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# A Case Study of Tent and Trailer Camping in the Great Smoky Mountains National Park

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To the Graduate Council:

I am submitting herewith a thesis written by Michael Paul Baumstark entitled "A Case Study of Tent and Trailer Camping in the Great Smoky Mountains National Park." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Architecture.

Walter Shouse, Major Professor

We have read this thesis and recommend its acceptance:

Kenneth Kenney, A. J. Gray

Accepted for the Council:

Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

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August 1, 1972

To the Graduate Council:

I am submitting herewith a thesis written by Michael Paul Baumstark entitled "A Case Study of Tent and Trailer Camping in the Great Smoky Mountains National Park." I recommend that it be accepted for nine quarter hours of credit in partial fulfillment of the requirements for the degree of Master of Science in Planning, with a major in Urban Planning.

Walter L. Shaur  
Major Professor

We have read this thesis  
and recommend its acceptance:

Kenneth B. Kenney  
Arvid J. Gray

Accepted for the Council:

Hilton A. Smith  
Vice Chancellor for  
Graduate Studies and Research

**A CASE STUDY OF TENT AND TRAILER CAMPING IN THE  
GREAT SMOKY MOUNTAINS NATIONAL PARK**

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**A Thesis  
Presented to  
the Graduate Council of  
The University of Tennessee**

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**In Partial Fulfillment  
of the Requirements for the Degree  
Master of Science in Planning**

---

**by  
Michael Paul Baumstark**

**August 1972**

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Special appreciation is expressed to my wife, Janice, whose understanding and cooperation made this thesis possible and to whom this thesis is dedicated.

## ABSTRACT

The purpose of this thesis was to study the problems associated with the growing demand for tent and trailer camping facilities. In order to study the problem under controlled conditions, a case study of the Great Smoky Mountains National Park was undertaken. The study reviewed campers on three levels--wilderness, primitive, and modern. Each of these categories was then divided into tent and trailer campers and a model campground facility developed for each. The facilities which presently exist in the park were then compared with the models. The comparison revealed that study area facilities were lacking in many of the conveniences desired by campers. The differences between the model and the study area facilities were most dramatic in the modern campgrounds where no electrical or water hookups were provided for individual sites nor were showers available for the campgrounds.

Overall the results of the study revealed that the Great Smoky Mountains National Park, like most of the recreational facilities across the country, has a growing demand for its camping facilities. The study further indicated that because of the increased demand park authorities have experienced an increase in littering, traffic congestion, vandalism, destruction of vegetation, and an increased workload for park personnel.

Potential for the development of commercial camping outside the study area appears to be good. Physically the area adjacent to the Great Smoky Mountains National Park is similar to that found

inside the park. To date commercial camp developers have not taken full advantage of this factor, but indications are that demand for quality facilities will increase, forcing commercial interests to reevaluate future development plans.

After completing the review of commercial developments surrounding the study area including the growth trends for study area visitation and existing camping facilities, the following recommendations were made.

1. Develop a system of reservations and central check-in stations.
2. Allow no additional expansion of existing camping facilities.
3. Undertake the redesign of existing park facilities.
4. Remove horse traffic from hiking trails.
5. Undertake a systematic removal of internal trailer camping with a greater emphasis on external commercial facilities.

In conclusion, if objectives established by the National Park Service for the maintenance and operation of our parks are to be met, restrictions on use patterns and levels will have to be rigidly enforced. It is also essential that park officials and private enterprise work together to protect the environment by controlling development in the area. Unless positive measures can be taken to protect the park and its perimeter from the growing pressures of increasing visitation much of the natural beauty of the area will be destroyed.

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## CHAPTER I

### STATEMENT OF THE PROBLEM

On February 8, 1965, in his message on the natural beauty of our country, President Lyndon B. Johnson proclaimed these principles:

Our conservation must not be the classic conservation of protection and development, but a creative conservation of restoration and innovation. Its concern is not with nature alone, but with the total relation between man and the world around him. Its object is not just man's welfare, but the dignity of man's spirit.<sup>1</sup>

At the same time, the President called for a White House Conference on National Beauty which was held in Washington on May 24 and 25, 1965. Problems relating to environmental conditions, recreation, natural beauty, and preservation of the environment were discussed. Although some progress has been made in the area of preservation of our environment, there are still many problems to be solved, among which are those relating to recreation. In 1968 the President's Council on Recreation and Natural Beauty reported that:

Overcrowding and overuse on park, forest, and other recreation lands pose a serious problem. People are thronging to many outstanding scenic areas in ever increasing numbers. In doing this they threaten the very purposes for which the lands are managed. In Yellowstone National Park (Wyoming) and in the Angeles (California) National Forest, traffic congests the roads, and frustrated fishermen struggle

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<sup>1</sup>President Lyndon B. Johnson in his Message on the Natural Beauty of Our Country, February 8, 1965.

to find a place in line on the lakes. Many State parks and forests face comparable, if not greater, pressures and no letup is in sight.<sup>2</sup>

One of the factors which has contributed greatly to this overcrowding condition has been the phenomenal growth in the number of camping participants. According to some recreational experts the number of camping occasions has increased over 500 percent during the past decade.<sup>3</sup> As the number of campers increases, the competition for and pressure on existing campsites will also increase, thereby creating a number of problems for park directors. The problems associated with the increase in campers include more incidences of vandalism, overcrowding of existing road systems, overloading of sewer and water systems, destruction of wilderness and natural areas, unauthorized camping, increased litter, and increased workload for park personnel.

It is estimated that 50 million Americans will go camping this year in one or more of the 1,700 public and private campgrounds from Alaska to Mexico,<sup>4</sup> and this number is expected to continue to increase yearly. To protect against the further deterioration of our public and private recreational areas, planning must be undertaken today to reduce the pressure being created by the increase in participation.

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<sup>2</sup>The President's Council on Recreation and Natural Beauty, From Sea to Shining Sea, A Report on the American Environment--Our Natural Heritage, Washington, D. C., 1968, p. 181.

<sup>3</sup>"Camping Spree in America: It's A Billion-Dollar Market," U. S. News and World Report, May 10, 1971, p. 39.

<sup>4</sup>Ibid.

The problems associated with camping are widespread and are present at all levels of operation--private, local, state, and federal. In order to develop meaningful programs to combat these problems, the planner must acquire an accurate understanding of the problems and complete knowledge of the alternative solutions open to him. It is to that end that this thesis is dedicated.

In this thesis the problems associated with camping were studied as they were related to a specific study area. The area selected for study was the Great Smoky Mountains National Park. The reasons for its selection will be discussed in the methodology section which follows. The purpose of this thesis was to analyze, through a case study, the problems associated with camping. Based on an analysis of the related data, recommendations and observations were made which should serve as a basis upon which planners can design development plans and management techniques to help eliminate similar problems in other areas. In order to understand how the research was performed and the problems associated with that research, let us begin a discussion of the thesis methodology.

## Methodology

### Selection of Study Area

As previously mentioned, this thesis is a case study of camping facilities in the Great Smoky Mountains National Park. The reasons for selecting this area for the study are as follows.

1. The Great Smoky Mountains National Park is an entity within itself and its boundaries can be easily defined for the purpose of the study.

2. The Great Smoky Mountains National Park has problems associated with its camping facilities similar to those being experienced across the nation.<sup>5</sup>

3. The Great Smoky Mountains National Park is an established recreational attraction with facilities for both tent and trailer camping which have been operational for an extended period of time.

4. The Great Smoky Mountains National Park is the most heavily visited park in the national park system.<sup>6</sup>

5. The Great Smoky Mountains National Park is accessible for frequent field trips and close study, elements which are necessary for an accurate and complete case study.

The use of a case study to investigate the problems associated with camping was the author's personal choice. The decision was based on past experience in the recreation field and the author's desire to produce an end product that would serve to illustrate the relationship between planning input and problem solving in a real world environment.

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<sup>5</sup>Ibid., p. 40.

<sup>6</sup>Gordon Young, "Solitude for Millions, Great Smokies National Park," National Geographic, October, 1968, p. 522.



### Basic Assumptions

Prior to the undertaking of the research certain basic assumptions were made regarding the study. The assumptions upon which this thesis was based are as follows.

1. It is assumed that there does in fact exist a number of problems associated with the growth of camping as a recreational pastime in America.
2. It is assumed that those problems associated with camping are significantly similar in nature that the results of an analysis on a particular problem in the study area can be applied elsewhere with only minor adjustment for area peculiarities.
3. It is assumed that sufficient data can be gathered to make a meaningful evaluation of the conditions of the camping facilities in the Great Smoky Mountains National Park.
4. It is assumed that the interviews obtained as part of the research are factual and represent an accurate picture of park conditions.

Having defined the area under study, established the general structure of the study and identified the assumptions under which the study was conducted, let us now turn to the definition of terms used in the thesis.

### Definitions

The following definitions are intended to clarify meanings and eliminate confusion for the reader. The terms will appear intermittently throughout the thesis.

1. Camping occasion - The act of camping at whatever level for a period of time not to exceed one day.

2. Tent camping - The act of camping in the out-of-doors using paraphernalia other than a camping trailer, motorized camping vehicle or mobile camping structure towed by a motorized vehicle.

3. Trailer camping - The act of camping with the aid of any type of self-contained motorized camping vehicle, trailer, or camping structure which is towed by a motorized vehicle.

4. Camping site - An area capable of sustaining one tent or trailer camping occasion without interfering with the successful completion of the camping occasion of the adjacent camper.

5. Campground - A designated camping area comprised of one or more campsites.

6. Wilderness - An area set aside in its natural state and controlled to limit access. Users of these areas will be required to utilize the minimum amount of equipment to achieve their objective.

### Data Collection

One of the key elements in a successful research project is the collection and analyzation of data pertaining to the research subject. For the purpose of this thesis the data was collected by using three techniques--interviewing, a literature search, and correspondence.

Interviews. Interviews were taped with seventy-one individuals including the chief ranger of the Great Smoky Mountains National Park, five park rangers, and sixty-five campers. Each of the interviews was informally conducted using a separate interview format for campers and park personnel.

Since the study area was defined rigidly by the park boundaries, the selection of those individuals to be interviewed was greatly simplified. After the interview with the chief ranger in which problem areas were identified, subsequent interviews were taken in areas where problems were the greatest. Field trips and interviews were also made on a random basis in those areas where problems had not developed as rapidly. This was done in an effort to see if any discernible differences could be detected between problem areas and non-problem areas.

Literature search. The literature search covered books, magazines, periodicals, and newspaper articles. Although the rapid growth of camping as a recreational activity has caused a number of serious problems, few books have been written on the subject. As a result of the lack of books covering the subject matter, a large contingency of the literature secured for this research comes from magazines, newspapers, periodicals, and camping industry publications. The microfilm index, card catalog, and various periodical indexes were utilized to locate the material. As data was collected, it was reviewed, categorized, and placed in a central data bank for future reference.

Correspondence. Because of the lack of available literature, it was decided to contact the state agency responsible for campground development and operation in all fifty states. In addition to making contact with each state, a number of federal agencies were contacted including the U. S. Forest Service, Bureau of Land Management, U. S. Department of the Interior, and the National Park Service. There was less than 35 percent return from the inquiries, but those responding confirmed the fact that camping related problems are similar nationwide. The responses also provided information on programs being initiated to solve the problems on a state basis. The responses were reviewed as they were received and pertinent data was recorded in a central data bank. Information from the data bank was drawn upon as needed throughout the thesis.

#### Study Limitations

In the course of developing any research project there are certain restrictions regarding the manipulation of the data which are inherent in the selection of a methodology. This thesis is no exception. Areas with limitations include literature, time frame of the research, data interpretation, and the nature of the facilities in the study area.

Literature. The relatively recent commitment to a program designed to combat the camping problem has resulted in only a minimal number of books on the subject. Only in the national park system have any detail studies been undertaken to determine future

ramifications and possible courses of action. In those areas where action has been taken, no official feedback has been released to indicate its success or failure.

The lack of studies and books on the subject of camping related problems has subsequently led to a dependency on magazine articles, quarterly publications published by various recreation oriented organizations, and newspaper articles. The fact that the literature for this research is primarily made up of recent articles is not in itself an undesirable trait. It is mentioned here solely for the purpose of making the reader aware of the information sources as well as to illustrate the recent origin of a commitment to the solution of the camping problem.

Time frame of the research. The time frame within which research is undertaken determines to a large degree the level of analysis possible. In this thesis the time frame was approximately one year. During this time thesis-related activities included design of a proposal, data gathering, data categorization, data analysis, and assimilation of research findings into a written format. The time frame appears to be sufficiently long to incorporate into the analysis the data necessary to develop meaningful and accurate recommendations. The reader should, however, realize that in an area of such dynamic growth as camping, there are likely to be rapid changes in management techniques and policy guidelines. To guard against the possibility of

having the study outdated before its completion, the review of related material was not terminated until the planning recommendations were complete.

Data interpretation. Because this thesis was largely based on interviews with campers and park authorities, there exists the possibility that personal attitudes on the part of the author may have influenced the interviewee or the analysis of the interview material. To offset this possibility, the author was constantly reminded of this condition and every effort was made to review the data with an open, objective perspective.

Nature of the facilities in the study area. The ideal situation for this research would be to have separate campgrounds for trailer and tent camping on all levels--wilderness, primitive, and modern. In the Great Smoky Mountains National Park the modern and primitive areas are mixed, making the study of problems as they related individually to tent and trailer campers more difficult. The lack of distinct camping facilities for tent and trailer campers was partially compensated for by a more intensified research phase and an increased emphasis on this problem during the interviews. Although the conditions were not ideal for a separate review of the two types of camping, the author feels that the additional emphasis on this problem during the research phase of this study was sufficient to give an accurate analysis of the problems associated with each.

The limitations discussed in this section should not be considered major problems, but they are areas of contention which the reader should be aware of as he reviews this case study.

With a review of the methodology complete, the following chapter will develop a background of the growth of camping in America and the problems associated with this growth.

## CHAPTER II

### BACKGROUND

The preceding chapter discussed the purpose and procedure of research involved in the thesis. In this chapter the author will attempt to develop for the reader an awareness of the complexity of the problems associated with camping. Included in this discussion will be an analysis of leisure time trends, review of camping industry growth, and a review of the problems confronting areas providing facilities for tent and trailer camping.

#### Growth of Leisure Time

One of the factors contributing to the increased interest in camping is the growth in the amount of available leisure time in the United States. Since 1900 leisure time has increased significantly. At that time 27 percent of the total population's total time (or 177 billion hours) was allotted for leisure time activities. In 1950 the leisure time available was 34 percent (or 453 billion hours), an increase of 7 percent since 1900.<sup>1</sup> The leisure time figure is expected to continue its upward trend and reach 38 percent (or 1,113 billion hours) by the year 2000. (See Figures 1 and 2.)<sup>2</sup>

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<sup>1</sup>Marion Clawson and Jack L. Knetsch, Economics of Outdoor Recreation (Baltimore: Johns Hopkins Press, 1966), p. 22.

<sup>2</sup>Ibid., p. 23.



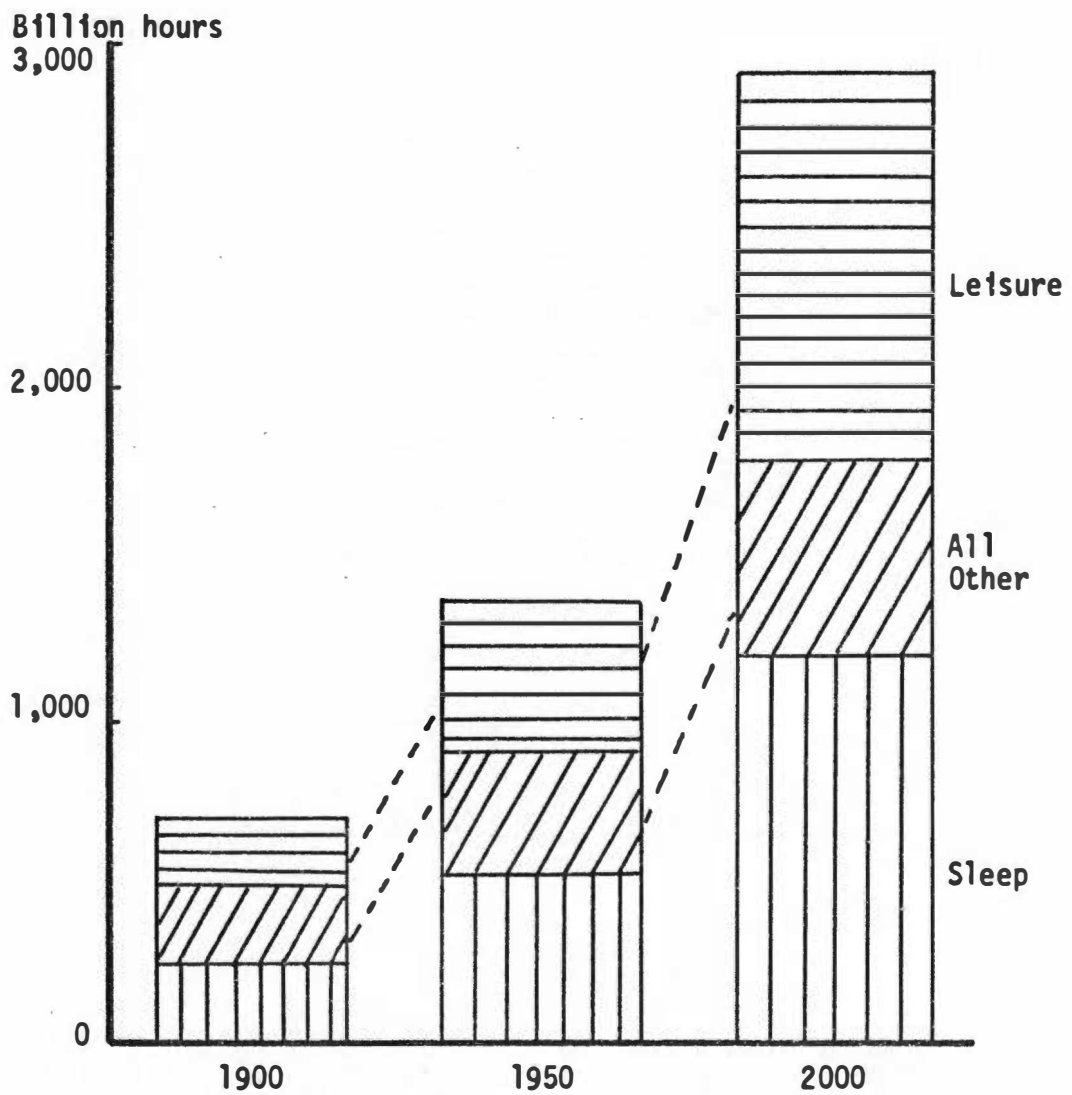


Figure 1. National time budget (from Clawson, Knetsch, Economics of Outdoor Recreation)

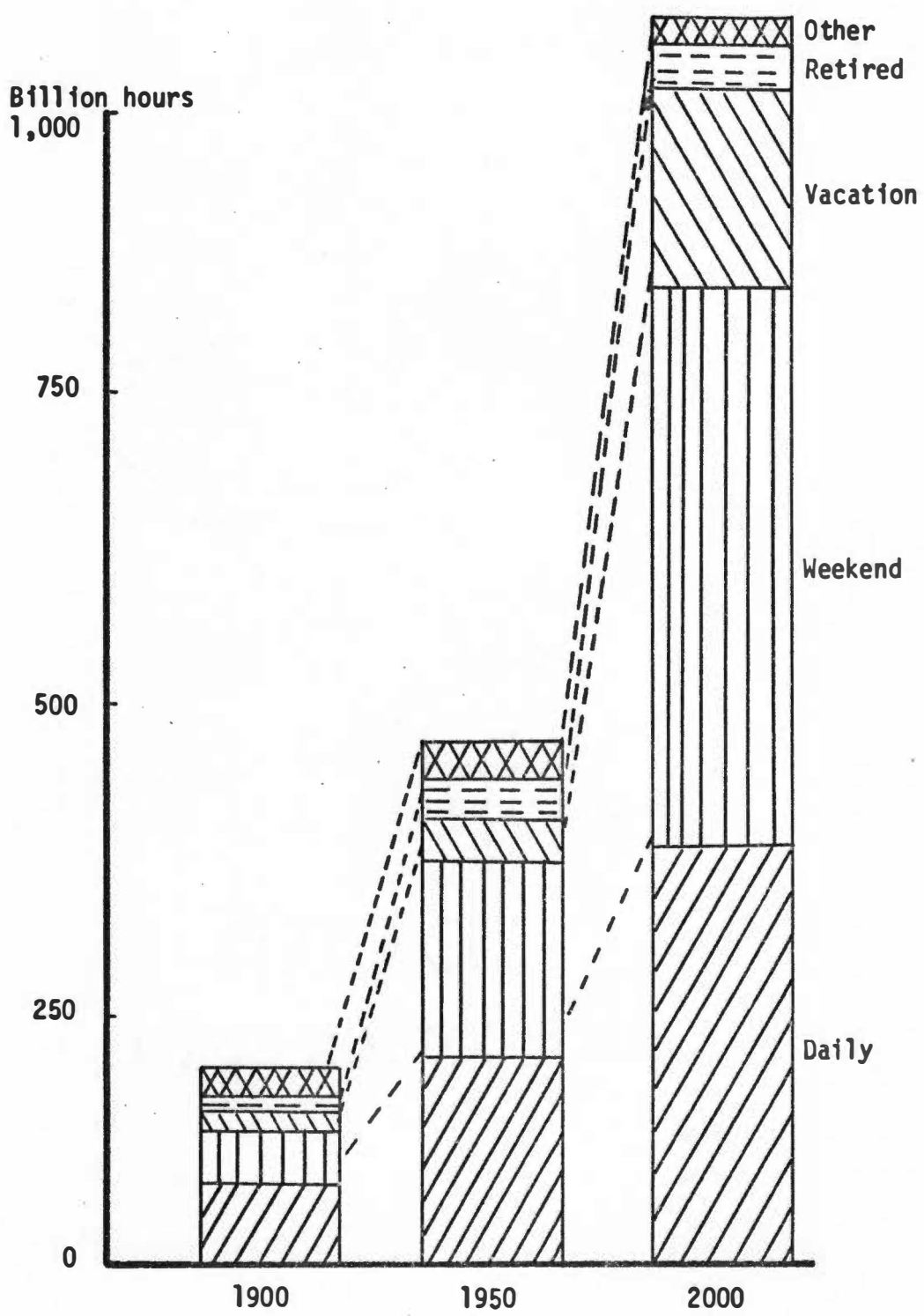


Figure 2. Time division of leisure (from Clawson, Knetsch, Economics of Outdoor Recreation)

The increased leisure time not only affects the types of facilities needed but has a direct bearing on the amount of recreational land needed to meet future demand. It has been estimated that there will be ten times the demand for recreational opportunities in the year 2000 as there was in 1956.<sup>3</sup> The increased demand for recreational opportunities will subsequently require at least an additional 20 million acres of recreational land by the year 2000.<sup>4</sup>

### Growth of Camping Industry

One of the by-products of the increase in leisure time has been the trend toward greater participation in recreation-oriented activities.<sup>5</sup> One of the recreational activities enjoying considerable growth in popularity has been camping. This section will demonstrate for the reader how the camping industry has grown by reviewing the trends in sales for camping vehicles, the number of camping vehicles being produced, and the growth in campground development.

Sales of camping equipment. One indicator of the growth of an activity is the level of sales associated with that activity. The level of sales is increasing yearly in the camping vehicle industry. To illustrate, in 1961 sales of camping vehicles amounted to \$213 million

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<sup>3</sup>Marion Clawson, R. Burnell Held, and Charles H. Stoddard, Land for the Future (Baltimore: Johns Hopkins Press, 1960), p. 187.

<sup>4</sup>Marion Clawson, Land for Americans (Chicago: Rand McNally & Company, 1963), p. 19.

<sup>5</sup>Ibid.

and by 1969 the sales had increased to over \$1 billion.<sup>6</sup> (See Figure 3.) Not only have the sales of camping vehicles increased tremendously, the rental of these vehicles has also increased. It has been estimated that of the 117 million camping occasions that occurred in 1969, 23 percent occurred in rented vehicles. Industry spokesmen view the renters as potential purchasers. Some dealers even offer special deals such as trial trips to encourage the renter to purchase.<sup>7</sup>

The trend toward increased sales of camping equipment is not limited to individuals interested in trailer camping. The overall interest in camping can also be seen in the sales associated with wilderness and primitive camping gear. In 1969 the National Sporting Goods Association estimated sales of \$83 million for tents and \$57 million for sleeping bags.<sup>8</sup> It is further estimated that 50 million Americans will purchase some type of tent, camp stove, sleeping bag, or other camping gear during 1972.<sup>9</sup>

Production of camping equipment. With annual sales increasing, it is logical to assume that production has also increased. The research does in fact indicate an increased production rate with the trend toward further increases in the future.

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<sup>6</sup>"Camping Spree in America," p. 39.

<sup>7</sup>Recreational Vehicle Industry, Facts and Trends, "Recreational Vehicle Rentals" (Washington, D. C.: Recreational Vehicle Industry, 1970), p. 9.

<sup>8</sup>Ibid., "Industry's Growth Potential," p. 8.

<sup>9</sup>"Camping Spree in America," p. 40.

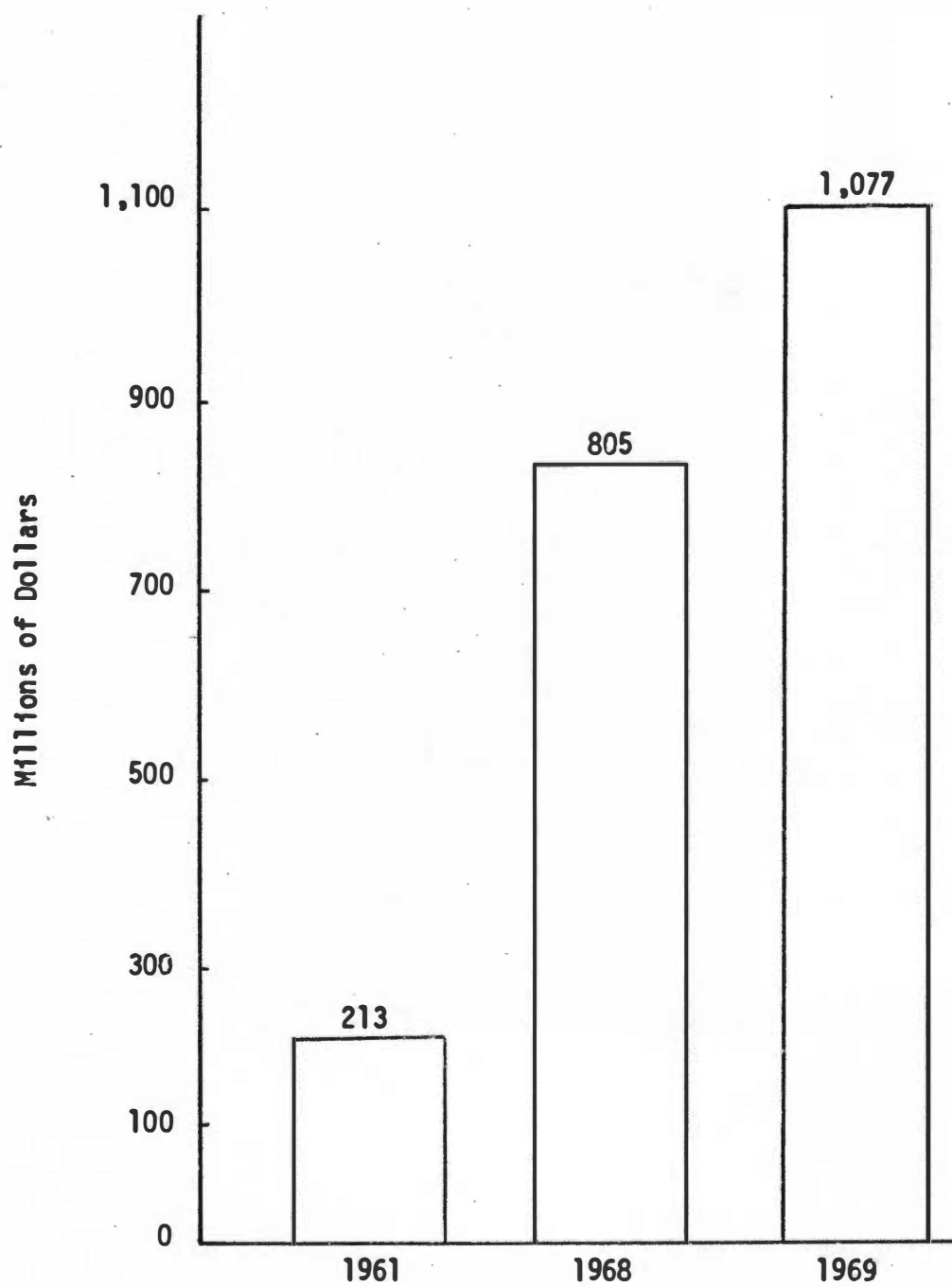


Figure 3. Recreational vehicle annual retail sales.

Historically, the early 1930's are sighted as the period when commercialized camping first began.<sup>10</sup> From the 1930's until after World War II the interest in camping grew slowly but steadily. In 1946 there was a surge in attendance at public campgrounds which has increased steadily ever since. From the 1930's until the mid-1950's the overwhelming majority of campers were tent campers, and it was not until the latter part of the 1950's and early 1960's that the camping vehicle really became popular.<sup>11</sup> For example, in 1956 there were 15,370 camping vehicles produced by a small number of manufacturers located mostly in California; in 1964 there were 90,370 camping vehicles produced and by 1969 the number had grown to 514,100.<sup>12</sup> (See Figure 4.) With the increased sales and production of camping vehicles, there has been a corresponding increase in the number of campgrounds.

Campground growth. Most of the early campgrounds were provided by public agencies as a part of the total park structure and were designed and developed almost exclusively for tent camping. As the emphasis changed from tent to trailer camping, many of the old tent campgrounds were converted to accommodate trailers. Despite their effort, the public agencies were unable to keep pace with the growing demand for facilities.

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<sup>10</sup>Facts and Trends, "Progress in the Recreational Vehicle Industry," p. 8.

<sup>11</sup>Ibid.

<sup>12</sup>Ibid.

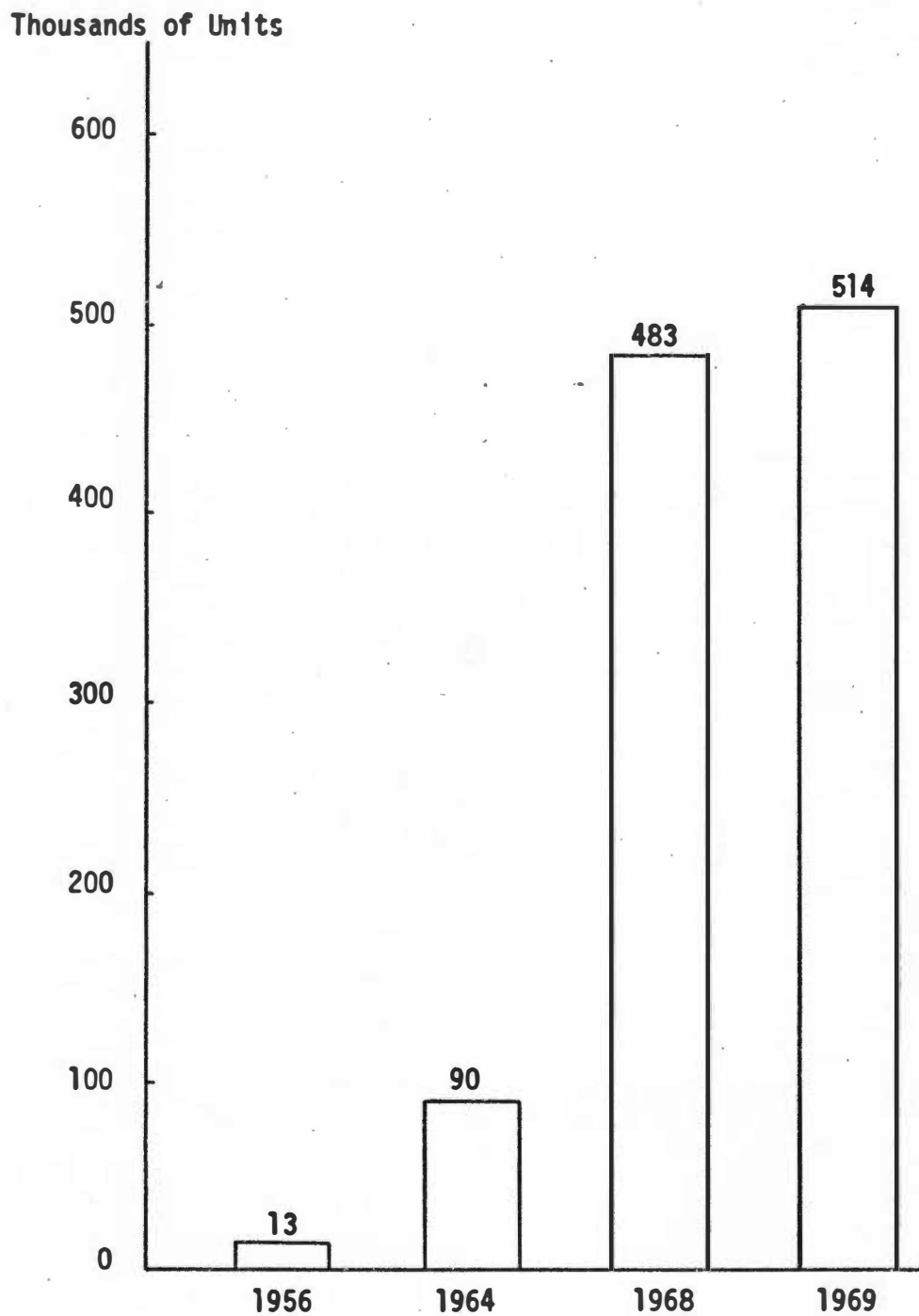


Figure 4. Recreational vehicle annual production.

By the early 1960's demand for camping sites had reached the point where it was profitable for private enterprise to begin developing campgrounds. It was the increasing demand for campsites that led to the development of the nation's largest campground chain, Kampgrounds of America (KOA).<sup>13</sup> The first of the KOA camping parks opened in 1962 and by 1971 there were 525 campgrounds in operation in 47 states, Canada and Mexico.<sup>14</sup> Taking the lead established by the KOA organization, private campground construction has now surpassed the total number of existing public sites. The Woodall Publishing Company which gathers data on campgrounds estimates that there are nearly 10,000 private parks with more than 450,000 sites in the United States compared to approximately 7,000 public parks with 204,000 sites.<sup>15</sup>

The composition of the 10,000 private campground operators further demonstrates the interest the private sector has in this industry. Many of the campgrounds developed by the private sector are locally owned and operated and range in design from an open cow pasture with an outdoor privy to a campground with paved parking pads, a store, hot showers, a self-service laundry, and a swimming pool.

The biggest chain of private campgrounds as mentioned above is the KOA with 525 campgrounds in which nearly 8 million campers stayed during 1971.<sup>16</sup> Other large organizations which are entering

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<sup>13</sup>"Camping Spree in America," p. 40.

<sup>14</sup>Ibid.

<sup>15</sup>Ibid.

<sup>16</sup>Ibid.



the camping business include Ramada Inn with the "Camp Inn;" Holiday Inns of America with the "Trav-L-Parks," expected to have 400 campgrounds by 1975; the "Safari Camps of America" with 75 campgrounds at present; and the Gulf Oil Company which recently purchased a 49 percent ownership in the "Venture Out" campgrounds, a condominium-type campground where individual sites are purchased.<sup>17</sup>

Despite the fact that production and sales of camping equipment have increased tremendously over the past decade, the camping industry is being confronted with a number of serious problems. The following section discusses some of these problems and their effects on campers and campgrounds.

#### Problems Associated with Camping

As pointed out earlier in this chapter, camping is an activity which is increasing in popularity. The fact that the number of participants is increasing so rapidly is one of the principal reasons for many of the problems associated with camping. The problems most commonly associated with areas providing camping facilities are overcrowding, traffic congestion, vandalism, stream pollution, sanitation and littering.<sup>18</sup> The level of severity for these problems varies from one campground to another and from one type of camper to another.

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<sup>17</sup>C. B. Colby, "The Big Change in Camping," Outdoor Life, January, 1971, p. 16.

<sup>18</sup>Our National Parks, A Living Heritage, "A New Decade Brings Problems," Parks & Recreation, June, 1970, p. 43.

To better understand the complexity of these problems, the following discussion will revolve around a review of each of the problems as it relates to both tent and trailer camping.

### Trailer Camping

Spokesmen for the camping vehicle industry cite the inability of campsite construction to keep pace with vehicle production rates as the number one problem.<sup>19</sup> The shortage of space in turn leads to overcrowding at existing sites or camping in unauthorized areas, both of which are damaging to park facilities.

In an interview with an experienced camper, Melvin M. Garner,<sup>20</sup> the problem of finding an authorized camping area with available space is becoming an increasingly common occurrence. The inability to find an authorized site forces the camper to select one of two options, the abandonment of the camping trip or the use of unauthorized areas for camping. Specific reference to this particular problem was made in correspondence with four states--Michigan,<sup>21</sup> Utah,<sup>22</sup> Florida,<sup>23</sup> and

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<sup>19</sup>Facts and Trends, "Industry Problems," p. 15.

<sup>20</sup>Interviews with campers in the Great Smoky Mountains National Park, August, 1971.

<sup>21</sup>Letter from Paul R. Rearick, Acting Chief, Parks Division, Michigan Department of Natural Resources, July 15, 1971.

<sup>22</sup>Letter from R. Clark Anderson, Chief, Special Projects, State of Utah, Division of Parks and Recreation, August 9, 1971.

<sup>23</sup>Letter from E. E. Hardee, Deputy Chief, Bureau of Operations, Division of Recreation and Parks, Florida Department of Natural Resources, July 1, 1971.

Ohio.<sup>24</sup> Each of these states has strict limitations on the number of campers allowed in an area. In Ohio, as well as a number of federal parks, attempts have been made to solve the problem of insufficient sites by providing temporary overflow areas. The result has been that the temporary areas, which were not equipped or constructed for constant use, were being used on a regular basis, causing erosion of the site, sanitation problems, and indiscriminate garbage disposal practices. The overflow areas idea has been largely abandoned and replaced with strict controls on the number of campers allowed into an area accompanied by increased patrols to prevent unauthorized camping.<sup>25</sup>

A shortage of campsites was also a problem in the Everglades National Park during the winter of 1967-1968. Here the approach was not to limit the number of campers using an area, instead there prevailed an attitude of "make room for one more." The consequence of this practice was that 320 campers were crowded into an area designed for only one-half that number. This policy brought about conditions of obvious overcrowding, erosion of sites, destruction of vegetation, littering, overloaded sanitation facilities and an increase in crime.<sup>26</sup> The experience in the Everglades National Park along with

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<sup>24</sup>Letter from Norville L. Hall, Chief, Ohio Department of Natural Resources, July 23, 1971.

<sup>25</sup>Bob Behme, "A Crisis in Our Campgrounds," Outdoor Life, February, 1971, p. 130.

<sup>26</sup>Michael Frome, "Must Our Campgrounds Be Outdoor Slums?," Reader's Digest, September, 1969, p. 170.

similar experiences in other federal reserves has caused the National Park System to develop a policy of limiting the number of campers in an area on the basis of the area's design capacity.

Although the state and federal restrictions tend to control overcrowding in the authorized areas, there are still problems with unauthorized camping. The most recent trends have been to encourage private enterprise to develop campsites outside the parks and to limit future campground development inside the parks.<sup>27</sup>

Traffic congestion. The traffic congestion in the nation's parks can largely be attributed to the yearly increase of visitation to these areas. The average yearly rate of increase for visitors to the National Park System is 7 percent and this rate is expected to continue at least for the foreseeable future.<sup>28</sup> By the year 2000 visitation to the nation's parks is expected to reach one billion,<sup>29</sup> which will increase the present traffic congestion considerably unless appropriate action is taken to promote better traffic controls.

In Yosemite Valley National Park a number of measures have been initiated that will control the flow of traffic. The control of vehicular movement became necessary when traffic congestion reached the point that it was blocking the normal flow of traffic on major

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<sup>27</sup>"Changing the National Park to Cope with People and Cars," U. S. News and World Report, January 4, 1972, p. 53.

<sup>28</sup>Ibid.

<sup>29</sup>"A Look Into the Future," Our National Parks, A Living Heritage, p. 44.

roads around the park. The volume of vehicular movement in the park was also threatening the giant Sequoias and other species of vegetation with extinction, in addition to causing the wildlife to retreat to the more remote parts of the park.<sup>30</sup>

Certainly not all the traffic congestion in our parks can be attributed to campers and their trailers, but according to park officials trailers to account for a significant amount of the congestion. One of the reasons why camping trailers create traffic congestion is that they require as much room to maneuver as a bus and carry only a minimum number of people.<sup>31</sup>

Interviews with 83 percent of the campers revealed that they considered their camping vehicle to be slower and more cumbersome to maneuver than the average passenger car.<sup>32</sup> Correspondence with the various state agencies across the country also indicated that camping vehicles were responsible for a considerable amount of the traffic congestion in their state's parks.

As with the overcrowding problem, park officials recommend the development of camping facilities outside the park to alleviate traffic congestion accompanied by controlled movement of those vehicles allowed in the park.<sup>33</sup>

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<sup>30</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 174.

<sup>31</sup>Ibid.

<sup>32</sup>See Appendix A.

<sup>33</sup>"Yosemite: Better Way to Run A Park?," U. S. News and World Report, January 24, 1972, p. 56.

Vandalism. As the number of people entering and leaving an area increases, the potential for crime also increases. The number of serious crimes committed in the national parks rose 138 percent from 1966 through September, 1969.<sup>34</sup> During that period of time the attendance rate was also increasing while the number of park personnel remained relatively stable. The result was to reduce the level of controls in the parks.<sup>35</sup>

One of the primary reasons for the increase in crime is the lack of sufficient park personnel to adequately patrol the camping areas. In Michigan crime in certain of the state parks caused newspapers to call for closing of the parks until such time as law and order could be restored. On a number of occasions during 1971 Michigan state troopers were called out to arrest bands of "longhairs" who were running roughshod over campers, taking their food, drinks, and equipment.<sup>36</sup>

State parks are not the only areas plagued with this type of action. In Yosemite Valley National Park on July 4, 1970, the park officials, in a violent skirmish, arrested 174 youths and adults who were camping in an unauthorized area and refused to move. Charges against those arrested included illegal use of drugs, illegal possession

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<sup>34</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 169.

<sup>35</sup>"Changing the National Park to Cope with People and Cars," p. 55.

<sup>36</sup>"Crackdown Needed on Park Hoodlums," The State Journal (Michigan), Vol. 117, No. 71, July 17, 1971, p. A-12.

of alcohol, resisting arrest, camping in a restricted area, littering and assorted other charges.<sup>37</sup> Since that time park officials have attempted to deemphasize the use of force in parks by providing a number of programs in which the youths can participate within the authorized camping areas.

In addition to the large scale incidences which require the application of mass policing action, there are those who indulge in the destruction of public property on a less grandiose scale. These acts of vandalism include writing on bathroom walls, destroying bathroom fixtures, destruction of park equipment, destruction of natural vegetation, intentionally setting fires, polluting streams or water sources, and removing materials from the park without authority. These are the types of things most commonly associated with the term "vandalism" and these along with the more severe incidents mentioned above are on the increase in our campgrounds. Acts of vandalism tend to be highest in those parks where overcrowded camping conditions exist and park personnel are spread thin over a large area.<sup>38</sup>

Stream pollution. The problem of stream pollution from trailer camping areas is related to the function of two elements. First, what level of use does the campground maintain; and second,

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<sup>37</sup>"Yosemite," p. 56.

<sup>38</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 169.

what type of sanitary facilities are available for the campground and what level of treatment do these facilities provide?

One of the sources of pollution often overlooked at campgrounds is the gas and oil dripping from automobiles and/or trailers. These pollutants are washed by the rains into storm drains which usually go directly into nearby streams. If storm sewers do not exist, these drippings are absorbed by the soil killing the vegetation and eventually seeping into the stream. The killing of the vegetation ultimately leads to erosion and an unsightly environment.

The chief potential for stream pollution in a campground is the sanitation system. If the campground has a system that is connected to a local treatment plant which in turn is operating properly, the effect will probably be minimal. If, on the other hand, the campground's sewer system does not include adequate treatment measures, the pollution problem can be severe.

Another potential source of stream pollution is the trailers' holding tanks. The sanitation facilities in the campground should allow for dumping and treatment of the effluence from these holding tanks. Unless such facilities are provided, the campers may use the streams to empty their tanks. Streams running through or adjacent to campgrounds may also serve as convenient dumping grounds for empty bottles, containers, or other articles discarded by the campers.<sup>39</sup>

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<sup>39</sup>Personal observation made by author at Dudley Creek Travel Trailer Court, June 7, 1971.



Strict enforcement of industry standards and city and state health codes are the best means of controlling stream pollution from trailer camps.

Litter. The discarding of trash and garbage in unauthorized areas is a tremendous problem in most campgrounds. The problem has reached the point in some areas of the western United States that campgrounds have been closed in an effort to control the problem.<sup>40</sup>

Littering, like so many of the problems associated with camping, can be directly correlated with the number of campers using a given area. As the facility's capacity to absorb additional users decreases litter becomes worse. The control, collection, and removal of litter must not exceed the available manpower's capacity or a system breakdown will occur in the form of littering.<sup>41</sup>

The prime example of this occurred in Idaho at the opening of a new park. The park was designed to handle 1,000 people in the campground. At the opening approximately 17,000 people showed up and the area took on the appearance of a rock festival. Two large fields normally used for ballgames and golf practice were roped off and used to park the vehicles. Litter became so bad that trash receptacles became full and additional receptacles had to be brought

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<sup>40</sup>Behme, "A Crisis in Our Campgrounds," p. 130.

<sup>41</sup>Letter from Jerry Hover, Park Manager, Idaho Department of Parks, July 12, 1971.

in from the nearby town. As a result of this massive influx of people, the park had to be closed for a complete renovation.<sup>42</sup>

To combat the littering many parks are promoting clean-up campaigns including films, lectures, and fireside gatherings in the campgrounds. The object of this campaign is to make people aware of the cost and damage to the environment caused by littering and try to get people to place trash in designated receptacles.<sup>43</sup> The second phase of the clean-up campaign is an emphasis on more stringent compliance with existing laws regulating litter. In this stage, offenders are prosecuted and the prosecutions are widely advertised in an effort to discourage others.

Sanitation. The level of treatment for sanitation in a campground is directly related to the facility's capacity to treat waste and the amount of waste placed in that system. Correspondence with the various states confirmed that where the number of campers is controlled so as not to exceed the designed capacity of a facility, there was little, if any, problem with sanitation facilities. On the other hand, Michigan park officials report that, "when sanitation facilities were over-extended, people begin crapping in the sand."<sup>44</sup>

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<sup>42</sup>Ibid.

<sup>43</sup>Roger Mudd News, C.B.S. telecast, February 5, 1972: "Yosemite." Narrator, Bill Curtis.

<sup>44</sup>Tom Opre, "Campgrounds Hit By Rowdies," The State Journal (Michigan), Vol. 117, Number 71, July 7, 1971, p. A-1.

Not only is this type of action deplorable, it is a health hazard. It creates an odor and is an added expense to the maintenance duties of the park.

The campgrounds that are confronted with sanitation problems are beginning to enforce limits on the number of users as their answer to problems of overused sanitation facilities.

Thus far in this chapter we have concentrated on the problems associated with trailer camping, in the remaining part of the chapter the problems associated with tent camping will be discussed. The following is a review of camping problems as they relate specifically to tent campers.

### Tent Camping

The same types of problems which plague trailer campgrounds also appear in areas where tent campers congregate. The degree of severity and the way in which the problems manifest themselves are the only real differences between tent and trailer camping problems. For that reason the treatment of tent camping problems will somewhat overlap the preceding review of trailer camping problems.

Overcrowding. The effects of overcrowding for tent camping are very similar to those of trailer camping and include littering, vandalism, sanitation problems, erosion of trails, and destruction of vegetation.<sup>45</sup> The restrictions which govern the tent camper are,

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<sup>45</sup>Behme, "A Crisis in Our Campgrounds," p. 131.

however, much more difficult to enforce since he is able to pitch his tent almost anywhere and may enter and leave an area by any number of different routes.

On a single weekend during 1971 more than 1,000 tent campers converged on a small area in the California Sierra Nevada high country. The outcome was a tent city which destroyed much of the vegetation by the sheer volume of movement in the area.<sup>46</sup>

In a similar incident park rangers were forced to establish a sanitation station on Mount Whitney because a health hazard was developing due to the large number of campers using the area.<sup>47</sup>

The incidences of overcrowding have increased sufficiently in the wilderness areas of our national parks to cause Secretary of the Interior, Rogers C. B. Morton, to issue a policy statement restricting the number of hikers and campers on the backwoods trails of three national parks--the Rocky Mountains National Park in Colorado, Sequoia-Kings Canyon National Park in California, and the Great Smoky Mountains National Park. Preliminary research leading to Secretary Morton's decision indicated that, "People who are camping have a greater impact on the environment than those persons who are just walking through."<sup>48</sup>

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<sup>46</sup>Ibid.

<sup>47</sup>Ibid.

<sup>48</sup>"Wilderness Campers in Smokies Put on Quota," The Knoxville News-Sentinel, March 1, 1972, p. 1.

Vandalism. Vandalism among tent campers, like vandalism among trailer campers, has increased proportionately with the number of participants. Vandalism among tent campers includes destruction of trail shelters, setting fires, disfiguring natural areas with paint, and chopping trees for firewood.

Most of the acts of vandalism performed by tent campers in the wilderness areas are not detected until long after the damage has been done. The lack of funds to hire personnel needed to patrol the back country is the chief reason why most vandalism associated with tent campers goes unpunished.<sup>49</sup>

Incidences of vandalism among tent campers who hike into the back country are reaching levels sufficient to threaten the very environment they seek to enjoy. The chopping of trees for firewood is increasing at an alarming rate as is the stripping of tree bows to make beds.<sup>50</sup> Both of these practices destroy the camping experience for individuals who may want to use these areas at a later date.

movements to combat vandalism among tent campers include developing vandalproof equipment, increasing patrols in backwoods areas and the restriction of campers to a limited number of sites, which can be adequately maintained and patrolled.

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<sup>49</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 174.

<sup>50</sup>Interview with Lee Sneddon, Chief Ranger, Great Smoky Mountains National Park, June 7, 1971.

Stream pollution. Stream pollution is becoming a real problem for the tent campers. Before the number of campers increased so much the streams were able to absorb the detergents used to wash out campers' clothes, dirty dishwater, and even the human waste. Today, with an increasing number of campers using the streams as their personal septic tanks, the streams are becoming polluted.<sup>51</sup> The conditions have reached the point where many campers no longer feel safe drinking from the mountain streams where only a few years ago they did.<sup>52</sup>

Efforts to control the pollution have thus far had only limited success and as the number of campers increases the problem will also increase unless more stringent regulations are developed and enforced.

Litter. Litter control and collection is much more difficult for tent camping participants than for trailer camping participants. The primary reason for the difficulty lies in the inaccessibility of the camping sites for conventional means of collection. As a result of this inaccessibility, many of the campsites and trails used by tent campers have become trash heaps.<sup>53</sup> Efforts to clean up these areas have been frustrating in light of the growing number of contributors.

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<sup>51</sup>Behme, "A Crisis in Our Campgrounds," p. 131.

<sup>52</sup>Interviews with campers, August, 1971.

<sup>53</sup>Editorial, The Knoxville News-Sentinel, March 11, 1971, p. 4.

Sanitation. Part of the stream pollution problems discussed directly concern sanitation practices. Many of the backwoods areas do not have sanitation facilities and in those areas where facilities are available they are often misused. One of the problems facing these facilities is the high level of use they are receiving. Some of the outdoor privies have to be moved frequently causing problems with site location after a few moves.<sup>54</sup> The use of chemical toilets is impractical in most instances because of the remoteness of the sites and the constant maintenance required by such units.

Campers are normally requested to bring their garbage out of the backcountry to garbage collection points; recently, however, campers have begun to deposit their trash in the sanitation facilities, forcing other campers to use unauthorized areas for sanitary purposes. The use of sanitation facilities as garbage dumps also forces park authorities to move the facilities before they have been completely utilized. The problem of sanitation, like the problem of stream pollution, is increasing in magnitude each year and as of yet no solution has been found that would alleviate the problem.

As we have seen, the problems which concern tent campers are a great deal like those problems which concern trailer campers. Both have their roots in the tremendous growth in popularity of this activity as well as the failure of the public and private sectors to develop plans to adequately facilitate this growth.

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<sup>54</sup>Interview, Sneddon.

### Summary

Chapter II has been an attempt to develop for the reader an awareness of the past growth and future demand on camping facilities. This chapter also attempted to review some of the major problems which have developed as a result of the rapid growth in the number of camping participants. With this general background of the problems confronting camping facilities, Chapter III begins the discussion of the specific areas under study in this thesis.



## CHAPTER III

### THE GREAT SMOKY MOUNTAINS NATIONAL PARK: A CASE STUDY OF TENT AND TRAILER CAMPING

Thus far this thesis has dealt primarily with the problems of tent and trailer camping in a general context. Beginning with this chapter the emphasis will switch to a more specific treatment of these problems as they relate to the selected study area.

The primary thrust of Chapter III will be a discussion of the general characteristics of the study area. Included in this discussion will be an analysis of the park's geographical location, market area, climatic conditions, and available activities. Following this discussion there will be a review of the commercial development adjacent to the park and an analysis of the internal and external camping facilities. There will also be a description of the facilities available at each type of campground--wilderness, primitive, and modern--and the regulations governing their use.

In summary, Chapter III is an attempt to develop an awareness of the internal and external environment of the study area. Further, it is the function of this chapter to structure a foundation upon which the reader can evaluate the planning recommendations to be outlined in a later chapter.

### Description of Study Area

The Great Smoky Mountains National Park is made up of approximately 800 square miles<sup>1</sup> of forest-covered mountains and valleys straddling the Tennessee-North Carolina state line. The park lies along the Appalachian mountain chain and includes the highest peaks of that chain. The location of the park places it approximately 39 miles from Knoxville, Tennessee; 150 miles from Atlanta, Georgia; and 25 miles from Asheville, North Carolina.<sup>2</sup>

Because of the park's location its visitors may utilize any one of several highways to reach the area. (See Figure 5.) The primary route used by park visitors is U. S. 441 which bisects the park from north to south. Other routes include State Highway 73 which enters the park from the west near Townsend, Tennessee, and extends in a northeasterly direction across the park to Cosby, Tennessee; Federal Highway 129 which joins the Foothills Parkway and runs along the western periphery of the park; State Highway 28 which connects Fontana and Bryson City to spur routes which run into the southern portion of the park; Interstate 40 parallels the eastern boundary of the park, making contact with various routes that lead to the park;

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<sup>1</sup>Phillip King and Arthur Stupka, United States Geological Survey Map, "The Great Smoky Mountains--Their Geology and Natural History" (United States Department of the Interior, Geological Survey, revised 1961).

<sup>2</sup>Rand-McNally, Road Atlas, United States, Canada and Mexico (United States: Rand-McNally, 1969), p. 3.

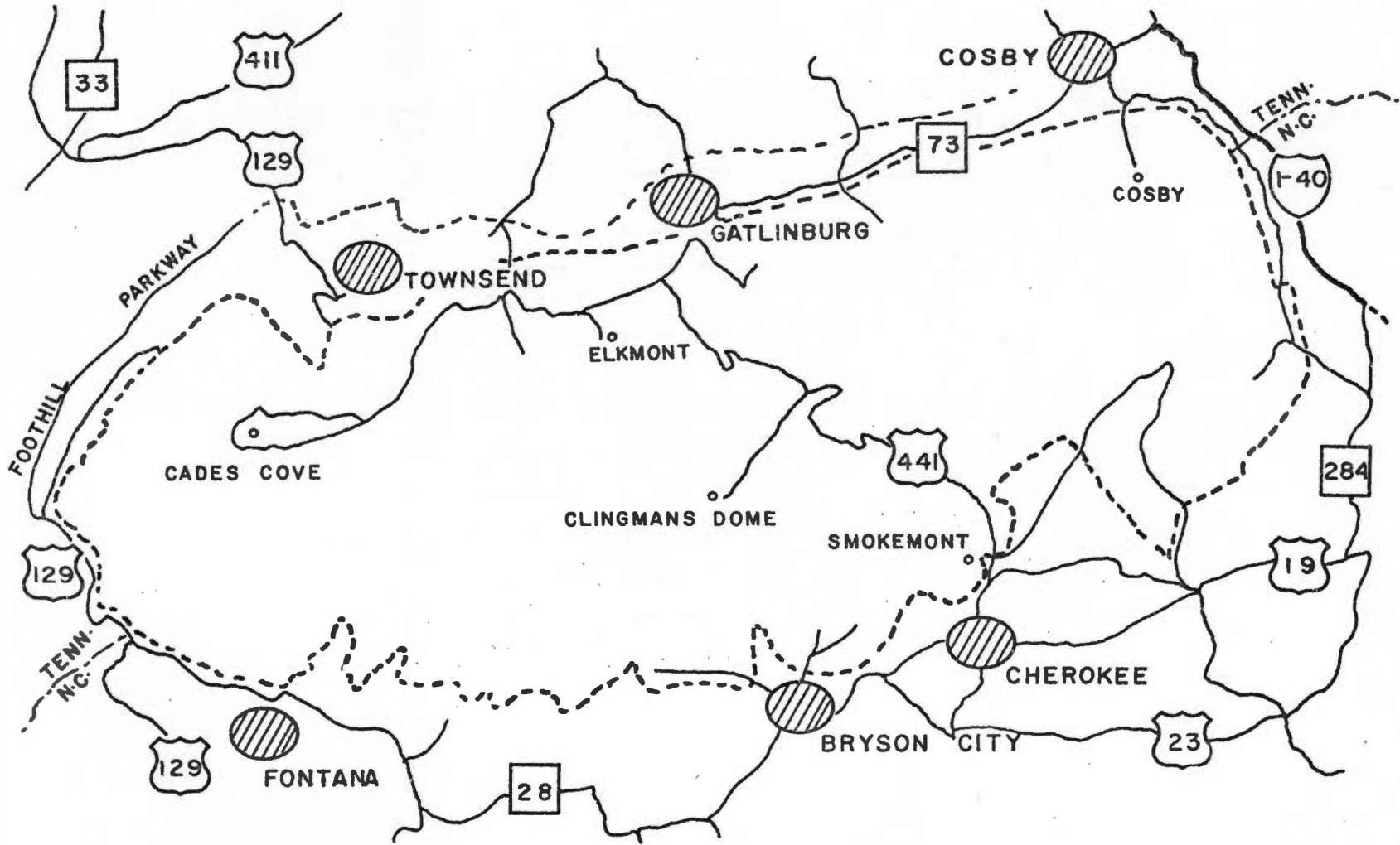


Figure 5. Road network in the vicinity of the study area.

and Federal Highway 19 which approaches the park from the east by connecting with U. S. 441 which runs through the park.<sup>3</sup> In addition to the state and Federal highways mentioned, Interstates 75 and 81 when completed will increase accessibility to the park, thereby increasing the visitation potential. To better understand the effect geographical location and accessibility have had on visitation patterns, the following section will be devoted to a discussion of the park's market area.

### Market Analysis

In order to sustain a high rate of visitation year after year, an area must not only be attractive, it must have a large population base from which to draw its visitors. Keeping the importance of a large population base in mind, it has been estimated that one-fourth of the population of the United States lives within a day's drive of the Great Smoky Mountains National Park.<sup>4</sup> (See Figure 6.) In Figure 6 concentric circles have been drawn on a map of the United States representing approximately 100-mile intervals from the park. Also noted on the map by smaller circles are those cities with 100,000 or greater population.<sup>5</sup> From this map the reader can see more clearly the relationship of the park to the major population centers in the country.

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<sup>3</sup>Ibid., pp. 42-43.

<sup>4</sup>Young, "Solitude for Millions," p. 525.

<sup>5</sup>United States Department of Commerce, 1970 Census of Population, Number of Inhabitants, United States Summary (Washington, D. C.: United States Department of Commerce, 1971).

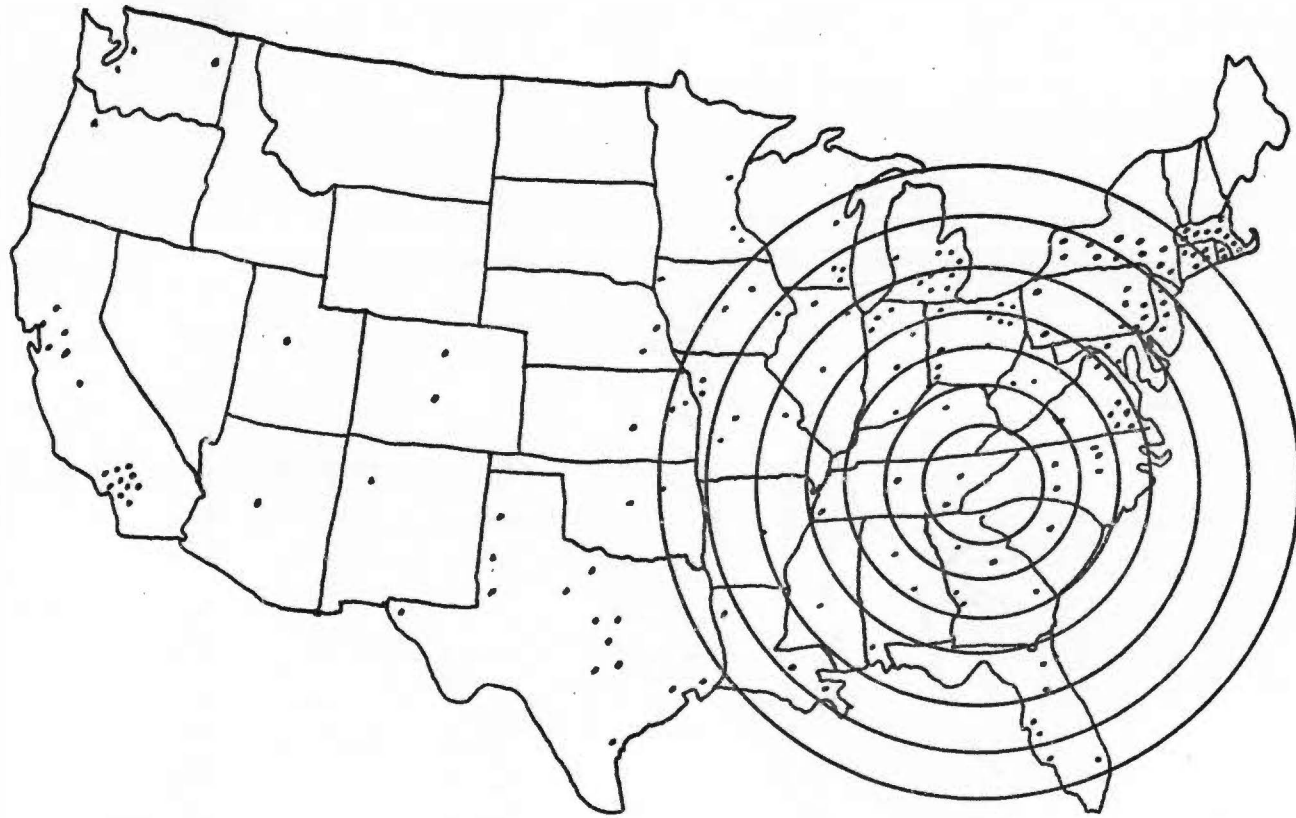


Figure 6. Population centers and proximity to the study area.

A further indication of the extensive market area of the park is the fact that the Great Smoky Mountains National Park has been the most heavily visited park in the National Park System for the past two decades.<sup>6</sup> Visitation to the park has increased steadily since the end of World War II with the exception of the 1968-1969 seasons when attendance actually declined.<sup>7</sup> Despite the slight decline in 1968-1969, attendance resumed its upward trend in 1970 and 1971 when a record number of visitors came to the park. Recent projections indicate that the visitation is continuing to increase and that the record set in 1971 will most likely be topped by the 1972 count.<sup>8</sup> (See Figure 7.)

Origin and destination. Visitors to the park are made up of two general groups. The first group consists of local or area residents who use the park on a weekday or weekend basis as a place to picnic, pleasure ride, hike or just get away from the pace of urban living for awhile.<sup>9</sup> The second group is comprised of those individuals

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<sup>6</sup>Interview, Sneddon.

<sup>7</sup>United States Department of the Interior, National Park Service, Transportation Concepts, Great Smoky Mountains National Park, "Visitation and Traffic" (1971), p. 6.

<sup>8</sup>Eyewitness News, C.B.S. telecast, April 4, 1972: "Record Number of Visitors to Park." Narrator, Doc Johnston.

<sup>9</sup>Tennessee Department of Conservation, Division of Planning and Development, Tennessee Comprehensive Outdoor Recreation Plan, 1969 (Nashville: Tennessee Department of Conservation, 1970), p. 63.

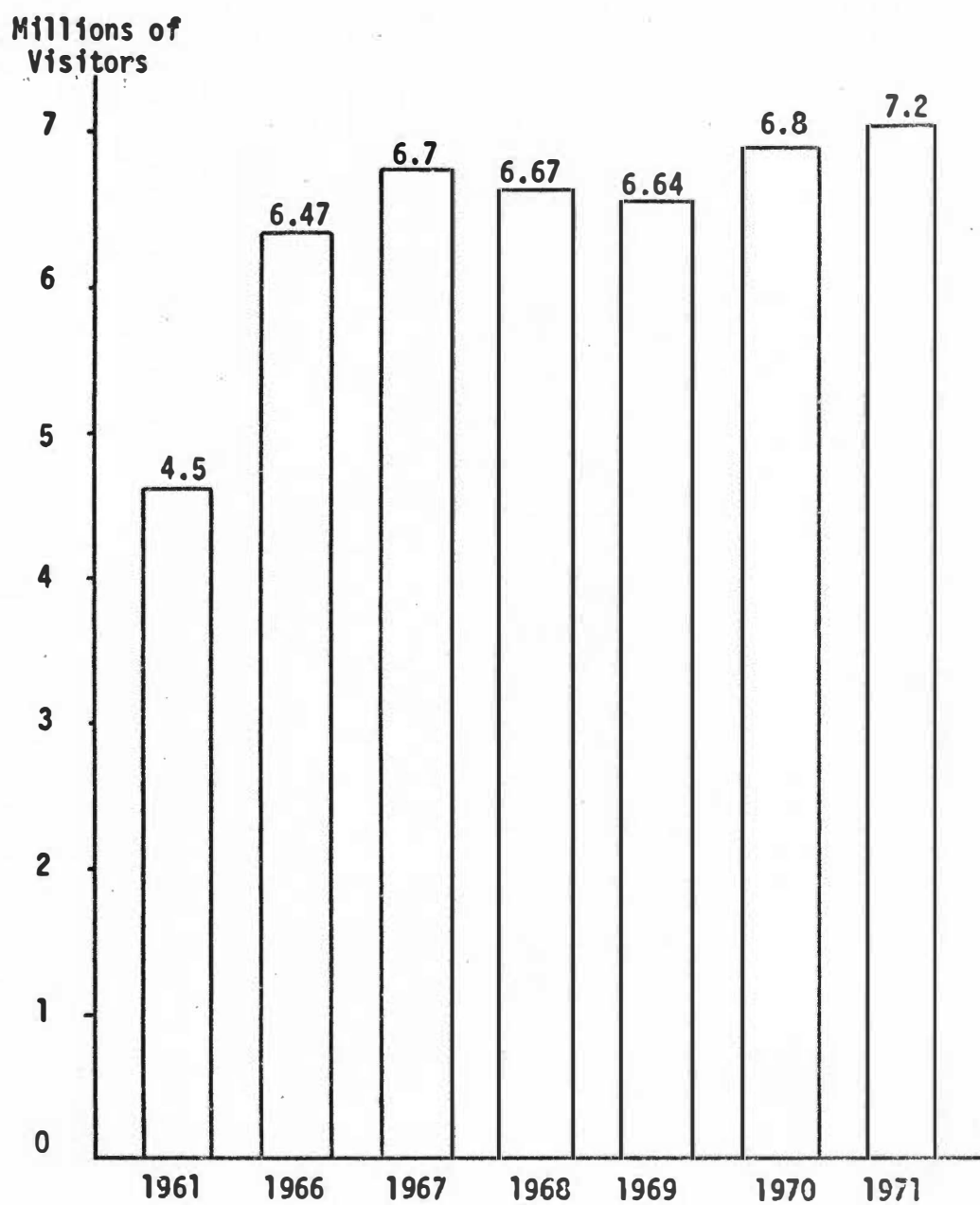


Figure 7. Visitation trends for the Great Smoky Mountains National Park.

living outside the immediate area who require more than half a day to reach the park. These individuals are usually on a vacation and see the park as a point of interest in their travels or as their destination. It is this group that forms the nucleus for the large market area.

To date no conscious effort has been made by park officials to determine the point of origin of its visitors. In lieu of official records at the park, a 1969 survey of tourism in east Tennessee was utilized to identify the market area for the park. The research revealed that the market area was chiefly comprised of southern, eastern, and midwestern states.<sup>10</sup> (See Figure 8.) One reason for the availability of such a large market area appears to be the accessibility provided by the road network which also places the park in an excellent position to draw visitors from the annual north-south tourist migration.<sup>11</sup>

Visitation trends. Visitation to the park is year around with high peaks during the summer months, early fall and holidays. The consistency of the visitation is demonstrated by the fact that more than 100,000 visitors have come to the park every month during the past three years. A large percentage of those individuals who visit the park are on vacations. The heavy use of the park by

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<sup>10</sup>Ibid.

<sup>11</sup>Ibid., p. 64.



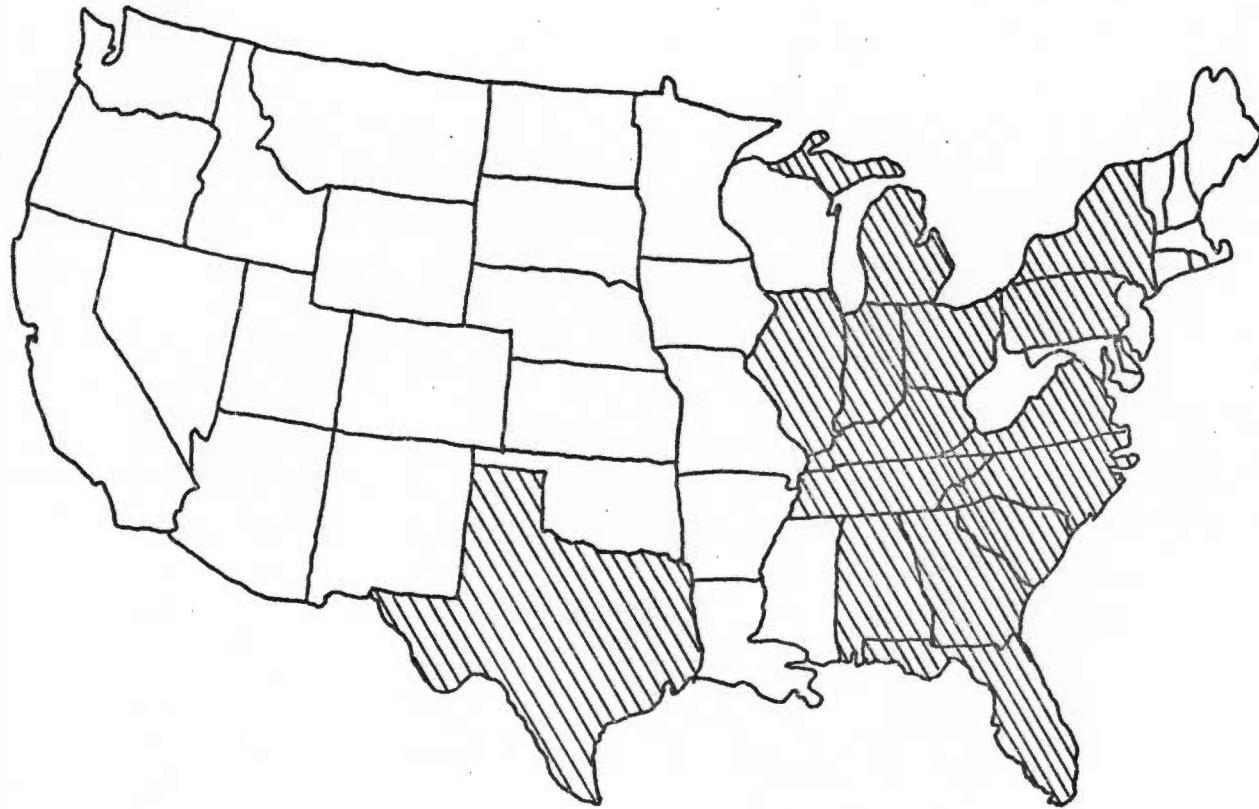


Figure 8. Market area for the Great Smoky Mountains National Park.

vacationers is evidenced by the fact that during 1970 and 1971 in the months of June, July and August, the traditional school vacation months, more than a million visitors were recorded each month.<sup>12</sup> In recent years the trend has been for visitation to increase at the rate of 4 to 7 percent annually.<sup>13</sup> If the visitation rate continues to climb, park authorities have suggested they will take measures to control the volume of visitors entering the park. Included in the suggestions for controlling visitors are the banning of automobiles, a tramway, a quota system,<sup>14</sup> and a circumferencial highway around the park excluding internal traffic.<sup>15</sup>

One of the factors contributing to the increasing growth in visitation is the climate. Within the park there are a variety of climatic conditions, each conducive to a particular type of activity. The following section will discuss the climate and its effect on activity in the park.

### Climate

The climate of an area is, to a large extent, the factor which determines the range of activities that can be undertaken. In

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<sup>12</sup>National Park Service, Summary of Monthly Public Use, Great Smoky ountains National Park, Calendar Year 1970 (Xeroxed monthly report).

<sup>13</sup>"Changing the National Park to Cope with People and Cars," pp. 52-55.

<sup>14</sup>Willard Yarbrough, "Limit on Smoky Visits Seen," The Knoxville News-Sentinel, March 26, 1972, Section A, p. 1.

<sup>15</sup>United States Department of the Interior, Transportation Concepts, pp. 38-39.

this regard the Great Smoky Mountains National Park is fortunate because it has a variety of climatic conditions which lend themselves well to a wide range of recreational activities.

Altitude variations. The variations in climatic conditions within the study area have been directly attributed to the abrupt changes found in the park.<sup>16</sup> For example, the altitude along the river valley where Gatlinburg is located is approximately 1,300 feet above sea level while the altitude atop Clingman's Dome eleven miles away is 6,642 feet above sea level. The variations in altitude are dramatic and bring about a number of changes including increased precipitation, temperature variations and differences in plant and animal life. To illustrate the significance of the altitude on conditions affecting life within the park, the average temperature in January atop a 6,000-foot peak in the Smokies is equivalent to that recorded in central Ohio, while the average July temperature is equivalent to that found along the southern edge of the Hudson Bay in Canada. As a general rule, the decrease in temperature which occurs with the increase in elevation averages about three degrees per 1,000 feet in the study area.<sup>17</sup>

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<sup>16</sup>United States Department of Commerce, Weather Bureau, in cooperation with the Great Smoky Mountains Natural History Association, Climatology of the United States No. 20-40, Climatological Summary.

<sup>17</sup>Ibid.

Precipitation patterns. The greatest level of precipitation occurs during the summer months in the form of showers and thunder-showers, whose formation is aided by the rough terrain existing within the park. In addition to the peak period of precipitation occurring in the summer, secondary peaks occur during the winter months and early spring.<sup>18</sup>

### Vegetation

One of the most beautiful aspects of the Smokies is the vegetation which abounds there. The lush foliage of the park is in sharp contrast to the concrete and asphalt we live with most of our lives. Not only are the mountains covered with foliage, there is also a wide range of plant life to be found there.

Species of plants. There are approximately 1,400 species of flowering plants within the Smokies.<sup>19</sup> In addition to the flowering plants, there are at least 2,400 species of nonflowering plants. Included in the nonflowering plants category are approximately 50 species of ferns or fern-allies, 330 species of mosses and liverworts, 230 lichens and 1,800 species of fungi.<sup>20</sup> The variety of plants

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<sup>18</sup>Ibid.

<sup>19</sup>United States Department of the Interior, National Park Service, Great Smoky Mountains National Park, North Carolina and Tennessee (United States Government Printing Office: 1971).

<sup>20</sup>King and Stupka, "Plants."

found in the park provides an excellent outdoor laboratory for those interested in botany as well as those merely searching for natural beauty.

Seasonal variations. The months of April and May begin the flowering season and are the months of greatest blooming for the wildflowers. Following the wildflowers, the Catawba rhododendron and laurel begin to reach their height from early to middle June, filling the mountain slopes with brilliant color. But perhaps the most spectacular and most heavily visited vegetation-related phenomenon is the fall color change of the hardwood trees which takes place in October.<sup>21</sup> The Smokies are famous for their panoramic views during the fall season and that fame is reflected in the ever increasing visitation rate during this period. Visitation on the weekends when the leaves are changing is among the highest recorded for any single weekend during the year including national holidays.<sup>22</sup>

### Animals

The animal life, like the vegetation, attracts many visitors to the Smokies. Possibly the most popular of the animals is the black bear who frequently raids garbage cans along the road and occasionally

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<sup>21</sup>Ibid.

<sup>22</sup>Summary of Monthly Public Use.

appears at picnic and camping areas to collect scraps of food discarded by the visitors. At present the bear population is estimated to be around 300. The bear population, somewhat larger a few years ago, was decreased in 1969 when a shortage of food forced them to leave the protection of the park causing many to be killed by hunters.<sup>23</sup>

In addition to the black bear, there are more than 50 species of fur-bearing animals, 200 kinds of birds, 80 kinds of reptiles and amphibians, and 80 kinds of fish.<sup>24</sup> Most of these animals are not observed by the average visitor since their habitats are the less populated areas of the park, but a great many can be observed by those who take the time to look.

The variety of plant and animal life along with the variations in climate combine to provide an environment that is conducive to the enjoyment of a variety of activities. The discussion which follows identifies some of these activities.

### Activities

One reason the Smokies is the nation's most visited park is the wide range of activities available for its visitors. Included in the activities available are hiking, photography, self-guided nature trails, visitor and interpretive centers, bird watching, sightseeing, visit to a working grain mill, living historic demonstration

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<sup>23</sup>Yarbrough, "Limit on Smoky Visits Seen."

<sup>24</sup>King and Stupka, "Animals."

areas, horseback riding, fishing, swimming, picnicking, camping, evening fireside programs, interpretive films, nature studies, and numerous vistas and overlooks.<sup>25</sup>

Not only is there a wide variety of activities continuously taking place in the park, the majority of these activities can be participated in with only a minimum amount of equipment, thereby making it possible for a large number of people to enjoy these activities.

Another important aspect of the activities in the study area is that they are highly compatible. The compatibility of activities is due in large part to their common dependency on the natural environment for their basis. Because of the importance of the natural environment, park officials have developed a policy of controlled expansion to protect the environment.<sup>26</sup> This policy recognizes the effects of change on the environment and attempts to minimize the adverse effects by keeping development to a minimum.

In contrast to the natural orientation of the study area, a number of commercial establishments have developed outside the park. These developments were designed to supplement the natural orientation of activities inside the park. The relationship between these external commercial developments and the internal developments will be discussed in the following section.

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<sup>25</sup>Interview, Sneddon.

<sup>26</sup>Willard Yarbrough, "Smoky Trail Showing Wear From Overuse," The Knoxville News-Sentinel, March 5, 1972, Section A, p. 1.

Description of the Area Adjacent to the  
Great Smoky Mountains National Park

A prime example of commercial development adjacent to the study area is Gatlinburg, Tennessee. At one time Gatlinburg was a lumbermill town, but with the creation of the Great Smoky Mountains National Park the lumber industry declined and a lucrative tourist trade began.<sup>27</sup> Present day Gatlinburg is a booming community with a number of commercial facilities to serve the tourists. Included in these facilities are motels, restaurants, gasoline stations, craft and gift shops, numerous novelty shops, guided tours, skiing, skylifts, and a variety of entertainment attractions. Gatlinburg is not only a tourist attraction, it is a community made up of families who live there all year. To meet the needs of these individuals Gatlinburg also provides an assortment of facilities including churches, schools, grocery stores, fire and police protection, medical care, banks, barber shops, attorneys, architects, electrical service, drycleaning, hardware and appliances, real estate offices and a radio station.<sup>28</sup>

In addition to the commercial developments listed above, Gatlinburg has developed into a center for camping enthusiasts, the

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<sup>27</sup>Tennessee Department of Conservation, "Great Smoky Mountains National Park," Tennessee Conservationist, January, 1972, p. 4.

<sup>28</sup>Gatlinburg Chamber of Commerce, Gatlinburg, Tennessee Directory (Gatlinburg: Chamber of Commerce, 1971), pp. 1-27.



majority of whom are visiting the Smokies.<sup>29</sup> It presently has eleven privately owned campgrounds with more than 1,300 sites.<sup>30</sup>

With the visitation to the Smokies continuously climbing, the outlook for additional camping development in Gatlinburg is promising.

As indicated by the foregoing discussion, Gatlinburg is a living community whose economy is primarily based on tourism. The ultimate success of the community rests with the attraction of the tourist dollar. An indication of the success of communities offering services like Gatlinburg's was revealed in a study which indicated that in 1969 tourists spent approximately \$173,800,000 in Tennessee communities adjacent to the park and \$17,623,000 in North Carolina communities adjacent to the park.<sup>31</sup>

One of the North Carolina communities that is a favorite tourist attraction is Cherokee. The town of Cherokee is located inside the Cherokee Reservation at the southern entrance to the park.

Like Gatlinburg, it has developed its commercial facilities in an attempt to attract the tourists visiting the Smokies. Although both Cherokee and Gatlinburg have the same basic source of revenue, Cherokee has not enjoyed the level of financial success attained

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<sup>29</sup>Anne Hart, "Tourists Spent \$93 Million in Knoxville Area in 1971," The Knoxville News-Sentinel, March 12, 1972, Section A, p. 8.

<sup>30</sup>Gatlinburg Chamber of Commerce, Gatlinburg, Tennessee Directory, pp. 13-14.

<sup>31</sup>United States Department of the Interior, Transportation Concepts, p. 46.

by Gatlinburg. For example, 80 percent of the tourists coming into east Tennessee visit Gatlinburg compared to 51 percent for Cherokee.<sup>32</sup> In addition to the 29 percent difference in visitation, a recent study revealed that tourists spend only 10 percent as much in North Carolina communities adjacent to the park as they do in Tennessee communities adjacent to the park.<sup>33</sup>

The types of activities available in Cherokee are essentially the same as those found in Gatlinburg and include motels, fast-service food chains, restaurants, numerous souvenir and gift shops, craft shops, an Indian village and camping facilities. Cherokee is also a living community and as such has all the facilities to support that community including fire and police protection, schools, churches and medical care.

Cherokee and Gatlinburg are positioned at the two main entrances to the Great Smoky Mountains National Park and by virtue of their location have the best chance at the tourist dollar attracted to the park. In spite of their dominant positions, many tourists spend only a fraction of their allotted money in Gatlinburg and Cherokee. For that reason many other communities have found it profitable to supply camping and tourist-related facilities to take advantage of the tourists drawn to the park. Towns included in this category are

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<sup>32</sup>Hart, "Tourists Spent \$93 Million in Knoxville Area in 1971."

<sup>33</sup>United States Department of the Interior, Transportation Concepts, p. 60.

Bryson City, Fontana, Tapoco, Dellwood, and Maggie, North Carolina; and Walland, Kinzel Springs, Townsend, Wear Cove, Pigeon Forge, Pittman Center, and Cosby, Tennessee. These communities do not necessarily depend on tourism for their livelihood, rather they have developed recreational facilities as a supplement to their normal economy.<sup>34</sup>

In addition to the facilities available in the communities surrounding the study area, the Cherokee National Forest is adjacent to the park at two points and provides a number of complementing public facilities.<sup>35</sup> The forest is comprised of approximately 936 square miles of which 934 are timberland and 2 square miles are used for land utilization projects.<sup>36</sup>

The physical characteristics of the forest are similar to those of the study area, largely wilderness, mountainous with a wide range of altitudes. Because of the similarities in physical characteristics, many of the activities enjoyed in the study area are also available in the Cherokee National Forest. Those available include photography, bird watching, hiking, swimming, fishing, hunting, picnicking, nature studies, winter sports and camping.<sup>37</sup> Despite

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<sup>34</sup>"Visitors Head Home," The Knoxville News-Sentinel, April 3, 1972, p. 6.

<sup>35</sup>Forest Service, United States Department of Agriculture, Outdoor Recreation In The National Forests, Agriculture Information Bulletin No. 301 (Washington, D. C.: United States Government Printing Office, 1965), p. 90.

<sup>36</sup>Ibid., p. 92.

<sup>37</sup>Ibid.

the variety of activities available in the forest, visitation is considerably less than in the study area.<sup>38</sup> The fact that the Cherokee National Forest is capable of supporting a higher level of participation raises the possibility of developing this area to complement the facilities already existing in the Smokies. A further discussion of this and other similar proposals will be discussed later in the thesis.

### Future Potential

The potential for further campground development along the periphery of the park is quite good at this time. The campgrounds around the park, for example, are filled to capacity early in the summer months and do not begin to experience vacancies until after the winter weather has set in.<sup>39</sup> Further evidence of the need for additional facilities is the fact that expansion of existing campgrounds to accommodate the swelling number of campers has been a continuous process. In addition to the expansion to accommodate the summer influx of campers, many of the national campground chains are promoting winter camping as an alternative to the crowds in summer.<sup>40</sup> Despite the phenomenal growth in camping enthusiasts, it is fast reaching the point where quality campgrounds will be required to maintain a competitive business. For example, despite the need for more campgrounds,

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<sup>38</sup>Ibid.

<sup>39</sup>"Visitors Head Home."

<sup>40</sup>Behme, "A Crisis in Our Campgrounds," p. 16.

developers are finding it necessary to include self-service laundries, swimming pools and even organized entertainment to attract family campers.<sup>41</sup> In addition to the added luxuries being required, campgrounds are faced with the problem of providing increased security for their guests. The need for stronger security measures has been dramatically demonstrated by the increasing levels of vandalism in the campgrounds.<sup>42</sup> There does exist a need for additional camping facilities outside the park, but developers should be aware of the quality of operation that will be required to maintain a profitable and continuous business.

To better understand the potential for development, it is necessary to have a knowledge of the physical characteristics of the area to be developed.

The geographical region in which the park is located is known as the Southern Appalachians-Unaka Mountain Region.<sup>43</sup> Throughout this region the physical characteristics are generally the same, mountainous with heavy vegetation and elevations ranging from 1,200 to more than 6,600 feet above sea level.<sup>44</sup>

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<sup>41</sup>Colby, "The Big Change in Camping," p. 13.

<sup>42</sup>"Crackdown Needed on Park Hoodlums," p. A-12.

<sup>43</sup>Tennessee Department of Conservation, Division of Planning and Development, Tennessee Outdoor Recreation Plan, Executive Summary, 1969 (Nashville: Tennessee Department of Conservation, 1970), pp. 6-7.

<sup>44</sup>Ibid.

The Great Smoky Mountains National Park occupies a dominant position in this region but outside the park boundaries there still exists a considerable amount of land available for development. The same natural beauty that attracts tourists and campers to the park can also be found in the undeveloped areas adjacent to the park. Through controlled development of this area the pressures of increased visitation which threatens the natural beauty of the park can be substantially reduced.<sup>45</sup> The specific use of this undeveloped land adjacent to the park will be discussed in more detail in Chapter V.

Having reviewed briefly the existing commercial development outside the park and the potential for further expansion of that development, we will now discuss the camping facilities within the study area.

#### Developed Camping in the Great Smoky Mountains National Park

Thus far the author has tried to develop a general overview of the study area for the reader. This was attempted through a discussion of the physiological characteristics of the area, identification of the market area and a review of the recreational opportunities which exist inside as well as outside the study area. With the overview complete the discussion is now concentrated on a review of

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<sup>45</sup>Interview, Sneddon.

the camping facilities within the Great Smoky Mountains National Park. To fully understand the problems associated with camping in the park it is necessary to have a knowledge of the existing camping facilities. To help develop this understanding the author has identified and classified all existing sites in relation to the camping function they perform. To begin the discussion the following is a review of the physical growth of camping in the study area.

### History

The physical activity of camping in the study area can be traced back to man's initial presence in this area. Among the first documented campers were the Indians and the fur traders, followed by the settlers and the professional loggers. The establishment of the park brought about another kind of camper, the recreationalist, who first saw camping as a form of shelter for himself and his family while visiting the park.

In the early period of the park's existence those visiting saw it as a final destination at which point they would seek overnight accommodations. Because of the lack of such accommodations outside the park, a number of internal campgrounds were developed. With today's road system, rapid modes of transportation and numerous motel and commercial camping facilities, park officials feel the physical need for internal accommodations to house park visitors no longer exists. Typical of the changing nature of camping in the Great Smoky Mountains National Park is the change of attitude reflected in

statements by park officials. For example, park officials say that the function of the internal camping facilities has changed so radically from its original purpose that there probably would not be any internal campgrounds allowed in the Great Smoky Mountains National Park if the existing facilities were not already constructed.<sup>46</sup>

The sites constructed as part of the original park development were primitive in nature and were constructed only because no other accommodations were available for park visitors. The transition of camping from a necessity for park visitors to an expanding form of recreation has resulted in the alteration of the original campground design. The largest single factor influencing the change in campground design has been the growing popularity of the trailer as a camping vehicle. The sites that were originally constructed to accommodate tents had to be enlarged and new roads constructed to handle the heavier, bulkier trailers. Not only has the transition in camping brought about changes in campground design, it has also had an impact on traffic control and park facilities.<sup>47</sup> The problems arising out of the increasing number of campers attempting to use park facilities will be discussed later as part of the evaluation process in Chapter V. As for now, the discussion will shift to an identification of the different kinds of camping facilities available in the area.

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<sup>46</sup>Ibid.

<sup>47</sup>"Wilderness Campers in Smokies Put on Quota."



### Types of Camping Accommodations

The existing park facilities provide camping opportunities for three types of camping enthusiasts--the wilderness camper, the primitive camper and the trailer camper. Each of these facilities has its own unique characteristics and tends to attract a particular type of camper. To help develop an understanding of the characteristics of the camping facilities within the study area the remainder of the chapter will be dedicated to a review of these facilities.

Wilderness campsites. At present the park has forty-two designated wilderness camping sites.<sup>48</sup> An additional thirteen sites are connected with the Appalachian Trail.<sup>49</sup> "The wilderness campsites are accessible only by foot trails, horse trails, or by boat in the Fontana Lake section of the park."<sup>50</sup> Those individuals wishing to participate in this type of camping should be prepared to enjoy their camping experience without the aid of any campsite facilities. Policing and litter pickup are limited to once a week because of the lack of park personnel and registration is in the form of a fire permit issued at the two main visitor centers. The regulations governing the use of the wilderness campsites are as follows:

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<sup>48</sup>National Park Service, Great Smoky Mountains National Park, Tennessee-North Carolina, Appalachian Trail Camping and Fishing.

<sup>49</sup>Ibid.

<sup>50</sup>Ibid.

1. A campfire permit is required for trailside camping.
2. Firearms and fireworks are prohibited.
3. Do not cut or deface in any way any green or living tree or shrub or any natural feature. Use only dead wood for fires.
4. Burn all combustible refuse in the camp fireplace. Nonburnables must be packed out to the nearest garbage can.
5. When pit toilets are provided, use them in a sanitary manner; if none are provided, then be sanitary. Emulate the cat!
6. Dismantle any lean-tos, benches, tables, tent poles, etc., that you may erect, before you break camp.
7. All wildlife is given full protection. Protection of personal property from wildlife is the camper's responsibility, and must be accomplished without injury or molestation to the park's wildlife.
8. Hitch horses to hitching racks.
9. Use of Appalachian Trail shelters is limited to one night only.
10. Dogs are not allowed in trail campsites.<sup>51</sup>

Primitive campsites. The second type of camping facility available to campers is the primitive campground. At present there are four of these campgrounds and each is equipped with fireplaces,

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<sup>51</sup>United States Department of the Interior, National Park Service, Trail Campsite Regulations.

tables, and a pit toilet.<sup>52</sup> The primitive campgrounds include Abrams Creek, Big Creek, Cataloochee, and Greenbrier. The primitive areas, like the wilderness camping areas, do not provide organized recreational activities within the campground. The primitive areas do, however, have a ranger on duty who provides regular patrolled inspections and each campground has daily litter collection. The regulations which govern the use of these areas are as follows:

1. Register on arrival and check out on departure.
2. Tents and trailers left without occupancy 48 hours will be removed and stored at the owner's expense.
3. Keep your campsite neat and leave it clean for the camper who follows you. Burn all combustible rubbish in the fireplace. Place garbage in cans.
4. Comfort stations should be used in a sanitary manner. Wash dishes at campsite. Empty dishwater in the slop sinks.
5. Keep dogs or pets on a leash or confined to prevent their running free. Owners of vicious or excessively noisy animals will be requested to remove the animal from the campground.
6. Be particularly careful not to impair, deface, or destroy the trees, flowers, shrubs, buildings, signs or other facilities in the park. Do not drive nails in trees. Park cars and trailers in designated areas.
7. Firearms and fireworks are prohibited in the park.

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<sup>52</sup>Gatlinburg Chamber of Commerce, Accommodations and Camping Facilities, "Primitive Campgrounds."

8. Regulations prohibit feeding or molesting bears. Bears are dangerous and unpredictable.

9. Mini-bikes are prohibited.<sup>53</sup>

Modern campsites. The third type of camping facility is the modern campground. At present there are seven of these campgrounds in the study area.<sup>54</sup> These sites provide water, picnic tables, fireplaces, comfort stations, and tent and trailer parking spaces. There are no showers or electrical hookups for the trailers, sleeping shelters are not provided and campers must furnish their own equipment.<sup>55</sup> Disposal stations for trailer holding tanks and accommodations for replenishing water supplies are located at only four points in the park--Smokemont, Cosby, Cades Cove Campgrounds, and Sugarland Visitors' Station.

The modern campgrounds also have a ranger on duty who makes regular patrols of the campgrounds and garbage collection is on a daily basis. The registration for these campgrounds takes place at the campground on a first come, first served basis. The same rules and regulations which apply to the primitive camping areas also apply here and, like the wilderness and primitive areas, no provisions have been made for organized recreation in the camping area.

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<sup>53</sup>Gatlinburg Chamber of Commerce, Accommodations and Camping Facilities, "Developed Campgrounds."

<sup>54</sup>United States Department of the Interior, Great Smoky Mountains National Park, North Carolina and Tennessee.

<sup>55</sup>Gatlinburg Chamber of Commerce, "Developed Campgrounds."

Having reviewed the existing camping facilities, Chapter IV will discuss the camping model against which these facilities will be measured.

## CHAPTER IV

### CAMPGROUND MODEL

In Chapter IV the author will attempt to develop a series of models against which the facilities in the Great Smoky Mountains National Park can be evaluated. These models are based on information gathered through correspondence, interviews, books, magazines, and newspaper accounts. It should be pointed out at this time that the models to be developed are in no way intended to be the final answer to campground problems. The purpose of the models is to describe in general terms the conditions that would optimize the enjoyment of the camping experience as identified by the campers.

The format the models will follow is a three-stage approach discussing each of the three types of camping facilities--wilderness, primitive, and modern--separately. The discussion will be of a general nature and will review elements which should be incorporated in each of the three types of campgrounds. The formal arrangement or final design of the recommended model elements will not be discussed in this thesis inasmuch as the layout of each campground will vary slightly according to physical and administrative limitations.

To guide the structure of the models, the author has developed a set of assumptions dealing with the activity of camping in general. The assumptions, like the models, are based on the findings of the research performed for the thesis. The assumptions upon which the models were developed are as follows:

1. Camping is a growing industry.<sup>1</sup>
2. The equipment used in camping is becoming more sophisticated every year.<sup>2</sup>
3. Campgrounds should provide a pleasant and relaxing atmosphere.<sup>3</sup>
4. Campgrounds should be designed to provide an alternative to the urban pace of life.<sup>4</sup>
5. Campgrounds should provide security for occupants.<sup>5</sup>
6. Campers vary in types and require different types of facilities.<sup>6</sup>

Having identified the foundation upon which the models were formulated, the remainder of the chapter will be devoted to a discussion of the individual camping models.

### Wilderness Camping

The wilderness campers are the most self-sufficient of the three types of campers to be discussed in this chapter.<sup>7</sup> Their

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<sup>1</sup>Norman Strung, "Everybody's Going Camping," The Americana Annual, 1972 (United States: Rand McNally & Company, 1972), p. 56.

<sup>2</sup>"Camping Spree in America," p. 41.

<sup>3</sup>Interview with camper, Melvin Garner, August 7, 1971.

<sup>4</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 174.

<sup>5</sup>Opre, "Campgrounds Hit By Rowdies," p. A-1.

<sup>6</sup>Colby, "The Big Change in Camping," p. 12.

<sup>7</sup>Ibid.

self-sufficiency allows them to engage in the activity of camping with only a minimum amount of facilities required to satisfy their needs. They are self-sustaining in the sense that they carry sufficient food and equipment to sustain themselves during the entire camping period. The only physical requirements is a clearing large enough to establish a campsite and a system of trails to reach these areas. The lack of a dependency on man-made facilities characterizes the individualistic nature of these campers in their search for the solitude of a natural environment. These individuals depend on their own resourcefulness to enjoy the challenges of the backwoods.<sup>8</sup>

There are two categories of wilderness campers that will be discussed in this section--the tent camper and the trailer camper. Both of these individuals seek the same relationship with the environment but each utilizes different equipment to achieve his goal. The fact that they are both seeking the same general type of experience means there are a number of similarities in the areas developed for each of these categories of wilderness camping. The requirements which are compatible will be discussed first, after which tent and trailer wilderness camping will be reviewed in light of the characteristics which will optimize the chances for each to achieve a meaningful camping experience.

The activity of wilderness camping has certain basic characteristics that are fundamental to enjoyment of the camping experience for

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<sup>8</sup>Behme, "A Crisis in Our Campgrounds," p. 131.



all participants. The elements that should be available in all wilderness camping areas include:

1. Designate an area for wilderness camping.
2. Restrict use levels and length of stay.
3. Provide a system of rules and regulations to govern the use of the area.
4. Provide a system of patrolling to enforce the rules and regulations.

The designation of a special area for wilderness camping is an important element to be considered when trying to maintain the natural character of an area for a specific use pattern.<sup>9</sup> If the wilderness area were open for general use, the natural characteristics of the area would soon be destroyed. The isolation of the wilderness camping area from the other activity patterns should also include the separation of the two facets of wilderness camping--tent and trailer camping.

Another element of the wilderness camping experience which must be regulated is the number of campers allowed into a particular area. If too few campers are allowed into the wilderness area, the preservation of the environment is achieved through an inadequate utilization of land. If, on the other hand, an unlimited number of campers are allowed to enter the area, the need for camping space may be satisfied but the wilderness character of the area will be destroyed

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<sup>9</sup>Ibid.

and the enjoyment of wilderness camping will be gone.<sup>10</sup> To safeguard against this eventuality, a registration and quota system should be established. The basis for the quota should be an environmental study that would determine the level of use which the particular area could sustain without causing deterioration to the natural environment. At no time should the number of campers in the area exceed the area's determined design capacity.

As a part of the use quota, a designated length of stay should also be initiated. It is important that no single individual or group of individuals be allowed to monopolize the limited facilities. The length of stay permitted each camper should be determined as a function of the demand for camping accommodations in a particular wilderness area and the designed capacity of the area. In addition to demand, an allowance should be made for size of the area and the destination of the camper, giving him time to reach his destination, camp for a designated period of time, and make the return trip. Additional control could be attached to the length of stay regulation by assigning all campers to a specific camping area and requiring them to use only these areas.<sup>11</sup> If more than one wilderness area exists, the registration system should include a safeguard against campers

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<sup>10</sup>John W. Anderson, Jr., "Hiker Deplores Conditions He Finds on Appalachian Trail," The Knoxville News-Sentinel, March 11, 1972, Section A, p. 4.

<sup>11</sup>Interview with Assistant Park Ranger Edward Widmer, Great Smoky Mountains National Park, April 12, 1972.

who move from one area to another, occupying sites that might otherwise be used by campers who are trying to get into the wilderness areas for the first time.

The density of use and the length of stay are important factors, but just as important is the manner in which the area is utilized by the campers. Disregard for the natural environment or for other campers could lead to a rapid destruction of the wilderness characteristics of the area.<sup>12</sup> To protect against the misuse of the wilderness area a definite set of regulations and penalties should be established for these areas and a copy of these rules supplied to each camper.<sup>13</sup> The regulations should include such information as minimum requirements for establishing and extinguishing campfires, disposal of litter, sanitation practices, minimum procedure to be followed in breaking camp, registration and site assignments, limitations on permissible activities, and a list of penalties for violations.

As a part of the regulation all campers should be required to meet minimum equipment standards. By requiring a minimum amount of equipment, it would tend to insure that the camping experience can be successfully completed without imposing on other campers or unnecessarily drawing upon the natural environment.<sup>14</sup> The minimum equipment

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<sup>12</sup>Behme, "A Crisis in Our Campgrounds," p. 131.

<sup>13</sup>"Smokies Proposal--Hike Permit Planned for Park," The Knoxville News-Sentinel, April 27, 1972, Section A, p. 2.

<sup>14</sup>Interview, Widmer.

requirement is important during the summer, but as winter arrives in the mountains the equipment check becomes essential. Unless campers are sufficiently prepared for the severe winter weather, the results could be extremely unpleasant or even fatal.

All of the conditions discussed thus far are dependent on some type of control network to insure compliance. The key to the control system in the wilderness area has to be voluntary compliance since it would not be practical to saturate the wilderness area with patrols to force compliance.<sup>15</sup> The most efficient system would, therefore, be a combination of instruction to campers to promote voluntary compliance and an official patrolling system that checked each designated camping area at least once a week. The wilderness patrol should serve a multiple function including patrolling for regulation violators, administering first aid, making trail maintenance checks, surveying effects of visitation on vegetation, and checking for sanitation and litter problems. The fact that there is active patrolling of the wilderness area should tend to discourage some of the deliberate rule violations as well as provide a sense of security for those using the area.

The discussion so far has centered around the general elements of the wilderness model. The remainder of the wilderness model will be devoted to a review of elements related to the separate activities of tent and trailer wilderness camping.

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<sup>15</sup>Interview, Sneddon.

### Wilderness Tent Camping

In the field of camping, the wilderness campers are considered to be the most self-sufficient group of campers. The tent camper depends on no one outside his immediate traveling companions while on the camping trip. The equipment and supplies are all packed in by means of a backpack and no facilities are available for resupply until the campers leave the wilderness area.

The wilderness tent camper is not only the most self-sufficient camper, he is also the most difficult to control. The fact that he carries everything he needs for camping on his back gives him a considerable degree of mobility and affords him the opportunity of entering the wilderness area at almost any point.<sup>16</sup> As a result of past failures to control the ingress and egress of these campers, a number of problems have arisen including sanitation, litter, destruction of natural vegetation,<sup>17</sup> and most serious, poaching.<sup>18</sup> To help control these problems and to promote the enjoyment of the wilderness camping experience, the following recommendations are made in addition to those reviewed earlier.

1. Provide a system of hiking trails to enhance the control of movement in the wilderness area.

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<sup>16</sup>Interview, Widmer.

<sup>17</sup>Interview with Ranger Richard Zani, Great Smoky Mountains National Park, April 3, 1972.

<sup>18</sup>Interview, Widmer.

2. Establish campsites along the trail to be used by all wilderness campers.

A system of trails would mean that authorities would have some control over the movement in the area. Without designated trails the movement within the area would be haphazard and natural beauty could be destroyed by continuous random movement. The control of movement also provides a better means to check the campers for compliance with the permits and use regulations required of all campers. In addition to control benefits the network of trails affords an opportunity for more systematic evacuation of individuals should an emergency arise.

In conjunction with the trail network a system of trailside campsites should be designated. The designation of authorized campsites is a necessary first step in the assignment of campers to particular areas of the wilderness preserve. The identification of individual sites also adds to the control of movement and provides a medium through which use patterns and levels can be measured. In addition to the use factors, the designation of campsites provides a means through which maintenance related problems can be handled with greater efficiency since the areas of use will be known.

#### Wilderness Trailer Camping

Next to the wilderness tent camper the wilderness trailer camper is the most self-sufficient. The main difference between the

tent and trailer camper is the method of arriving at the campsite and the type of shelter utilized upon arrival. Trailer campers are capable of carrying a greater volume of supplies than the tent campers but once the camping area has been reached, both are self-sustaining units. To enhance the possibility of a successful camping experience, the following recommendations are made in addition to the general elements discussed earlier.

1. A system of roads should provide access to the camping area.
2. Establish campsites adjacent to and in connection with the road network.
3. Develop a system of reservations.

The system of roads, like the network of trails for the tent campers, provides access as well as control. The roads should be constructed to handle jeep or pickup truck traffic and require only a minimum amount of maintenance. The roads need not be paved since they are only to be used by wilderness campers with jeeps or pickup trucks, but they should be graded and graveled to help maintain the roadbed. In the development of the road network for the campers, serious consideration should be given to the volume of camper traffic the wilderness area can handle without having a detrimental effect on the environment, and then control for this capacity.

As part of the road network, park authorities should develop specific wilderness campsites. These campsites would in turn be assigned to campers for use during their stay in the wilderness camping

area. The development of designated sites would provide a means of controlling use and allow for the development of a rotation system and rehabilitation plan to protect the vegetation. The use of a rotation system is a common practice in high use areas. Its function is to help prevent the destruction of the campsites commonly found in areas where random continuous camping is allowed.

In connection with the development of authorized and assigned campsites, a system of reservations should also be established. The establishment of this system tends to eliminate much of the confusion associated with the excess of campers seeking admittance into a restricted area. Under this system advance plans could be made with assurance that accommodations would be available upon arrival. The advance notice would also provide a written record of demand, necessary for planning the accurate allocation of resources such as staff, budget requests, and future development plans.

The next level of camper to be reviewed will be the primitive camper. In this model, as in that of the wilderness camper, the general elements of the model will be discussed first. After the general discussion the model will be reviewed in the context of elements peculiar to tent and trailer campers.

### Primitive Camping

The primitive camper is the middle level of camper, he is a cross between the purist wilderness camper and the more sophisticated modern camper with all his paraphernalia. The primitive camper appears



to be an individual who enjoys being in the out-of-doors but feels little compulsion to hike five or ten miles into the backwoods to get there. He is usually a hunter, fisherman or even family man who looks at camping as a way to get away from things for awhile and still retain some of the conveniences of modern society. To protect the environment in which this type of camping takes place and to promote the enjoyment of the camping experience, the following recommendations are made.

1. Set aside a designated area for primitive camping.
2. Provide a system of access routes.
3. Provide sanitation facilities.
4. Provide garbage collection.
5. Provide running water.
6. Provide fireplaces and picnic tables.
7. Enforce limitations on number of campers.
8. Provide individualized campsites.

As noted earlier, the designation of an area for a specific type of camping experience is very important. If the different types of camping are allowed to mix or if the general public is allowed to make random use of the camping area, the enjoyment of the camping experience will be diminished.<sup>19</sup> The exclusion of the campgrounds from the overall program of activities offers the primitive camper the opportunity to relax and get away from the general public and its assorted interests.

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<sup>19</sup>Anderson, "Hiker Deplores Conditions He Finds on Appalachian Trail."

Another element of this model that was also a part of the wilderness model is the need for access routes. Based on observations, interviews and personal experience, those individuals indulging in primitive camping generally arrive at the campground in some type of motorized vehicle. The access routes, therefore, should be roadways constructed to serve a large volume of assorted vehicles under a variety of weather conditions. In addition to being an all weather road, ideally the access points should allow the campers to avoid the main traffic arteries. Since the primitive camper does not necessarily bring all his provisions with him, he may find it necessary to leave the campground a number of times during his stay, thereby adding to the traffic on the already crowded traffic network.<sup>20</sup>

Because of the nature of the primitive camper, the campgrounds should offer more conveniences than the wilderness campgrounds. One of the most important services needed in the primitive campground is some form of sanitary facility. These sanitation facilities need not be expensive or even permanently fixed to the sites. An example of such a device is the chemical comfort station which can be easily installed and is relatively inexpensive to maintain. Permanent sanitation facilities are not recommended since the level of use in the primitive area should not be allowed to reach a level where it would require the volume of treatment associated with permanent facilities.

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<sup>20</sup>Interview with Ranger B. C. Messer, Traffic Control, Great Smoky Mountains National Park, June 13, 1972.

Primitive campgrounds should also provide running water. The water facilities for each campground should be centrally located, not at every site, and both hot and cold running water are not necessary since shower facilities are not provided.

In addition to the water and sanitation facilities available for the campground, each campsite should have its own grill and picnic table. By providing each site with these facilities, the camper can gain an additional feeling of independence and consequently enhance his camping experience. The grill and table at each site also help identify a territorial range of the campsite and offers the camping party a focal point around which to gather.

Garbage disposal and collection is a serious problem in the wilderness areas because of the limited access, but in the primitive campgrounds the problem is less severe since the access is good. Daily collection of litter and garbage stored in designated receptacles should be undertaken in all primitive areas to prevent possible health hazards. The primitive campgrounds accumulate garbage more rapidly than the wilderness campgrounds because they are designed to accommodate a greater number of individual campers in a relatively concentrated area. As a result of the greater volume of trash the attraction of rodents and disease carrying insects is enhanced, making the removal of the trash an important element.

The fact that primitive campgrounds require a closer relationship between campers means that some safeguards must be taken to

insure the enjoyment of the camping experience. One method of enhancing the chances for a successful and enjoyable camping experience is to limit the number of individuals using each of the campgrounds. As noted earlier, the idea of limited use is based on the demand for camping accommodations, available campsites and the capacity of those sites. The demand should also be reflected in time limitations placed on each camper so that the campgrounds cannot be monopolized by individuals or groups of campers. The use of a reservation system and assignment of sites should be incorporated into the primitive campground system. This provides control as well as the data which is necessary for determining future patterns of development.

In the designation and construction of the individual campsites the design should take advantage of the existing terrain and natural vegetation to provide a reasonable distance between sites. The reasonableness of the distance will vary from one campground to another, but the guarantee of privacy for each site should be the permanent measure of reasonableness. In an atmosphere of wall to wall tents and trailers, common in many campgrounds today,<sup>21</sup> the environment of camping changes from a pleasant outdoor experience to a camping slum with all its ramifications. Included in these ramifications are pollution from campfires, increased littering and crime, a decline in the camping experience, and deterioration of facilities.<sup>22</sup>

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<sup>21</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?," p. 170.

<sup>22</sup>Ibid.

The key to real success in a primitive campground is a combination of all the factors mentioned thus far plus a set of regulations to govern activities and an enforcing body. Regulations covering all phases of the camping experience should be firmly established with a regular system of controls to insure compliance. The job of patrolling and controlling for irregularities in primitive campground regulations are considerably easier than in the wilderness areas since the road network leading to and from the campground is the only means of access. One method of control commonly used is to establish an entrance station where registration and checkout could be handled and sites assigned. This type of operation would also tend to keep unwanted outside elements from adversely affecting the campground occupants.

The only real differences between the primitive campground for tent and trailer is that the trailer campgrounds and sites should be made to handle the heavy vehicular movements without causing erosion or excessive deterioration to the site. Trailer campgrounds should also make provisions for the discharge of trailer holding tank waste, either on the premises or in a location convenient to all primitive trailer campgrounds.

#### Modern Camping

The fastest growing type of camping is modern camping. These campers like to be in an outdoor setting with all the conveniences of

home.<sup>23</sup> The majority of these individuals are vacationers who see camping as an economical alternative to motels and restaurants.<sup>24</sup> They are usually in transit from one point to another and only stay in a given campground for a short period of time. The high turnover rate plus the fact that the number of people wanting to camp increases every year has greatly encouraged the development of the commercial campground facilities.<sup>25</sup> To satisfy the needs of these campers, the following recommended elements should be found in the modern campground for both tent and trailer campers.

1. Designated camping areas
2. Paved road system
3. Designated sites
4. Limits on number of users and reservation system
5. Shower facilities
6. Sanitation facilities
7. Garbage collection
8. Running water and electricity to each site
9. Picnic table and grill for each site
10. Campground store
11. Controlled movement of campers to other parts of the park.
12. Set of rules and regulations to govern the use of the

campground.

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<sup>23</sup>Recreational Vehicle Institute, Recreational Vehicle Owner Profile (Chicago: Trailer Topics Magazine, 1969), p. 6.

<sup>24</sup>Facts and Trends, "Recreational Vehicle Rentals," p. 12.

<sup>25</sup>Colby, "The Big Change in Camping," p. 16.

The idea of designated camping areas for the particular type of camping has been discussed throughout this model. It is, however, of considerable importance in relation to the modern campground. The modern campers are not only more numerous than other types of campers, they generally carry a larger variety of paraphernalia with them.<sup>26</sup> The large numbers of this type of camper coupled with the paraphernalia they bring with them would destroy the camping experience for the primitive or wilderness camper. The fact that a greater amount of support facilities are desired by the modern campers than either of the other two types of campers also makes it desirable to separate the modern camper from the other campers.

All modern campers by definition arrive at the campgrounds by some means of motorized vehicle. The method of arrival makes it important to provide a road system within the campground that can withstand the high volume of use by heavy vehicles. Since the road network is the only means of arrival to the modern campground, it not only serves as a means of access, it also provides a method of control. The entrance and exit from the campground should be funneled through a single entrance station so that fees can be collected, registration authorized, and information about the facilities distributed.

The activity of camping, particularly modern camping, is growing at a fantastic rate and the equipment used in this type of camping is becoming larger and more sophisticated every year.<sup>27</sup> The

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<sup>26</sup>"Changing the National Park to Cope with People and Cars," p. 52.

<sup>27</sup>Facts and Trends, "Industrial Problems," p. 15.

size of the trailers and camping vehicles not only affects the campground facilities, it has begun to affect external and internal traffic flow around the campground. To alleviate some of the traffic congestion those individuals going to the modern campgrounds should be routed in such a way that they can avoid as much of the main park traffic as possible.

As noted earlier, the modern campers are comprised largely of individuals on a vacation and once they have arrived at their destination they are interested in visiting the various points of interest in the immediate area. The movement of the modern campers and their vehicles in and out of the campgrounds adds to the traffic congestion which already exists on park arteries. The elimination of as much of this type of movement as possible would greatly enhance the general traffic flow in the park. One possibility would be to provide a shuttle system between the campgrounds and the various points of interest in the area. This would have the effect of helping to alleviate traffic congestion by reducing the number of vehicles on the limited road network, while providing a service for the campers.

The ability to accommodate the growing number of campers desiring entrance into the campground is a common problem at almost every campground operation.<sup>28</sup> If campers were allowed to enter without regard to numbers, then the facilities will soon be unfit to use.<sup>29</sup> To help determine the optimum level of use, each campground

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<sup>28</sup>Behme, "A Crisis in Our Campgrounds," p. 130.

<sup>29</sup>Interview, Sneddon.



should be divided into individualized sites to the extent that existing terrain, vegetation patterns, and physical considerations will permit. Once the optimum number of sites has been established, the number of campers allowed into the campground at any one time should not exceed that number. Once the limit has been reached campers seeking admittance should be sent to other campgrounds not yet filled. One technique for controlling use patterns in campgrounds, particularly in respect to the modern campgrounds, is the reservation system. The reservation system will permit campers to know in advance if they will have accommodations upon arrival. This will also eliminate much of the unnecessary movement on major traffic arteries only to find that no space is available. The reservation system also allows the park to coordinate its staff and facilities to accommodate the periods of greatest demand.

Once the modern camper has secured a site in one of the campgrounds, he should have certain facilities available for his use. Among the facilities which should be included in the campground are sanitation facilities, showers, garbage collection, picnic tables and grills, and a campstore. The sanitation facilities should not only include the normal restrooms but should also encompass the on-site treatment of sewage for each campground or an equivalently effective system such as an underground pipeline to carry waste to a central location for treatment.

Another service which has become an important part of the modern campground is the campstore. At the campstore the modern camper should be able to find the basic camping supplies needed to sustain him during his stay. These stores should generally carry an assortment of camping equipment and canned goods as well as a variety of staple food products. By providing this type of service within the campground the camper is less likely to leave the area for his supplies, thus reducing potential traffic congestion.

Another service which should be available in modern campgrounds is the supply of water and electricity. With the modern camper equipped in all the conveniences of a motel on wheels, provisions should be made for him to utilize the equipment he has purchased. In recent years the demand for more electricity and water for every site in all modern campgrounds has been expressed by an increasing number of campers. The reason for this rapid rise in the demand for electrical connections in modern campgrounds has resulted from the tremendous growth in the sophistication of camping vehicles which has been encouraged by the large number of people participating in the sport.

Finally, the modern campground should be operated on the basis of an established set of rules and regulations discussed for wilderness and primitive areas, the rules regulating use of modern campgrounds should cover all forms of activity in the campground. As part of the regulatory system, there must also be a system of

enforcement to assure compliance. The level and method of enforcing the regulations of an area will determine to a large extent the degree of success the area will have in providing an atmosphere conducive to camping.

### Tent Camping

The modern tent camper should have, in addition to the above mentioned elements, a separate campground from the modern trailer campers. The two types of modern campers are compatible in the general facility requirements but they require separation to optimize the camping experience. The modern tent camper tends to seek more of a closeness to nature than the trailer camper even though they have many of the same conveniences. In order to better accommodate the tent campers they should be provided with a different type of site than the trailer camper. Tent campers should have a sand like base upon which to pitch their tents to provide the comfort necessary to optimize the camping experience. The U. S. Forest Service, for example, has constructed in some of their facilities a type of enclosed sand palet upon which campers may place their tents.<sup>30</sup> This type of arrangement provides an excellent place to pitch a tent, in addition to aiding in the maintenance of such areas by having a designated tentsite for each campsite.

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<sup>30</sup>United States Department of Agriculture, Forest Service, Agriculture Information Bulletin 301, Outdoor Recreation in the National Forests (United States Government Printing Office, 1965), p. 79.

### Trailer Camping

Trailer camping, like tent camping, should have its own separate area. The reasons for separate facilities have been discussed at some length in previous sections and will not be reviewed further at this time.

A problem which is common to most trailer campgrounds and yet largely ignored by administrators is the spillage of petroleum products from the trailers and towing vehicles. This type of spillage includes gasoline, oil, transmission fluid, anti-freeze, and grease--all of which collect on access roads and parking pads throughout the campground. Unless measures are taken to collect and treat these petroleum products, they will be absorbed into the ground, killing grass and other vegetation or washed into adjacent streams by the rainwater runoff. To prevent these petroleum products from damaging the environment, each trailer campground should provide paved parking pads designed to drain into a system of storm sewers which in turn are treated to remove all foreign matter before it is allowed to enter the streams. This type system will not only help to remove the petroleum products from the water but it should also remove a large portion of the detergents and cleaning materials which are used in dishwater and other cleaning processes at the campsite.

The final item that a modern trailer campground should include is an outlet to the sewage treatment facilities that would allow for holding tank dumping. The holding tank is a means of storing sanitary

wastes from trailer occupants within trailers serving as a convenience for the camper when sanitation facilities are not otherwise available. Periodically the tanks from the trailers must be emptied to accommodate new waste. In areas where facilities for dumping the holding tanks have not been available, the tendency has been to empty the untreated waste into the first convenient stream, resulting in the pollution of that stream. To control this potential source of pollution, each campground should have as part of its sewage treatment facilities a holding tank dump station. The past experience of park officials has proven these dumping stations to be a worthwhile investment.

### Conclusion

The three models discussed in this chapter are only intended to identify elements of the different types of camping in a general context. The specific design of the campgrounds, trails, roads, sewage systems, individual sites and related activities must be left open for individual interpretation according to location and available resources. The main concern is that the elements outlined in these three models should be incorporated into the design of a campground development in order to optimize the camping experience. The elements identified in the models are compatible with those identified in the unpublished research recently performed by Mr. Tim McCall for the University of Tennessee Graduate School of Forestry.<sup>31</sup> (See Figure 9.)

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<sup>31</sup>Tim McCall, "Characteristics of Campers in Forest Recreation Areas in East Tennessee" (unpublished Master's thesis, The University of Tennessee, Knoxville, 1972), p. 50.

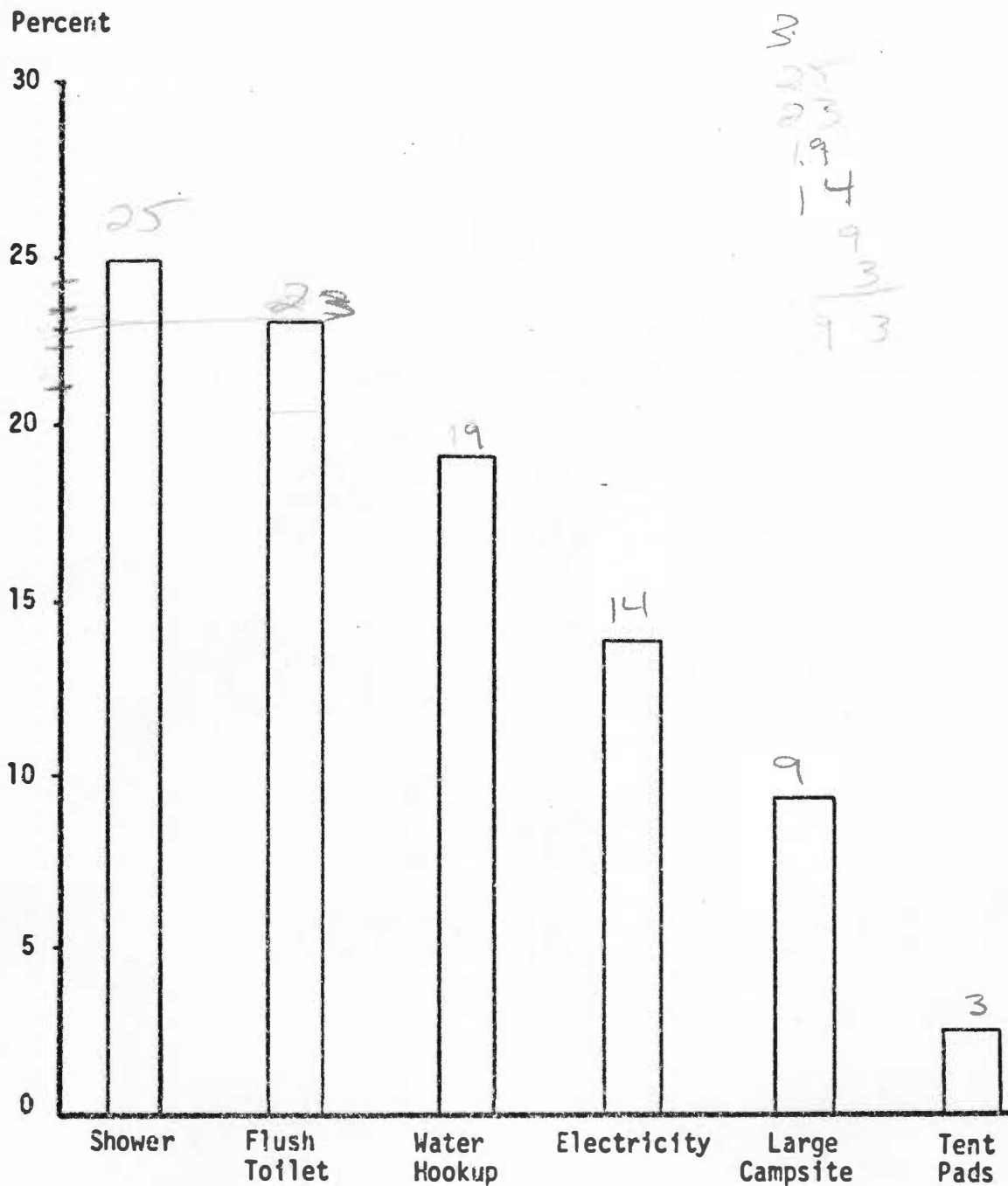


Figure 9. Frequency of responses about desired facilities by campers.

## CHAPTER V

### ANALYSIS OF STUDY AREA'S CAMPING FACILITIES

The purpose of this chapter is to draw together the material presented thus far in the thesis. The major task being the analysis of the camping facilities located in the Great Smoky Mountains National Park. The basis for this analysis is the models developed in the preceding chapter which will act as the general guidelines for judging the adequacy of the camping facilities. Wilderness, primitive, and modern camping facilities will be discussed separately in light of their particular needs and special characteristics. The analysis will center around a review of existing park facilities as they contrast with the conditions described in the camping models. Following completion of analysis for existing facilities, the remainder of the chapter will be devoted to a discussion of planning.

#### Types of Camping Facilities Available in the Study Area

The first area of concern will be to identify the general types of camping facilities available in the study area. The availability of facilities will determine the area's ability to handle the various categories of campers. In the Great Smoky Mountains National Park facilities are available to three categories of campers-- wilderness, primitive, and modern. In order to develop a full understanding of these three types of facilities, the following section will discuss each separately starting with the wilderness facilities.

Wilderness facilities in the study area. The characteristics identified in the model commonly desired by most wilderness campers include a designated wilderness area, use limitations, rules and regulations governing activities within the area, and a system of patrolling to control these activities. The wilderness areas in the Smokies provide the majority of the elements named in the model. One area of considerable conflict which still remains is that between the horseback and hiking campers. At present there are a number of trails within the park that are utilized by both types of campers. The result of this double use pattern has been the deterioration of the trail and the subsequent reduction of pleasure for hikers.<sup>1</sup>

Recently the regulations governing use of the wilderness area have undergone considerable change, placing greater limitations on users of the area. The reason for the increased restrictions on wilderness users was the numerous reports of overcrowding in the backcountry.<sup>2</sup> The overcrowding brought about an assortment of problems including littering,<sup>3</sup> destruction of natural vegetation and erosion,<sup>4</sup> vandalism,<sup>5</sup> and sanitation problems.<sup>6</sup> Overcrowding occurred when

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<sup>1</sup>Interview, Widmer.

<sup>2</sup>Yarbrough, "Smoky Trail Showing Wear From Overuse."

<sup>3</sup>Editorial in The Knoxville News-Sentinel, March 11, 1971.

<sup>4</sup>Yarbrough, "Smoky Trail Showing Wear From Overuse."

<sup>5</sup>Eyewitness News, C.B.S. telecast, February 29, 1972:  
"Loving and Littering Our Smokies to Death." Editorial by Doc Johnston.

<sup>6</sup>Interview with Ranger Arthur Whitehead, Great Smoky Mountains National Park, Elkmont Campground, June 7, 1972.



enforcement of use limitations on campers was lax allowing too many campers into the area. As a result of this condition Rogers Morton, Secretary of the Interior, announced on March 1, 1972, that the Great Smoky Mountains National Park along with two other national parks would be placed on a quota system for wilderness hiking and camping.<sup>7</sup> Under the new system campers are assigned campsites within the wilderness areas and are required to use only these sites. The system is designed to distribute the campers over a wider area so that a better utilization could be made of the available facilities.<sup>8</sup> The new system also includes a system of permits, increased backwoods patrols, and fines for illegal or improper use of the area.<sup>9</sup> At present the new restrictions have been in effect for only a few months and a manpower shortage has thus far prevented full implementation of the programs, policies, and procedures.<sup>10</sup>

Wilderness camping in the Smokies is confined to only tent camping with no plans for expanding the system to include wilderness trailer camping.<sup>11</sup> The facilities available for the tent campers include a system of trails, identified campsites, and storm shelters

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<sup>7</sup>"Wilderness Campers in Smokies Put on Quota."

<sup>8</sup>"Hike Permit Planned for Park," The Knoxville News-Sentinel, April 27, 1972, p. 2.

<sup>9</sup>Interview, Widmer.

<sup>10</sup>Ibid.

<sup>11</sup>Interview, Sneddon.

along the trails.<sup>12</sup> With the new system of controls over the wilderness camping, the study area facilities meet all the standards established in the wilderness model discussed in Chapter IV. If funding could be secured to raise the level of manpower to that recommended under the wilderness quota program, conditions would surpass those identified in the model by increasing the present level of control.

Primitive facilities in the study area. Presently there are four primitive campsites, two for tent and trailer and two for tent only.<sup>13</sup> The facilities which are available to primitive campers differ somewhat from the types of facilities identified in the model. The primitive areas include a designated camping area, regulations governing its use, regular ranger patrols, official limitations on use levels and length of stay, sanitary facilities, garbage collection, and fireplaces and tables. The regulations controlling length of stay limit a participant to seven days in any single primitive campground or a total of fourteen days in the park.<sup>14</sup> Items identified to be of general concern to primitive campers not available in the study area campgrounds include running water and individualized sites separated by vegetation or terrain. The lack of individualized sites

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<sup>12</sup>"Trail Rules in Effect Tomorrow in Smoky Park," The Knoxville News-Sentinel, May 31, 1972, p. 31.

<sup>13</sup>Ibid.

<sup>14</sup>Ibid.

allows the campers to scatter themselves at random throughout the campground. This random style of establishing a campsite encourages the overuse of more favorable sites while other site locations go virtually unused.<sup>15</sup> The overuse of campsites has resulted in the deterioration of vegetation, greater maintenance problems and general decline in the camping experience. One method of controlling overuse is to develop a rotation system to disperse use patterns. The rotation of heavily used areas to allow natural rehabilitation is, however, much more difficult to achieve when use patterns are irregular<sup>16</sup> as they are in the study area.

Another area of concern in the camping model was the quality of access roads. The road network used to reach the primitive areas is for the most part graded, gravel roads kept in good repair. Year around travel on these roads is possible with the exception of periods during the winter when snow and ice accumulate on the roads. This, however, does not greatly affect the camping facilities since most primitive areas are not in use extensively during the winter months. With the exceptions noted above, the primitive tent camping facilities are in general agreement with the conditions identified in the model.

The primitive trailer camping facilities have the same types of problems as the tent camping areas. There is no running water; use

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<sup>15</sup>Personal observation made by author at Greenbrier Campground, April 3, 1972.

<sup>16</sup>Interview, Sneddon.

of campgrounds appears to be loosely controlled; and there are no holding tank disposal facilities. In addition to these variations from the camping model, the primitive trailer campgrounds are also open to tent campers.<sup>17</sup> The fact that camping facilities are suitable for either tent or trailer camping would tend to indicate that compromises in construction would have to be made so that the sites could accommodate either trailers or tents.

Overall, conditions in the primitive campgrounds are inferior to those identified by the campers interviewed. To correct this, measures need to be taken to identify and restrict campers to specific sites; develop a system of rotation and rehabilitation to protect the natural vegetation at the sites; develop a source of water for cooking and drinking; and provide separate campgrounds for tent and trailer campers with adequate site construction to support these units without causing erosion or otherwise destroying the physical character of the site. The campsites in the study area also varied from the model in design and arrangement of the sites. A reduction in the total number of sites would allow the remaining sites to be designed to provide greater privacy and efficiency.

Modern camping facilities in the study area. The type of provisions made for the modern camper in the study area can be

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<sup>17</sup>Interview with Ranger Howard Roach, Great Smoky Mountains National Park, Smokemont Campground, June 13, 1972.

with many of the problems associated with camping in the Smokies.<sup>18</sup> The modern camper has the greatest amount of equipment, thereby placing a greater demand on the available facilities such as roads, camping space and staff control and applies pressure to have extras such as water at each campsite, showers and campstores included. The level of pressure from modern campers on existing park resources has reached the point that it is beginning to infringe on other activities in the park. For example, one of the most popular activities in the study area is driving for pleasure. The use of the internal road system by the campers, their trailers, boats, and other paraphernalia causes a slow up in traffic flow, subsequently traffic congestion occurs.<sup>19</sup> When traffic congestion occurs the opportunity for sight-seeing is reduced and the pleasure of the mountain drive is reduced appreciably.

Facilities available to the modern camper vary from one campground to another but generally include permanent sanitation facilities with an on-site treatment system, designated campgrounds, individualized sites, an established system of rules and regulations to govern the use of the campground, a system of controls and enforcement, limitations on use, an all-weather road system, garbage collection,

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<sup>18</sup>W.M.O.C. Radio News, Chattanooga, June 16, 1972: "Park Problems." News article by George Fry, former Park Superintendent of the Great Smoky Mountains National Park.

<sup>19</sup>Ibid.

and picnic tables and grills for each site. In addition to these elements two campgrounds are provided with campstores.

None of the modern campgrounds have been provided with running water or electrical hookups for the individual campsites. The modern campground does not have accommodations for showering nor do they make provisions for the movement of campers in and out of the campgrounds to surrounding points of interest without reentering the park's road network in their own individual vehicles.

All modern campgrounds in the study area are open to both trailer and tent camping with only Smokemont campground offering a separate area for a portion of the trailer campers. Designs in the campgrounds vary from dirt and gravel roads and pads to the newly renovated campgrounds with paved parking pads and roads and increased space between sites. The older campgrounds have sites that were designed to facilitate the earlier forms of camping vehicles which were considerably smaller and more maneuverable than most of today's models.<sup>20</sup> In the more updated campgrounds, pull-through campsites have been developed to accommodate the larger more cumbersome camping vehicles and trailers.

One of the chief shortcomings of the modern trailer campgrounds is the lack of any system of treatment for the petroleum drippage from the recreational vehicles. Only in the more recently remodeled campsites are there paved parking pads, a fundamental

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<sup>20</sup>Interview, Sneddon.

ingredient in the process to trap and treat petroleum spills before they are absorbed into the soil or washed into the streams. Even in those campgrounds where paved roads and parking pads are available, there are no provisions to capture and treat the residue of foreign materials accumulated in the rainwater runoff. The treatment of storm sewer water which not only picks up the petroleum drippings from the roads but detergents which are discarded from cleaning jobs around the campsite is another area of potential pollution needing consideration. Evidence of the detrimental effects of petroleum and detergent discard around the modern campsites can be seen in the frequency of oil stained soil and discolored or dead vegetation. Despite some obvious shortcomings, the sites in the study area are of a superior design to those of the commercial sector which border the park, which offer little if any measure of privacy or more than the minimum in space requirements.<sup>21</sup>

Using the discussion of existing camping facilities as a basis, the author will attempt to identify and discuss some of the planning recommendations developed for the study area and its campgrounds. This discussion is designed to draw attention to some of the administrative and procedural steps which should be taken to correct problems in the park which are related to camping. The recommendations will be general in nature and will attempt to indicate areas where corrective measures can be used to alter existing conditions.

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<sup>21</sup>Personal observation made by author of twenty private campgrounds in the area surrounding the Great Smoky Mountains National Park, January through April 1972.

### Planning Recommendations

Based on a review of the data presented thus far in the thesis and upon the interviews, the following five recommendations are made. The first four recommendations are designed to alter existing conditions so that the present system of camping can operate more efficiently and better utilize available resources. The fifth recommendation differs from the first four in that it is an attempt to alter the present camping system to reflect future trends and needs of the park and maintain a balanced use pattern for all park visitors.

1. Develop a system of reservations and central check-in stations.
2. Allow no additional expansion of existing camping facilities.
3. Undertake the redesign of existing park facilities.
4. Remove horse traffic from hiking trails.
5. Undertake a systematic removal of internal trailer camping with a greater emphasis on external commercial facilities.

Reservation and check-in stations. Under the present system each individual campground handles its own registration on a first come, first served basis. Using this approach each camper must enter the park and go to the various campgrounds or stop by the visitors' center before he can determine if space is available. Even if the camper stops at the visitors' center only a rough estimate of available



space for any given campground can be obtained. As long as camping facilities are to be provided within the study area they should be operated in a manner that would encourage the most efficient use of the available facilities.

The establishment of a system of reservations would aid the camper and eliminate much unnecessary movement in the park. A large portion of the traffic congestion which clogs the park arteries has been attributed to this unnecessary movement of campers and their paraphernalia.<sup>22</sup> If the unnecessary movement could be reduced to a minimum, traffic congestion could also be reduced considerably making the overall operation of the park more efficient. Under the reservations system, campers would make advanced reservations for the campground of their choice, receive confirmation by return mail, then upon arrival receive final confirmation and instructions at one of several strategically located check-in points controlling the various entrances to the park. The check-in points will also serve to restrict the number of campers entering the park as well as to distribute information about the availability of campsites to those campers who for whatever reason did not preregister.

The reservation system would also decrease the possibility of campers moving from one campground to another, over-staying their allotted time and monopolizing the available campsites. Under the

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<sup>22</sup>W.M.O.C. Radio News, June 16, 1972.

present system little effort is made to keep complete records on the various campground occupants and campers can easily move from one campground to another within the park without being detected.

No expansion of existing facilities. Camping facilities were first provided as a courtesy to park visitors because there were no commercial overnight accommodations for tourists in the immediate area. Highway design and vehicular limitations also added to the need for internal facilities since most visitors were ill equipped to make the trip to and from the park in a single day. Since the introduction of camping in the Smokies transportation modes and commercial development have changed decisively making the need for internal camping facilities unnecessary.<sup>23</sup>

The growing demand for camping facilities, unless controlled, could be sufficient to force park officials to develop additional campgrounds. If campground development is allowed to keep pace with the demand for facilities, the original purpose for which the park was established will be discarded to serve the interests of a specialized group.

Redesign existing campgrounds. Some form of redesign or rehabilitation should be initiated in all three types of camping facilities in order to optimize the existing system. For example, in the wilderness and primitive tent camping areas the sites are

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<sup>23</sup>Interview, Sneddon.

poorly defined and random site selection is a common occurrence resulting in an uneven distribution of campers. The uneven distribution of campers in turn places a burden on the natural environment by overusing some areas while others are left virtually untouched.<sup>24</sup> The identification and assignment of individual campsites in these areas would tend to provide a foundation for a more uniform utilization of the entire camping facility.<sup>25</sup>

In the primitive and modern campgrounds consideration should be given to a greater separation between the individual sites. In campgrounds where reconstruction and rehabilitation have been employed to modernize the sites, the problem of spacing has been largely resolved. The problem still remains a very real one in the older campgrounds where site design and construction was based on smaller camping units in use twenty years ago.<sup>26</sup> A reduction in the number of sites coupled with a more efficient utilization of terrain features and natural vegetation as buffers between sites would greatly improve the camping experience in primitive and modern campgrounds.

Removal of horse traffic from hiking trails. Many of the hiking trails in the Smokies are used by both hikers and horseback enthusiasts. The result of this double use has been the destruction

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<sup>24</sup>"Hike Permit Planned for Park."

<sup>25</sup>Ibid.

<sup>26</sup>Interview, Sneddon.

of the hiking trail.<sup>27</sup> The horses dig into the trail and loosen the trail material causing it to be easily washed away by rain runoff. The separation of hiking and horseback trails would limit the trail destruction to a defined area making maintenance a much easier job. The separation of horse and hiking trails also tends to eliminate the use conflict between hikers and horseback riders.

Systematic removal of internal trailer camping. The trend in camping for the study area has been for an increasing number of campers to switch from tent camping to trailer camping.<sup>28</sup> The result of this trend has been the conversion of formerly tent oriented campgrounds into trailer camping facilities. The number of sites converted to accommodate trailers has grown steadily along with a proportionate increase in the number of trailer campers desiring accommodations and an increase in the traffic congestion.<sup>29</sup>

The first effort to reduce traffic congestion within the park was the restriction of commercial vehicles from the park.<sup>30</sup> This was followed by the construction of a bypass around Gatlinburg to help prevent traffic backup into the park.<sup>31</sup> Both of these measures were successful in reducing internal traffic congestion on a short term

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<sup>27</sup>Interview, Widmer.

<sup>28</sup>Interview, Sneddon.

<sup>29</sup>Interview, Widmer.

<sup>30</sup>Interview, Sneddon.

<sup>31</sup>Ibid.

basis. Visitation to the park, however, has continued to increase year after year until the volume of traffic using the park arteries has again reached the level where traffic congestion is a common occurrence.<sup>32</sup>

Thus far the recommendations have dealt with elements that will make the existing camping system operate more efficiently. The author now proposes a change in the existing system, the systematic removal of all trailer camping from the interior of the park. The removal of internal trailer camping would help to accomplish two objectives--the reduction of traffic congestion and the preservation of the natural and scenic beauty of the park. The trailer camper and his assorted paraphernalia are attributed with being a major contributor to the traffic congestion in the park.<sup>33</sup> The trailers and self-contained camping units cannot maneuver as easily and as quickly as the family automobile around the mountain curves resulting in a slower movement of traffic. These vehicles require as much room to maneuver as a bus and transport an average of only three people, making them a very inefficient means of moving people.<sup>34</sup> Removal of the internal camping facilities coupled with restrictions on vehicles towing campers or self-contained units inside the park should help to reduce the present traffic congestion considerably.<sup>35</sup>

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<sup>32</sup>W.M.O.C. Radio News, June 16, 1972.

<sup>33</sup>Ibid.

<sup>34</sup>Frome, "Must Our Campgrounds Be Outdoor Slums?"

<sup>35</sup>W.M.O.C. Radio News, June 16, 1972.

The removal of camping from the interior of the park will reduce traffic congestion on a short term basis, but if visitation continues to rise more stringent measures will have to be taken to protect the park environment. Included in the alternatives to protect the park environment are a quota system, the closing of the park entirely to private vehicles,<sup>36</sup> or a combination of these alternatives. One indication that these alternatives are already under consideration is the study released in 1971 suggesting an external loop road around the park and the closing of U. S. Highway 441 through the park<sup>37</sup> and the continuous implication by national park officials that measures are going to have to be taken in the near future to protect our parks from the increasing levels of use. If such alternatives were to be implemented, a by-product would, of course, be the elimination of internal trailer camping.

The elimination of internal trailer camping should also be coordinated with an acceleration in commercial camping development to insure accommodations for the new influx of campers. The commercial camping developers have indicated that they are willing and have the capacity to supply any additional campsites that might be needed to meet the growing demand.<sup>38</sup> Use of the commercial sector to meet the

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<sup>36</sup>United States Department of the Interior, Transportation Concepts, p. 6.

<sup>37</sup>"Hike Permit Planned for Park."

<sup>38</sup>"Private Camp-Owners May Get Bonanza," The Knoxville News-Sentinel, January 2, 1972, Section D, p. 7.

needs of campers visiting the park would tend to relieve pressure on park facilities in general and allow the available resources to be reallocated to more efficiently cope with established goals and objectives.

In the concluding chapter the author will attempt to draw together the different areas of discussion covered in the thesis. From this overview the author will develop statements regarding the general nature of camping in the Smokies and the future of this activity within the study area. The author will also identify areas of study which are complementary to this thesis and could be undertaken to identify the future trends in the area adjacent to the study area.

## CHAPTER VI

### CONCLUSIONS

In this chapter the author will conclude the study by summarizing the material covered by the thesis. Included in this synopsis will be a review of the growth of camping as a recreational activity, the effect of this growth on the study area, and the potential for development of camping facilities adjacent to the study area. Following the synopsis the author will conclude the study with a list of complementary research which could be undertaken to supplement this research and determine future trends.

The activity of camping as a form of recreation has grown tremendously since the end of World War II, causing a significant increase in the demand for camping facilities.<sup>1</sup> Demand for these facilities has been so great that the public sector has been unable to keep pace. As a result of this inability to keep pace with the growth of camping enthusiasts, the private developer began to emerge in an attempt to take up the slack between what was available in the public and what was needed. At present there are more than 10,000 private campgrounds with more than 450,000 sites in the United States as compared to 7,000 public campgrounds with 240,000 sites.<sup>2</sup>

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<sup>1</sup>Facts and Trends, "Progress in the Recreational Vehicle Industry," p. 8.

<sup>2</sup>"Camping Spree in America," p. 40.



The growth in popularity has been coupled with a similar growth in sophistication and size of the camping vehicle.<sup>3</sup> This growth has caused campground operators, both public and private, to face not only a growing demand for more facilities but also a rising demand for more conveniences in existing campgrounds.<sup>4</sup>

The effect of this rapid growth in popularity and the rising level of sophistication in camping has been to increase problems associated with camping in the study area. Problems resulting from the camping boom include traffic congestion,<sup>5</sup> overuse of facilities resulting in destruction of natural vegetation and site erosion,<sup>6</sup> increase in the incidences of vandalism,<sup>7</sup> increase in the level of littering,<sup>8</sup> and an increased workload for park staff.<sup>9</sup> In the early period of the park's existence, people had to be protected from the park, but today the park is in real danger of being "loved to death."<sup>10</sup> For example, the Chimneys campground was closed altogether for over a year so that it could undergo rehabilitation. When the area was

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<sup>3</sup>Facts and Trends, "Progress in the Industry," p. 2.

<sup>4</sup>Interview, Sneddon.

<sup>5</sup>W.M.O.C. Radio News, June 16, 1972.

<sup>6</sup>Interview, Zani.

<sup>7</sup>"A New Decade Brings Problems," Our National Parks, A Living Heritage, p. 43.

<sup>8</sup>Editorial in The Knoxville News-Sentinel, March 11, 1971.

<sup>9</sup>Interview, Sneddon.

<sup>10</sup>Josh Eppinger, "The Threat to Our National Parks--People," Parade, May 7, 1972, p. 20.

reopened to the public camping was no longer allowed, instead the area was to be used exclusively for picnicking. When the Chimneys campground was first constructed it could easily handle the volume of campers using the area. As the number of campers increased, the campground reached a point where it was continuously full. The condition of constant use without an interval of rest for rehabilitation caused the vegetation in the area to be destroyed and erosion of campsites took place.<sup>11</sup>

The campgrounds in the study area do not have many of the conveniences found in the external commercial campgrounds. Those conveniences which are not incorporated in the study area campgrounds include water and electricity to every site, swimming pools, game rooms, and self-service laundries. The campers, however, do have the opportunity to camp in the midst of the Great Smoky Mountains National Park surrounded by thousands of acres of forest. In this setting the camper can indulge in a number of activities without the use of his car; these activities include hiking, nature studies, wildlife photography, picnicking, sightseeing, or fishing.<sup>12</sup> These types of activities are not generally available to campers in campgrounds outside the park without involving an automobile trip to another area.<sup>13</sup>

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<sup>11</sup>Interview, Widmer.

<sup>12</sup>Interview, Whitehead.

<sup>13</sup>Personal observations made by author on August 7, 1971; April 3 and 12, 1972; and June 13, 1972.

The very conditions that make the Smokies a desirable place to camp are the elements which are being threatened because of the popularity of camping in the area.<sup>14</sup> Park authorities have already begun to realize the internal conflicts which exist and are beginning to take action to protect the park environment. An example of this protective policy is the restriction on wilderness camping which became effective June 1, 1972.<sup>15</sup> This program of restrictions became necessary when the number of campers using the backcountry reached the level that they were destroying the very environment they were seeking to enjoy.<sup>16</sup> All authorized activities should be protected against encroachment from other activities or from themselves so that the total environment of the area can be maintained.

One method of maintaining an equilibrium within the study area is to take advantage of the areas bordering the park. The area along the park boundaries has the same general physical characteristics as the area inside the park. Because of the similarities in physical makeup many of the activities which take place inside the park could be provided externally without loss of environmental quality. The opportunity is available for park authorities and private investors to work together to develop quality facilities that will meet the growing demands for recreational facilities. One of the

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<sup>14</sup>"Hiking Permit Planned for Park."

<sup>15</sup>"Trail Rules in Effect Tomorrow in Smoky Park."

<sup>16</sup>"Wilderness Campers in Smokies Put on Quota."

prime areas for cooperation between public and private sectors is the area of campground development. Developed properly the campgrounds on the exterior of the park can offer the same opportunities as those inside the park. The public recreation areas have an obligation to provide a variety of activity opportunities to the public. When one phase of these activities begins to encroach upon the others, measures should be taken to restrict its influence. By working closely with the private sector, internal conflicts can be minimized by allowing the private sector to take up the slack for future demands.

One of the courses of action open to those wishing to encourage quality commercial development outside the park is the use of existing and potential power resting in the different state agencies. As noted above, quality private development would help to alleviate pressure on existing park facilities. With this in mind the following is a list of state agencies and possible courses of action which may influence external commercial campground development.

1. Tennessee Department of Conservation. The Department could develop parks in the general proximity of the Smokies to facilitate a decentralization of visitors to the area and to relieve pressure on the existing facilities in the Smokies. The development of state parks would also provide the camper with an alternative to campgrounds. The Department could also undertake an advertising campaign to inform campers of existing parks and facilities to make tourists aware of other facilities and hopefully distribute more broadly the campers seeking accommodations in the area. Another area which the Department could utilize to provide quality camping

facilities is the state forest system. If properly structured, limited camping in the state forests would not be in conflict with the state's forest programs and would help provide needed campsites.

2. Tennessee Department of Highways. The Department could develop, in cooperation with the National Park Service and the State of North Carolina, a road network around the Smokies. This would open the periphery of the park to visitors which are now concentrated in a corridor between Gatlinburg and Cherokee. Another element of the highway program that could be used to encourage quality campground development is the Scenic Highways Act. Under this act highways can be recommended for scenic highway status offering them certain privileges including protection from strip development and controls over signing policies. The presence of a scenic highway would not only offer a visual advantage but it could act to encourage campground developers to construct facilities that would complement and take advantage of the scenic quality of the area.

3. Tennessee Department of Health. Through regulations placed on campground operators by this department, the design of camping facilities in the state could be directly affected. The maximum density standard could be lowered to force developers to provide more open space between campsites. It would also be within the jurisdiction of this department to raise the standards on swimming pool construction and capacity, sanitation facilities and eating establishments, thereby encouraging a higher quality of development.

4. Tennessee State Legislature. The most direct influence on the camping industry would come through the Tennessee State Legislature. By passing legislation that would control the types of campground development taking place in Tennessee, quality could be improved. Possibly the most effective legislative acts would be the licensing of campground operators and the establishment of an agency to administer the program. Through such a program a design standard would have to be met before a license could be secured. This licensing program would also require a continued high level of operation to maintain the license.

Through the influence of the governmental agencies noted above the character of commercial camping adjacent to the Great Smoky Mountains National Park could be altered. The change in the character of commercial development would hopefully reflect aesthetic qualities not generally found in the area's existing commercial facilities.

This thesis was developed as a case study of a particular type of activity at a single point in time. In order to develop a perspective of future trends it will be necessary to investigate other areas of study. These studies are complementary to this case study and should add a dimension of predictability to the material presented in this thesis. Areas which should be considered include a study for commercial camping facilities in the area to determine plans for future expansion, seasonal use patterns, composition of campgrounds

and review of operational problems; and a study of community development programs in the surrounding area to determine future facilities for movement and storage of traffic, additional tourist attractions, and support facilities to handle the new developments and the demands created by these developments. It would also be helpful to undertake an investigation into why people are drawn to this area. This would not only aid in determining the types of facilities needed for commercial developments to relieve internal pressures on the park, it would aid in developing public and private facilities elsewhere.

In conclusion the study revealed that the Great Smoky Mountains National Park has problems with its camping facilities which are common to public recreational areas across the country.<sup>17</sup> It was also revealed that potential for commercial development is good and that park officials are encouraging private developers to take a more active part in meeting future camping demands.<sup>18</sup> General visitation to the park is rising yearly with a record number of visitors recorded in 1971, and 1972 is expected to be even higher.<sup>19</sup> Overall, the study indicates that some type of controls will have to be employed in the future to regulate camping and visitation to the park in order to protect the park from the people.<sup>20</sup>

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<sup>17</sup>Behme, "A Crisis in Our Campgrounds," p. 130.

<sup>18</sup>Interview, Sneddon.

<sup>19</sup>Interview, Widmer.

<sup>20</sup>Eppinger, "The Threat to Our National Parks--People,"

## BIBLIOGRAPHY



## BIBLIOGRAPHY

- Agricultural Extension Service, Virginia Polytechnic Institute, Blacksburg, Virginia. Opportunities for Private Campgrounds as an Alternative Use of Land, Circular 792, February, 1972.
- Anderson, Jr., John W. "Hiker Deplores Conditions He Finds on Appalachian Trail," The Knoxville News-Sentinel, March 11, 1972.
- Anderson, R. Clark. Letter from Chief, Special Projects, State of Utah, Division of Parks and Recreation, August 9, 1971.
- Behme, Bob. "A Crisis in Our Campgrounds," Outdoor Life, February, 1970.
- Bell Telephone Hour. N.B.C. telecast, April 11, 1972: "From Yellowstone to Tomorrow." Narrator, George C. Scott.
- Brewer, Carson. "National Forests Trails, Road to be Classified As to Users," The Knoxville News-Sentinel, May 3, 1972.
- \_\_\_\_\_. "This Is Your Community," The Knoxville News-Sentinel, June 11, 1972.
- "Camping Spree in America: It's A Billion-Dollar Market," U. S. News and World Report, May 10, 1971.
- "Changing the National Park to Cope with People and Cars," U. S. News and World Report, January 24, 1972.
- Clawson, Marion. Land for Americans. Chicago: Rand McNally & Company, 1963.
- \_\_\_\_\_, R. Burnell Held, and Charles H. Stoddard. Land for the Future. Baltimore: Johns Hopkins Press, 1960.
- \_\_\_\_\_ and Jack L. Knetsch. Economics of Outdoor Recreation. Baltimore: Johns Hopkins Press, 1966.
- Colby, C. B. "Join the Backpack Boom," Outdoor Life, October, 1971.
- \_\_\_\_\_. "The Big Change in Camping," Outdoor Life, January, 1971.
- \_\_\_\_\_. "You Can't Win 'Em All," Outdoor Life, November, 1971.

- Cornwall, George W. and Carl J. Holcomb, eds. Guidelines to the Planning, Developing, and Managing of Rural Recreation Enterprises, Cooperative Extension Service, Virginia Polytechnic Institute, Blacksburg, Virginia, September, 1966.
- "Crackdown Needed on Park Hoodlums," The State Journal (Michigan), Vol. 117, No. 71, July 17, 1971.
- Craighead, Karen and Derek. "A Walk Through the Wilderness," National Geographic, May, 1972.
- Eppinger, Josh. "The Threat to Our National Parks--People," Parade May 7, 1972.
- Eyewitness News. C.B.S. telecast, February 29, 1972: "Loving and Littering Our Smokies to Death." Narrator, Doc Johnston.
- \_\_\_\_\_. C.B.S. telecast, April 4, 1972: "Record Number of Visitors to Park." Narrator, Doc Johnston.
- Frome, Michael. "Must Our Campgrounds Be Outdoor Slums?," Reader's Digest, September, 1969.
- Garner, Melvin. Interview with camper in the Great Smoky Mountains National Park, August 7, 1971.
- Gatlinburg Chamber of Commerce. Accommodations and Camping Facilities, "Developed Campgrounds," n. d.
- \_\_\_\_\_. "Primitive Campgrounds," n. d.
- \_\_\_\_\_. Gatlinburg, Tennessee Directory. Gatlinburg: Chamber of Commerce, 1971.
- Hall, Norville L. Letter from Chief, Ohio Department of Natural Resources, July 23, 1971.
- Hardee, E. E. Letter from Deputy Chief, Bureau of Operations, Division of Recreation and Parks, Florida Department of Natural Resources, July 1, 1971.
- Hart, Anne. "Tourists Spent \$93 Million in Knoxville Area in 1971," The Knoxville News-Sentinel, March 12, 1972.
- Hover, Jerry. Letter from Park Manager, Idaho Department of Parks, July 12, 1971.

Jiran, John. "Outdoor Fun 'Just Comes Natural' in Tennessee,"  
The Knoxville News-Sentinel, February 25, 1972.

"Jobs Threatened . . . Conflict in Our National Forests, Resource  
Use? Or Wilderness Preservation?," The Carpenter,  
April, 1972.

King, Phillip and Arthur Stupka. United States Geological Survey  
Map, "The Great Smoky Mountains--Their Geology and Natural  
History." United States Department of the Interior:  
Geological Survey, 1961.

Messer, B. C. Interview with Ranger, Traffic Control, Great Smoky  
Mountains National Park, June 13, 1972.

National Park Service. Summary of Monthly Public Use, Great Smoky  
Mountains National Park, 1970. (Xeroxed)

Great Smoky Mountains National Park, Tennessee-North  
Carolina, Appalachian Trail Camping and Fishing, n. d.

Opre, Tom. "Campgrounds Hit By Rowdies," The State Journal (Michigan),  
Vol. 117, No. 71, July 17, 1971.

Our National Parks, A Living Heritage, "A New Decade Brings Problems,"  
Parks & Recreation, June, 1970.

Personal observation made by author at Dudley Creek Travel Trailer  
Court, June 7, 1971.

Personal observation made by author at Greenbrier Campground,  
April 3, 1972.

Personal observation made by author of twenty private campgrounds in  
the area surrounding the Great Smoky Mountains National  
Park, January through April, 1972.

Rand-McNally. Road Atlas, United States, Canada and Mexico. United  
States: Rand-McNally, 1969.

Rearick, Paul R. Letter from Acting Chief, Parks Division, Michigan  
Department of Natural Resources, July 15, 1971.

Recreation Vehicle Industry. Facts and Trends. Washington:  
Recreational Vehicle Industry, 1970.

Recreational Vehicle Institute. Recreational Vehicle Owner Profile.  
Chicago: Trailer Topics Magazine, 1967.

Roach, Howard. Interview with Ranger, Smokemont Campground, Great Smoky Mountains National Park, June 13, 1972.

Roger Mudd News. C.B.S. telecast, February 5, 1972: "Yosemite."  
Narrator, Bill Curtis.

Sneddon, Lea. Interview with Chief Ranger, Great Smoky Mountains National Park, June 7, 1971.

Strung, Norman. "Everybody's Going Camping," The Americana Annual, 1972. United States: Rand-McNally & Company, 1972.

Tennessee Department of Conservation. "Great Smoky Mountains National Park," Tennessee Conservationist, January, 1972.

\_\_\_\_\_, Division of Planning and Development. Tennessee Comprehensive Outdoor Recreation Plan, 1969. Nashville: Tennessee Department of Conservation, 1970.

\_\_\_\_\_. Tennessee Outdoor Recreation Plan, Executive Summary, 1969. Nashville: Tennessee Department of Conservation, 1970.

The Knoxville News-Sentinel, "Advisers Describe Park Service Fund as Emergency," April 9, 1972.

\_\_\_\_\_. Editorial, March 11, 1972.

\_\_\_\_\_. "First Smokies Hiking Permits Are Refused," March 27, 1972.

\_\_\_\_\_. "Hike Permit Planned for Park," April 27, 1972.

\_\_\_\_\_. "1,000 Cars An Hour Counted in Park," October 4, 1971.

\_\_\_\_\_. "Park Has Record Number of Guests," April 4, 1972.

\_\_\_\_\_. "Park Visits Up," March 4, 1972.

\_\_\_\_\_. "Picnicking Tops Park Activities," January 6, 1972.

\_\_\_\_\_. "Private Camp-Owners May Get Bonanza," January 2, 1972.

\_\_\_\_\_. "625,900 Visitors Break Smoky Record," June 3, 1972.

\_\_\_\_\_. "Smokies Proposal--Hike Permits Planned for Park," April 27, 1972.

\_\_\_\_\_. "Smokies Sewage Work Budgeted," January 24, 1972.

\_\_\_\_\_. "Some Need OK on Park Trail," May 28, 1972.

\_\_\_\_\_. "Trail Rules in Effect Tomorrow in Smoky Park,"  
May 31, 1972.

\_\_\_\_\_. "Visitors Head Home," April 3, 1972.

\_\_\_\_\_. "Wild Fires Outside Park," March 12, 1972.

\_\_\_\_\_. "Wilderness Campers in Smokies Put on Quota,"  
March 1, 1972.

The President's Council on Recreation and Natural Beauty. From Sea to Shining Sea, A Report on the American Environment--Our Natural Heritage. Washington: Government Printing Office, 1968.

Tratner, Karen Lee. "Progress Is Our Most Important Problem,"  
Environmental Quality, May, 1972.

United States Department of Agriculture, Forest Service. Outdoor Recreation In The National Forests, Agricultural Information Bulletin No. 301. Washington: Government Printing Office, 1965.

United States Department of Commerce. 1970 Census of Population, Number of Inhabitants, United States Summary. Washington: United States Department of Commerce, 1971.

\_\_\_\_\_. Weather Bureau. Climatological Summary. In cooperation with the Great Smoky Mountains Natural History Association, Climatography of the United States, No. 20-40.

United States Department of the Interior, National Park Service. Great Smoky Mountains National Park, North Carolina and Tennessee. Washington: Government Printing Office, 1971.

\_\_\_\_\_. Great Smoky Mountains National Park, North Carolina--Tennessee. "General Information Memorandum Stating Winter Camping Policy," n. d. (Xeroxed)

\_\_\_\_\_. "Camping Regulations," July, 1968. (Xeroxed)

\_\_\_\_\_. Trail Campsite Regulations, n. d.

\_\_\_\_\_. "Trail Campsites East of Newfound Gap," May, 1969.  
(Xeroxed)

\_\_\_\_\_. "Trail Campsites West of Newfound Gap," May, 1969,  
(Xeroxed)

\_\_\_\_\_. Transportation Concepts, Great Smoky Mountains National Park, "Visitation and Traffic." Washington: United States Department of Commerce, 1971.

Whitehead, Arthur. Interview with Ranger, Elkmont Campground, Great Smoky Mountains National Park, June 7, 1971.

Widmer, Edward. Interview with Assistant Park Ranger, Great Smoky Mountains National Park, April 12, 1972.

W.M.O.C. Radio News, Chattanooga, June 16, 1972: "Park Problems." News article by George Fry, former Park Superintendent, Great Smoky Mountains National Park.

Yarbrough, Willard. "Gatlinburg, With Welcome Sign Always Out, Readies for Rush," The Knoxville News-Sentinel, April 23, 1972.

\_\_\_\_\_. "Limit on Smoky Visits Seen," The Knoxville News-Sentinel, March 26, 1972.

\_\_\_\_\_. "Smoky Trail Showing Wear From Overuse," The Knoxville News-Sentinel, March 5, 1972.

"Yosemite: Better Way to Run A Park?," U. S. News and World Report, January 24, 1972.

Young, Gordon. "Solitude for Millions, Great Smokies National Park," National Geographic, October, 1968.

Zani, Richard. Interview with Ranger, Great Smoky Mountains National Park, April 3, 1972.

## APPENDIXES

## APPENDIX A

### CAMPER INTERVIEW

1. How many persons in your party?

A. 1-2	85%
B. 3-4	14%
C. 5-6	1%
D. 7 or more	0%
  
2. Where did you spend the night last night?

A. Private campground	72%
B. State park	16%
C. Motel	2%
D. Other	10%
  
3. In what state is your home located?

Fifteen different states were given.
  
4. How many years have you been camping?

A. 0-1	9%
B. 2-5	31%
C. 6-10	55%
D. 11 or more	5%
  
5. How many times have you camped in the Smokies?

A. 1-3	40%
B. 4-8	15%
C. 9-15	35%
D. 16 or more	10%
  
6. How do the facilities in the Smokies compare with other commercial facilities in the area?

A. Much better	21%
B. Better	70%
C. About the same	6%
D. Not as good	3%
E. Worse	0%



## 7. What type of facilities would you prefer in a campground?

Water, electricity, showers, flush toilets, large campsites, grill and table, separate facilities for tent and trailer camping	79%
Swimming pool, self-service laundry, game room	19%
Nothing	2%

## 8. Why did you choose to camp here?

A. Scenery	20%
B. A and facilities desired	33%
C. A, B, and wanted to camp in the Great Smoky Mountains National Park	41%
D. Other	7%

## 9. What is your chief complaint with the facilities for camping in the Smokies?

A. Getting a site	13%
B. Lack of electrical and water hookups	21%
C. B and too small a campsite	33%
D. Other	33%

## 10. Would you prefer a system of reservations as opposed to the present system of first come, first served?

Yes	68%
No	32%

## 11. Would you prefer separate facilities for trailer and tent campers?

Yes	59%
No	23%
Undecided	13%

## 12. Does your recreational vehicle maneuver as well as the average automobile?

Yes	17%
No	83%

## 13. Would you favor use limitations on the different campgrounds to help maintain their rustic characteristics?

Yes	61%
No	37%
Undecided	2%

14. Would you favor the removal of camping from the park as part of a program to reduce management and physical problems in the park?

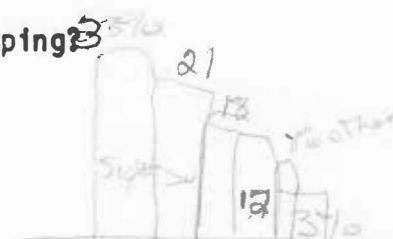
Yes 29%  
 No 69%  
 Undecided 2%

15. Has traffic congestion been a problem for you during your visit to the park?

Yes 71%  
 No 14%  
 Sometimes 13%

16. What activities do you like to indulge in while camping?

A. Nature studies 3%  
 B. A plus hiking 11%  
 C. A and B plus horseback riding,  
 fishing, swimming and sightseeing 49%  
 D. Others 23%



17. How did you determine sites were available in the park?

A. Went to various campgrounds 77%  
 B. Stopped by Visitors' Center 15%  
 C. Phone call 4%  
 D. Other 4%

13

fishing and  
 one? Sh  
 nature  
 walking

18. What type of camping do you do?

A. Only trailer 36%  
 B. Only tent 15%  
 C. Both A and B 49%

19. What areas not covered in this interview would you like to discuss?

A. Design of campsites 52%  
 B. Campground facilities 36%  
 C. Sanitation and pollution from campgrounds 9%  
 D. Other 3%

## APPENDIX B

### RANGER INTERVIEW

1. What type of facilities are provided for tent and trailer camping in the Great Smoky Mountains National Park?
2. Is there a system of reservations or pre-registration for the park campgrounds?
3. What is the market area for the park?
4. What are the major problems associated with camping and how are they being coped with?
5. What provisions are made for first aid and camping supplies within the various campgrounds?
6. What problems are unique to the Great Smoky Mountains National Park that are not found in other national parks offering similar recreational opportunities?
7. How many campsites are available for tent campers and where are they located?
8. How many campsites are available for trailer campers and where are they located?
9. To what extent are park officials working with private campground operators to relieve the pressure on the park?
10. What are the future plans for campground development or redesign?
11. What effect has the increased demand for camping facilities in the park had on other types of activities in the park?
12. What is the history of camping in the park?
13. How many people use the campgrounds each year?
14. How many try to get in and are turned away?
15. How do land use patterns in the area surrounding the park affect operations inside the park?
16. What provisions are made by the park to separate the camper from his camping vehicle while visiting the attractions in and around the park?

17. What are the most common complaints of tent campers?
18. What are the most common complaints of trailer campers?
19. How are the various levels of camping facilities patrolled?
20. To what degree was planning involved in the development of existing camping facilities?
21. How has planning been employed in the programming of use patterns in the park?
22. How has the increasing number of trailer campers affected the physical characteristics of park campgrounds?
23. What type of organized activities are available in the different types of campgrounds?
24. What types of regulations are imposed to control length of stay among the various levels of campers?
25. How does the participation rate among campers vary from season to season?
26. How are campers notified that a particular facility is full?
27. What changes would you recommend if you were in charge?

## VITA

Michael Paul Baumstark was born in Knoxville, Tennessee, on October 8, 1944. He attended public schools in Atlanta, Georgia, and was graduated from Chattanooga Central High School in June, 1962. Following high school he attended West Virginia State Teachers College, the University of Chattanooga, and in June, 1968, he received a Bachelor of Science degree in Political Science from Middle Tennessee State University. In January, 1971, while working as a recreational planner for the Tennessee Department of Conservation, he completed a Master of Arts degree in Political Science at Middle Tennessee State University.

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He is married to the former Janice Louise Garner of Chattanooga, Tennessee.