recreational migration between primary homes and second homes. Age structures and sex compositions of the population may have direct implications for health planning services which could be needed by second home occupants during their visit. Ragatz cites the need for data on the "social characteristics" of second home occupants for use in developing second home location probability models.[32] Studies of costs and benefits to the local economy resulting from second homes would call for both social characteristics of second home occupants and their patterns and lengths of occupancy.

4. Tenancy Characteristics. Related to the above section is a section on tenancy characteristics. Data collected in Sevier County showed that both cases of joint ownership of a single home as well as one individual owning several second homes occurred. Information concerning the number of years second homes are held in continuous ownership might lend further social insight into the subject. While the large majority of second homes have been found to be reserved for the owner's private use, as supported by both the literature and Sevier County data, a substantial number of second home owners rent their second homes to other parties. Such information is important to planners attempting to predict the intensity of use of second home properties

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[32] Ibid., p. 308.

since occupancy figures provided by the second home owner might not include renters. Occupancy data for renters requires deeper investigation. Where second home owners rent their dwellings to others through the services of an agent, as is a common practice in second home communities where development corporations often serve this function, rentals have been shown to be considerably higher, as in Sevier County. It is conceivably possible, as some electrical consumption figures would indicate for Sevier County, that in areas where recreational attractions are high the year round, second homes could be occupied with the regularity and intensity of permanent dwellings, a fact worthy of note to planners. Units occupied only by renters, either on an intermittent basis or a long term lease, would also be placed in the tenancy category.

A further consideration under the category of tenancy is that of conversion plans. Opinions of second home owners in Sevier County were taken with regard to their plans to convert the second home to a permanent residence. The considerable number of second home owners planning or contemplating conversion of their second homes into permanent retirement residences in Sevier County should be important information to the planner. Such actions amount to an immigration of elderly persons into the area which could change the social and economic makeup of the community involved and the associated demands for services.

5. Activity Characteristics. One, if not the most important category in this classification system for planners is that consisting of data on the activities associated with second homes. The subject of activity analysis is a broad and highly complex topic and would merit separate study in and of itself. According to Chapin, in

the study of activities we are "concerned with the definition of specific recurrent behavior patterns, both clustered and random ones."[33] Recurrent behavior patterns in the form of visits to second homes were identified in Sevier County. Activity characteristics should include the frequency of visits to the second home and the length of stay. In addition to the number and length of visits, planners should have information concerning the number of people to expect. Research findings reviewed in Chapter II indicated that family size for second home owners was larger than the norm for the country. Consideration must also be given to visitors outside the immediate family such as guests and relatives.

Activity analysis would concern itself with specific activities taking place on the site, as well as activities occurring near it. Travel patterns of second home owners while in residence at the second home would fall into this category and would give planners an indication of how second home occupants integrated themselves into local and regional activities, recreational and otherwise. Included in activity analysis of second home occupants would be what Guttenberg referred to as "Activity Effects." Such effects may occur on the second home site itself or in the surrounding region. For example, stream pollution caused by poor percolation of sewerage wastes from a densely populated second home area would be an activity effect occurring off the second home site itself. In addition, retail expenditures occurring in nearby towns and businesses could be classed as another activity.

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[33]Chapin, Urban Land Use Planning, p. 244.

effect occurring off the second home site but generated by its occupants. Activity characteristics have an intensity value, a time value, a range value, a type value, and are a fundamental part of any classification system.

CHAPTER VI

CONCLUSIONS

A. The Importance of Second Home Studies

While second homes are not new in the United States, they are new in the sense that in selected areas of the country their growth during the last decade has been very rapid, in some areas occurring at a rate considerably higher than the rate of primary home starts. This growth is taking place in many remote and predominately rural areas of the country. Furthermore, as in the case of Sevier County, this growth is occurring with little or no guidance from the public sector as to its form, its location, its character, or its density. Such a process is in direct conflict with the basic principles of land use planning.

Second homes are used differently, for different reasons, during different periods of time, and at different levels of intensity than primary residential dwelling units. They may be constructed and occupied with a different set of standards than primary residences.[1] The future

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[1] Burby and Weiss state:

> As a general rule, households tend to perceive problems which are highly salient to their individual recreational and proprietary interests and to be unaware of more general problems common to the towns and rural communities near which their recreation property is located.

Raymond J. Burby, III, and Shirley F. Weiss, "Community Problems in Reservoir Recreation Areas," Research Previews, (Chapel Hill, North Carolina: Institute for Research in Social Science, April, 1971), p. 13.

of their use may be indefinite. They may sometimes occur on a scattered-lot basis in no obvious relationship to one another. At other times they may be found clustered in high densities in second home communities, often with some supportive services. Public policies for second home development can only be rationally formulated when decision-makers possess facts regarding this type of land use. However, second home data are scarce and often difficult to obtain. Furthermore, second home research has only begun to explore the nature of second homes and their relationship to their surrounding environments. In light of the state-of-the-art of local planning for second home development and the rapid rate at which that development is occurring, further second home studies are both important and timely.

B. Fundamental Issues of Second Home Planning

Several basic issues or tasks must be taken into consideration when planning for second homes at the local level. One is that of taking full account of existing conditions. Existing second home stocks must be inventoried and rates of development or annual additions to the existing stocks must be calculated. This thesis has demonstrated some of the difficulties involved in conducting a country-wide second home inventory. Existing records of a public utility system provided a data base, but not without several major limitations. Rates of development were even more difficult to obtain, and no system was available for systematically recording annual second home starts except through an annual inventory. Local communities faced with actual or potential second home development need systematic processes for gathering

and updating second home data. As was found in Sevier County, existing public records may be adaptable to this need. The sale of land for future second home development is another figure which may aid local planning efforts. Information on this subject was available from the four second home communities in Sevier County; however, no means were available to systematically collect such data for scattered-lot sales.

A second fundamental task in planning for second home development is the collection of data on the characteristics of second homes and their occupants. Such information may provide planners with useful information for the provision of social services and community facilities. It is important that data collection on second home characteristics be aware of variations within the planning area. Considerable variations among second home characteristics may occur within relatively small areas, as was shown in Sevier County. The classification system proposed in this thesis was developed to collect and organize into a structured framework basic second home characteristics identified in this and other studies. Such a classification system may function as a tool aiding further data collection and analysis.

The study and understanding of second home usage is of vital importance to local communities planning for both existing and anticipated second home development. During certain seasons in Sevier County the population more than doubles as a result of the influx of second home occupants and tourists. Such population fluctuations have direct implications for the provision of public services such as sewage treatment and solid waste disposal. One second home community in

Sevier County containing 25 second homes is almost totally isolated atop a mountain with access via a long, winding, narrow, gravel road. Demands for police and fire protection in such areas may require that local governments make considerable changes in their current operations. The question of the holding capacity of the natural environment requires information on both the nature and intensity of second home use.

Performing the above tasks would be a useless operation if the information obtained was not related back to the host community. Data on spatial location of existing stocks, annual starts, user characteristics, and usage analysis must be integrated into all phases of local community planning in order to satisfy the objectives of both the second home user and the host community to the fullest possible extent.

C. Suggestions for Further Study

Several major areas of further second home study are necessary to develop inputs into the planning processes dealing with this land use. First, there is an immediate need at the local community level to find sources of second home data on both existing stock and annual additions to that stock. Existing public records may be adaptable in some communities, while others may be required to build new data collection processes to supply local planners with second home information. It is apparent from this and other studies that data requirements go far beyond the inventory and spatial analysis of second homes. Data on use are essential, as well as data on a number of other

variables characterizing second homes and their occupants. Research into methods of second home data collection must also consider cost factors, expecially when dealing with small rural planning jurisdictions.

A second major area for further study is in the analysis of the types of second home characteristics outlined in the classification system proposed in this thesis. Such studies are necessary in order to determine the various relationships between these characteristics. Statistical analysis is necessary to establish the levels of association among selected second home variables in order to further understand their meaning and function. For example, what is the relationship between second home usage patterns and the distance occupants must travel to their second homes? Are there significant associations between certain second home variables and their owner's decisions to convert their second homes into permanent residences? Do rural community facility and transportation plans affect second home development, or vice-versa? Are there significant relationships between physical characteristics of second homes and the occupancy patterns of their users? Such questions can only be answered following further statistical analysis of many second home characteristics.

Closely related to the above is the need for research into the relationships of second homes to their host communities. Although many studies have mentioned the possible positive and negative effects of second homes on their surrounding economic, social, and natural environments, little work has been done to substantiate cause-and-

effect relationships between second homes and their activity effects.[2] How do second homes directly affect the demand for public services? Do second homes pay their way economically? Are second home communities an asset or a liability to a rural county with a dwindling economic base and an out-migration of local residents? What are the facts concerning second home development and environmental deterioration? Controlled case studies will be required to shed further light on the existence of actual cause-and-effect relationships between second homes and their effects upon their environments.

A fourth area of further second home study is in the development of operational models capable of predicting where new development pressures will occur. Several studies cited in this thesis have dealt with the variables affecting second home location. Two major variables discussed earlier were the natural and recreational attractions of an area and its proximity to centers of demand for second homes. These two variables leave much to be desired in explaining such things as the factors influencing household and developer decisions. Although important strides have been made in this area, further research will be required to identify the significance of variables to be included in such models.

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[2] U.S. Department of the Interior, Bureau of Outdoor Recreation, Outdoor Recreation Research: A Reference Catalogue - 1970, (Washington: U.S. Government Printing Office, 1971). Some on-going second home research projects include: "2.0032, Economic Analysis of Environmental Quality Effects Associated with Seasonal Homes," pp. 1-35, "2.0104, Nonresident Ownership of Property in Vermont," pp. 1-47, and "3.0038, Local Government and Policy Implications of Seasonal Home Ownership in Rural Areas," pp. 1-55.

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APPENDICES

APPENDIX A

DEFINITIONS OF SECOND HOMES

United States Department of Commerce, Bureau of the Census. 1970 Census Users' Guide, Part 1 (Washington: U.S. Government Printing Office, 1970), p. 117.

Vacant year-round units held for occasional use --Vacant units for year-round occupancy which were held for weekend or other occasional use. (In 1960, included only sound or deteriorating vacant units). In 1960, the intent of this category was to identify homes reserved by their owners as second homes.

Vacant seasonal units -- Vacant units intended for occupancy during only a season of the year; for example, units for summer or winter recreational use, units for herders or loggers.

United States Department of Commerce, Bureau of the Census. Second Homes in the United States (Washington: U.S. Government Printing Office, 1969), p. 2.

. . . a second home is defined as a residence other than the one where the household usually lives, which was owned or rented by the household for the entire year. The homes must have been reserved for the occasional use of the owner during the entire year. Included are homes in exclusive possession of a household and also those shared with co-owners or co-renters. Not included are homes located outside the United States, homes used for income and investment purposes only, trailers, tents, and the like.

United States Department of Interior, Bureau of Outdoor Recreation. Northern New England Vacation Home Study: 1966, Appendix 1 (Washington: U.S. Government Printing Office, 1966), p. 29.

Vacation Home - A nonmobile single-family dwelling that is used exclusively as a vacation, weekend, or holiday residence by the owner or renters. This includes trailers on a foundation with permanent hook-up to water and sewage. It also includes single-family houses that the owner uses solely as a source of revenue. Excluded are all other trailers, all multiple-family houses, motels, hotels, detached tourist cabins, and houses of permanent residents even though the latter may rent rooms to vacationers.

Richard L. Ragatz, Vacation Homes: An Analysis of the Market for Seasonal-Recreational Housing (Ithaca, New York: Cornell University Press, 1969), p. 1.

Vacation homes . . . permanently located single-family housing used on a private-personal basis for seasonal outdoor recreation. The occupants must have some other form of shelter which is considered their primary place of residence, and the vacation home must have been originally constructed for the purpose of leisure-time activities.

Larry W. Tombaugh, "Factors Influencing Vacation Home Locations," Journal of Leisure Research, II (Winter, 1970), 54.

Vacation homes are defined in this study as permanently constructed dwellings that are used primarily for recreational purposes at least part of the year and that do not serve as permanent places of residence. Mobile homes, whether temporarily or permanently placed, are not included.

APPENDIX B

SECOND HOME STUDY QUESTIONNAIRE - APRIL, 1971

Instructions: Please check each item as it applies to you or fill in the blank where appropriate.

1. Do you own or rent your second home? A. Own_____B. Rent____ (if you rent, go to Question 8).

2. Do you own more than one second home in Sevier County? A. Yes_____ B. No____ If Yes, how many do you own?_____(If you own more than one second home in Sevier County, you may receive more than one questionnaire. Please complete each questionnaire you receive for a different one of your second homes.)

3. Do you co-own your second home jointly with other parties? A. Yes___ B. No____ If Yes, how many parties including yourself?

4. How many years have you owned your second home?_____

5. During the past 12 months, did you rent your second home to persons outside your immediate family? A. Yes___ B. No___. If Yes, for how long was it rented out? C. Less than 1 week____D. 1-4 Weeks____E. 1-3 MOnths____ F. 3-6 Months____ G. 6-9 Months____ H. 9-12 Months____.

6. What is your principal reason for having this second home? A. Recreation/Leisure-Time Use___B. Investment Income____ C. Business Purposes (such as entertainment)____D. Other (Specify)_____.

7. Do you have any plans to move into your second home on a permanent basis? A. Before Retirement: Yes___Indefinite___No____ B. After Retirement: Yes____Indefinite____No____

8. In what year was your second home built? A. Before 1930____ B. 1930-1940____C. 1940-1950____D. 1950-1960____E. If after 1960, specify year_____.

9. What primary mode of travel do you use to reach your second home? A. Automobile___B. Airplane___C. Bus____

10. Please give the approximate number of square feet in your second home or the outside dimensions of the structure. Square Feet_____ or Dimensions: Length_____Width_____.

11. Which of the following facilities does yout second home have? A. Piped Water Inside____B. Indoor Toilet____C. Indoor Bathtub or Shower____D. Kitchen or Cooking Equipment_____.

12. Please fill in the following table showing the number of visits to your second home and the average number of people involved in a typical visit for the past 12 months. If you have not had a second home 12 months or longer, leave blank.

Season	No. of Full Weeks	Average No. of People per Visit	No. of Weekends and/or Holidays	Average No. of People per Visit
Spring				
Summer				
Fall				
Winter				

April 7, 1971

Dear Second Home User:

In the U.S. the number of second homes (also referred to as vacation homes, cabins, chalets, cottages, etc.) is increasing rapidly. Yet almost no accurate information is available on who owns them, who uses them, how and when they are used, and how locations are chosen. Such information is needed for use in desgining regional transportation plans, making real estate market studies, and other efforts to anticipate future growth and development of second home areas and provide adequate public services to meet their needs.

Due to its large number of second homes and its importance as a regional recreation area, Sevier, County, Tennessee has been chosen as the site for a case study on second homes. The enclosed questionnaire is being sent to 639 individuals who own or rent second homes located in Sevier County. It is hoped that the knowledge gained through this survey will be applicable on a national scale. It is not specifically designed to be used on the local or county level.

As a second home owner or renter in Sevier County, this study depends upon you. The enclosed questionnaire has been intentionally kept brief so that it would only take a few minutes of your time to fill out. A prestamped self-addressed envelope has also been enclosed for your convenience in returning the questionnaire. No postage is necessary.

All information in this questionnaire will be held in the strictest confidence. All reports produced by this project will refer to general statistics only, and will in no way be related to any specific individual in name or otherwise.

We would very much appreciate a prompt reply. Thank you for your help in this project.

Sincerely,

James A. Spencer
Project Director

David R. Mosena
Research Assistant

April 22, 1971

Dear Second Home User:

Two weeks ago you were mailed a questionnaire as a part of a case study being conducted on second homes in Sevier County, Tennessee. Perhaps you have forgotten about it or it has been misplaced. The success of this project depends upon your answers to the questionnaire.

We have enclosed another questionnaire along with another stamped, self-addressed envelope. Filling out this questionnaire and dropping it in the mail will require only a few moments of your time.

Let me again stress that all of your answers will be held in the strictest confidence and that all reports resulting from this study will refer only to general statistics.

The ultimate goal of research projects such as this one is to aid efforts to assure a higher quality living environment for all parties concerned. Please give us your support in this important effort.

Thank you for your cooperation.

Sincerely,

James A. Spencer
Project Director

David R. Mosena
Research Assistant

APPENDIX C

TABLE XXVI

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 1, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	1	2	5	10	13	4	1	0	0	0	36
Percent	2.8	5.6	13.9	27.8	36.1	11.1	2.8	0.0	0.0	0.0	100.0
Oct.	1	3	7	8	8	5	4	0	0	0	36
Percent	2.8	8.3	19.4	22.2	22.2	13.9	11.1	0.0	0.0	0.0	100.0
Nov.	3	9	7	2	5	6	3	1	0	0	36
Percent	8.3	25.0	19.4	5.6	13.9	16.7	8.3	2.8	0.0	0.0	100.0
Dec.	7	12	2	3	4	1	5	2	0	0	36
Percent	19.4	33.3	5.6	8.3	11.1	2.8	13.9	5.6	0.0	0.0	100.0
Jan.	3	12	3	4	2	4	2	3	3	0	36
Percent	8.3	33.3	8.3	11.1	5.6	11.1	5.6	8.3	8.3	0.0	100.0
Feb.	3	9	2	6	3	3	4	5	1	0	36
Percent	8.3	25.0	5.6	16.7	8.3	8.3	11.1	13.9	2.8	0.0	100.0
March	4	8	6	2	6	4	4	2	0	0	36
Percent	11.1	22.2	16.7	5.6	16.7	11.1	11.1	5.6	0.0	0.0	100.0
April	2	3	5	6	5	9	5	1	0	0	36
Percent	5.6	8.3	13.9	16.7	13.9	25.0	13.9	2.8	0.0	0.0	100.0
May	1	3	9	3	11	5	4	0	0	0	36
Percent	2.8	8.3	25.0	8.3	30.6	13.9	11.1	0.0	0.0	0.0	100.0
June	0	2	6	4	11	11	2	0	0	0	36
Percent	0.0	5.6	16.7	11.1	30.6	30.6	5.6	0.0	0.0	0.0	100.0
July	1	0	4	7	10	7	6	1	0	0	36
Percent	2.8	0.0	11.1	19.4	27.8	19.4	16.7	2.8	0.0	0.0	100.0
Aug.	1	1	5	9	9	5	6	0	0	0	36
Percent	2.8	2.8	13.9	25.0	25.0	13.9	16.7	0.0	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXVII

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 2, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	1	0	0	0	1	2	0	0	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	50.0	0.0	0.0	0.0	0.0	100.0
Oct.	1	0	0	0	1	1	1	0	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	0.0	100.0
Nov.	1	0	0	0	0	1	1	1	0	0	4
Percent	25.0	0.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	100.0
Dec.	1	0	0	0	1	1	0	1	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	25.0	0.0	25.0	0.0	0.0	100.0
Jan.	1	0	0	0	0	0	1	1	1	0	4
Percent	25.0	0.0	0.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	100.0
Feb.	1	0	0	0	0	1	1	1	0	0	4
Percent	25.0	0.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	100.0
March	1	0	0	0	0	1	1	1	0	0	4
Percent	25.0	0.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	100.0
April	1	0	0	0	2	1	0	0	0	0	4
Percent	25.0	0.0	0.0	0.0	50.0	25.0	0.0	0.0	0.0	0.0	100.0
May	1	0	0	0	2	0	1	0	0	0	4
Percent	25.0	0.0	0.0	0.0	50.0	0.0	25.0	0.0	0.0	0.0	100.0
June	1	0	0	0	1	2	0	0	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	50.0	0.0	0.0	0.0	0.0	100.0
July	1	0	0	0	1	1	1	0	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	0.0	100.0
Aug.	1	0	0	0	1	1	1	0	0	0	4
Percent	25.0	0.0	0.0	0.0	25.0	25.0	25.0	0.0	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXVIII

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 3, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-499	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	5	2	3	2	4	3	3	2	0	0	24
Percent	20.8	8.3	12.5	8.3	16.7	12.5	12.5	8.3	0.0	0.0	100.0
Oct.	7	3	1	3	4	3	3	0	0	0	24
Percent	29.2	12.5	4.2	12.5	16.7	12.5	12.5	0.0	0.0	0.0	100.0
Nov.	7	3	1	3	3	0	3	4	0	0	24
Percent	29.2	12.5	4.2	12.5	12.5	0.0	12.5	16.7	0.0	0.0	100.0
Dec.	8	4	2	2	1	0	1	4	2	0	24
Percent	33.3	16.7	8.3	8.3	4.2	0.0	4.2	16.7	8.3	0.0	100.0
Jan.	10	4	1	2	0	0	1	3	3	0	24
Percent	41.7	16.7	4.2	8.3	0.0	0.0	4.2	12.5	12.5	0.0	100.0
Feb.	9	4	2	2	0	0	1	5	1	0	24
Percent	37.5	16.7	8.3	8.3	0.0	0.0	4.2	20.8	4.2	0.0	100.0
March	10	2	2	2	1	1	2	4	0	0	24
Percent	41.7	8.3	8.3	8.3	4.2	4.2	8.3	16.7	0.0	0.0	100.0
April	7	2	2	1	2	4	3	3	0	0	24
Percent	29.2	8.3	8.3	4.2	8.3	16.7	12.5	12.5	0.0	0.0	100.0
May	5	3	3	2	5	3	3	0	0	0	24
Percent	20.8	12.5	12.5	8.3	20.8	12.5	12.5	0.0	0.0	0.0	100.0
June	4	2	4	4	4	4	2	0	0	0	24
Percent	16.7	8.3	16.7	16.7	16.7	16.7	8.3	0.0	0.0	0.0	100.0
July	3	1	4	4	2	5	3	2	0	0	24
Percent	12.5	4.2	16.7	16.7	8.3	20.8	12.5	8.3	0.0	0.0	100.0
Aug.	3	1	2	5	4	4	2	3	0	0	24
Percent	12.5	4.2	8.3	20.8	16.7	16.7	8.3	12.5	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXIX

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 4, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	4	4	6	6	7	2	1	0	0	0	30
Percent	13.3	13.3	20.0	20.0	23.3	6.7	3.3	0.0	0.0	0.0	100.0
Oct.	4	5	11	2	7	1	0	0	0	0	30
Percent	13.3	16.7	36.7	6.7	23.3	3.3	0.0	0.0	0.0	0.0	100.0
Nov.	5	8	5	6	1	3	1	1	0	0	30
Percent	16.7	26.7	16.7	20.0	3.3	10.0	3.3	3.3	0.0	0.0	100.0
Dec.	7	8	6	3	3	0	0	3	0	0	30
Percent	23.3	26.7	20.0	10.0	10.0	0.0	0.0	10.0	0.0	0.0	100.0
Jan.	10	11	0	5	2	0	1	1	0	0	30
Percent	33.3	36.7	0.0	16.7	6.7	0.0	3.3	3.3	0.0	0.0	100.0
Feb.	10	10	3	2	3	0	1	1	0	0	30
Percent	33.3	33.3	10.0	6.7	10.0	0.0	3.3	3.3	0.0	0.0	100.0
March	10	9	3	4	2	1	0	1	0	0	30
Percent	33.3	30.0	10.0	13.3	6.7	3.3	0.0	3.3	0.0	0.0	100.0
April	11	8	3	2	3	1	1	1	0	0	30
Percent	36.7	26.7	10.0	6.7	10.0	3.3	3.3	3.3	0.0	0.0	100.0
May	6	6	9	5	3	1	0	0	0	0	30
Percent	20.0	20.0	30.0	16.7	10.0	3.3	0.0	0.0	0.0	0.0	100.0
June	4	6	5	11	3	1	0	0	0	0	30
Percent	13.3	20.0	16.7	36.7	10.0	3.3	0.0	0.0	0.0	0.0	100.0
July	4	4	7	7	5	3	0	0	0	0	30
Percent	13.3	13.3	23.3	23.3	16.7	10.0	0.0	0.0	0.0	0.0	100.0
Aug.	5	2	6	8	9	0	0	0	0	0	30
Percent	16.7	6.7	20.0	26.7	30.0	0.0	0.0	0.0	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXX

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 5, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-299	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	9	2	7	8	15	9	7	1	0	0	58
Percent	15.5	3.4	12.1	13.8	25.9	15.5	12.1	1.7	0.0	0.0	100.0
Oct.	12	8	7	7	14	5	3	2	0	0	58
Percent	20.7	13.8	12.1	12.1	24.1	8.6	5.2	3.4	0.0	0.0	100.0
Nov.	16	11	4	4	6	9	5	3	0	0	58
Percent	27.6	19.0	6.9	6.9	10.3	15.5	8.6	5.2	0.0	0.0	100.0
Dec.	20	12	4	4	7	4	1	3	3	0	58
Percent	34.5	20.7	6.9	6.9	12.1	6.9	1.7	5.2	5.2	0.0	100.0
Jan.	33	6	4	3	4	2	1	2	2	1	58
Percent	56.9	10.3	6.9	5.2	6.9	3.4	1.7	3.4	3.4	1.7	100.0
Feb.	32	8	5	3	3	0	2	3	2	0	58
Percent	55.2	13.8	8.6	5.2	5.2	0.0	3.4	5.2	3.4	0.0	100.0
March	26	9	5	3	6	3	2	4	1	0	58
Percent	44.8	15.5	8.6	5.2	8.6	5.2	3.4	6.9	1.7	0.0	100.0
April	29	6	4	4	7	2	2	4	0	0	58
Percent	50.0	10.3	6.9	6.9	12.1	3.4	3.4	6.9	0.0	0.0	100.0
May	21	8	5	5	10	5	3	1	0	0	58
Percent	36.2	13.8	8.6	8.6	17.2	8.6	5.2	1.7	0.0	0.0	100.0
June	18	5	8	6	10	6	3	2	0	0	58
Percent	31.0	8.6	13.8	10.3	17.2	10.3	5.2	3.4	0.0	0.0	100.0
July	9	5	5	10	6	15	5	3	0	0	58
Percent	15.5	8.6	8.6	17.2	10.3	25.9	8.6	5.2	0.0	0.0	100.0
Aug.	8	2	4	11	15	8	7	3	0	0	58
Percent	13.8	3.4	6.9	19.0	25.9	13.8	12.1	5.2	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXXI

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 6, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	12	5	9	13	27	24	13	2	0	0	105
Percent	11.4	4.8	8.6	12.4	25.7	22.9	12.4	1.9	0.0	0.0	100.0
Oct.	10	3	9	14	32	26	8	3	0	0	105
Percent	9.5	2.9	8.6	13.3	30.5	24.8	7.6	2.9	0.0	0.0	100.0
Nov.	14	18	3	8	18	20	9	13	2	0	105
Percent	13.3	17.1	2.9	7.6	17.1	19.0	8.6	12.4	1.9	0.0	100.0
Dec.	24	21	9	8	9	5	7	15	6	1	105
Percent	22.9	20.0	8.6	7.6	8.6	4.8	6.7	14.3	5.7	1.0	100.0
Jan.	30	14	11	5	9	3	6	11	13	3	105
Percent	28.6	13.3	10.5	4.8	8.6	2.9	5.7	10.5	12.4	2.9	100.0
Feb.	31	19	11	7	7	5	6	11	5	3	105
Percent	29.5	18.1	10.5	6.7	6.7	4.8	5.7	10.5	4.8	2.9	100.0
March	30	14	11	6	6	8	12	15	3	0	105
Percent	28.6	13.3	10.5	5.7	5.7	7.6	11.4	14.3	2.9	0.0	100.0
April	19	16	11	5	14	12	16	11	1	0	105
Percent	18.1	15.2	10.5	4.8	13.3	11.4	15.2	10.5	1.0	0.0	100.0
May	16	7	16	11	26	20	9	0	0	0	105
Percent	15.2	6.7	15.2	10.5	24.8	19.0	8.6	0.0	0.0	0.0	100.0
June	13	4	10	10	41	15	10	2	0	0	105
Percent	12.4	3.8	9.5	9.5	39.0	14.3	9.5	1.9	0.0	0.0	100.0
July	9	2	11	7	23	29	18	5	1	0	105
Percent	8.6	1.9	10.5	6.7	21.9	27.6	17.1	4.8	1.0	0.0	100.0
Aug.	7	1	8	9	24	33	16	7	0	0	105
Percent	6.7	1.0	7.6	8.6	22.9	31.4	15.2	6.7	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXXII

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 7, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	15	2	13	10	35	45	19	6	1	0	146
Percent	10.3	1.4	8.9	6.8	24.0	30.8	13.0	4.1	0.7	0.0	100.0
Oct.	14	7	9	17	35	45	14	5	0	0	146
Percent	9.6	4.8	6.2	11.6	24.0	30.8	9.6	3.4	0.0	0.0	100.0
Nov.	11	7	5	7	20	23	34	33	6	0	146
Percent	7.5	4.8	3.4	4.8	13.7	15.8	23.3	22.6	4.1	0.0	100.0
Dec.	30	23	7	4	14	13	13	32	10	0	146
Percent	20.5	15.8	4.8	2.7	9.6	8.9	8.9	21.9	6.8	0.0	100.0
Jan.	31	23	2	4	9	12	12	26	20	7	146
Percent	21.2	15.8	1.4	2.7	6.2	8.2	8.2	17.8	13.7	4.8	100.0
Feb.	36	23	6	3	11	10	14	24	16	3	146
Percent	24.7	15.8	4.1	2.1	7.5	6.8	9.6	16.4	11.0	2.1	100.0
March	35	15	8	6	14	15	17	26	9	1	146
Percent	24.0	10.3	5.5	4.1	9.6	10.3	11.6	17.8	6.2	0.7	100.0
April	22	15	7	5	15	24	26	24	8	0	146
Percent	15.1	10.3	4.8	3.4	10.3	16.4	17.8	16.4	5.5	0.0	100.0
May	19	10	10	12	33	36	14	12	0	0	146
Percent	13.0	6.8	6.8	8.2	22.6	24.7	9.6	8.2	0.0	0.0	100.0
June	12	3	10	17	45	38	16	4	1	0	146
Percent	8.2	2.1	6.8	11.6	30.8	26.0	11.0	2.7	0.7	0.0	100.0
July	11	2	7	15	39	43	22	7	0	0	146
Percent	7.5	1.4	4.8	10.3	26.7	29.5	15.1	4.8	0.0	0.0	100.0
Aug.	8	2	8	13	50	32	22	11	0	0	146
Percent	5.5	1.4	5.5	8.9	34.2	21.9	15.1	7.5	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXXIII

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 8, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	3	0	1	1	10	10	40	15	0	0	80
Percent	3.8	0.0	1.3	1.3	12.5	12.5	50.0	18.8	0.0	0.0	100.0
Oct.	3	0	0	2	13	26	29	7	0	0	80
Percent	3.8	0.0	0.0	2.5	16.3	32.5	36.3	8.8	0.0	0.0	100.0
Nov.	2	1	0	0	2	8	10	45	12	0	80
Percent	2.5	1.3	0.0	0.0	2.5	10.0	12.5	56.3	15.0	0.0	100.0
Dec.	2	0	0	1	1	2	7	21	36	10	80
Percent	2.5	0.0	0.0	1.3	1.3	2.5	8.8	26.3	45.0	12.5	100.0
Jan.	1	0	0	0	1	2	1	7	27	41	80
Percent	1.3	0.0	0.0	0.0	1.3	2.5	1.3	8.8	33.8	51.3	100.0
Feb.	2	0	0	0	1	1	0	12	26	38	80
Percent	2.5	0.0	0.0	0.0	1.3	1.3	0.0	15.0	32.5	47.5	100.0
March	1	0	1	0	1	2	2	12	52	9	80
Percent	1.3	0.0	1.3	0.0	1.3	2.5	2.5	15.0	65.0	11.3	100.0
April	2	0	0	0	0	2	5	26	39	6	80
Percent	2.5	0.0	0.0	0.0	0.0	2.5	6.3	32.5	48.8	7.5	100.0
May	2	0	0	0	4	10	28	30	5	1	80
Percent	2.5	0.0	0.0	0.0	5.0	12.5	35.0	37.5	6.3	1.3	100.0
June	2	0	0	0	7	30	30	11	0	0	80
Percent	2.5	0.0	0.0	0.0	8.8	37.5	37.5	13.8	0.0	0.0	100.0
July	1	1	0	1	8	21	30	17	1	0	80
Percent	1.3	1.3	0.0	1.3	10.0	26.3	37.5	21.3	1.3	0.0	100.0
Aug.	2	0	0	2	7	19	27	22	1	0	80
Percent	2.5	0.0	0.0	2.5	8.8	23.8	33.8	27.5	1.3	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

TABLE XXXIV

KILOWATT HOURS OF ELECTRICITY CONSUMED BY SECOND HOMES IN AREA 9, 1969-1970

Month	Kilowatt Hours of Electricity Consumed										
	0	1-19	20-49	50-99	100-249	250-499	500-999	1000-2499	2500-4999	5000+	Total
Sept.	3	0	2	3	14	12	12	2	0	0	48
Percent	6.3	0.0	4.2	6.3	29.2	25.0	25.0	4.2	0.0	0.0	100.0
Oct.	6	0	5	6	20	7	2	1	1	0	48
Percent	12.5	0.0	10.4	12.5	41.7	14.6	4.2	2.1	2.1	0.0	100.0
Nov.	8	6	2	7	15	5	3	2	0	0	48
Percent	16.7	12.5	4.2	14.6	31.3	10.4	6.3	4.2	0.0	0.0	100.0
Dec.	22	6	10	3	3	0	0	4	0	0	48
Percent	45.8	12.5	20.8	6.3	6.3	0.0	0.0	8.3	0.0	0.0	100.0
Jan.	20	13	7	2	1	0	0	2	3	0	48
Percent	41.7	27.1	14.6	4.2	2.1	0.0	0.0	4.2	6.3	0.0	100.0
Feb.	22	10	8	2	1	1	0	0	4	0	48
Percent	45.8	20.8	16.7	4.2	2.1	2.1	0.0	0.0	8.3	0.0	100.0
March	25	6	8	2	3	0	0	4	0	0	48
Percent	52.1	12.5	16.7	4.2	6.3	0.0	0.0	8.3	0.0	0.0	100.0
April	20	6	7	2	8	1	0	4	0	0	48
Percent	41.7	12.5	14.6	4.2	16.7	2.1	0.0	8.3	0.0	0.0	100.0
May	15	4	5	1	14	5	4	0	0	0	48
Percent	31.3	8.3	10.4	2.1	29.2	10.4	8.3	0.0	0.0	0.0	100.0
June	9	3	5	3	18	7	2	1	0	0	48
Percent	18.8	6.3	10.4	6.3	37.5	14.6	4.2	2.1	0.0	0.0	100.0
July	3	0	2	3	20	14	3	3	0	0	48
Percent	6.3	0.0	4.2	6.3	41.7	29.2	6.3	6.3	0.0	0.0	100.0
Aug.	2	2	1	2	14	16	8	3	0	0	48
Percent	4.2	4.2	2.1	4.2	29.2	33.3	16.7	6.3	0.0	0.0	100.0

Source: Electrical records of the Sevier County Electric System, collected by the author, Spring, 1971.

VITA

David Ridgway Mosena was born in Knoxville, Tennessee on January 5, 1946. He attended elementary school in Knoxville, Tennessee and graduated from Young High School in 1964. He enrolled in the University of Tennessee in September, 1964, and received a Bachelor of Science in Economics in March, 1969. He entered the Graduate School of Planning at the University of Tennessee in September, 1969, and received a Master of Science in Planning in December, 1971. During the summer of 1971, he participated in the Institute of International Education summer study program entitled "Environmental and Social Planning in Britain" held at the University of Manchester, Manchester, England.

He is an Associate Member of the American Institute of Planners and a member of the American Society of Planning Officials, for whom he is presently employed as a Research Associate.

He is married to the former Patricia Ann Wimberley of Collierville, Tennessee.