Study of campground use in the upper Blackfoot River Valley of western Montana

Joseph D. Bortz
The University of Montana

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A STUDY OF CAMPGROUND USE IN THE UPPER BLACKFOOT
RIVER VALLEY OF WESTERN MONTANA

by

Joseph D. Bortz

B. S. University of Montana, 1968

Presented in partial fulfillment of the requirements
for the degree of
Master of Science in Forestry

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Grateful appreciation is extended to those people who, directly or indirectly, made this study possible.

In particular:

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To the many campground visitors who took time out from their vacations to answer questions;

And to my wife and son who accompanied me on several interview trips and who gave their support throughout the program.

Joseph D. Bortz
<table>
<thead>
<tr>
<th>Chapter</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>INTERVIEW METHOD</td>
<td>23</td>
</tr>
<tr>
<td>Time of Interview</td>
<td>23</td>
</tr>
<tr>
<td>Interview Procedure</td>
<td>23</td>
</tr>
<tr>
<td>OBSERVATIONAL DATA</td>
<td>24</td>
</tr>
<tr>
<td>III. RESULTS</td>
<td>25</td>
</tr>
<tr>
<td>MODE OF CAMPING</td>
<td>25</td>
</tr>
<tr>
<td>PLACE OF LAST STAY</td>
<td>27</td>
</tr>
<tr>
<td>PREVIOUS CAMPING IN THE AREA</td>
<td>29</td>
</tr>
<tr>
<td>CHOOSING A CAMPGROUND</td>
<td>30</td>
</tr>
<tr>
<td>REASONS FOR CHOOSING A CAMPGROUND</td>
<td>30</td>
</tr>
<tr>
<td>REASONS FOR CHOOSING A CAMPSITE</td>
<td>31</td>
</tr>
<tr>
<td>AVERAGE LENGTH OF STAY</td>
<td>31</td>
</tr>
<tr>
<td>ACTIVITY PARTICIPATION</td>
<td>32</td>
</tr>
<tr>
<td>PLACE OF NEXT STAY</td>
<td>33</td>
</tr>
<tr>
<td>DESCRIBING THE TRIP</td>
<td>35</td>
</tr>
<tr>
<td>PARTY SIZE</td>
<td>35</td>
</tr>
<tr>
<td>AGE OF PARTY MEMBERS</td>
<td>37</td>
</tr>
<tr>
<td>DESCRIBING THE GROUP</td>
<td>38</td>
</tr>
<tr>
<td>SIZE OF FAMILIES</td>
<td>38</td>
</tr>
<tr>
<td>VISITORS HOME</td>
<td>39</td>
</tr>
<tr>
<td>DESTINATION</td>
<td>42</td>
</tr>
<tr>
<td>COMMENTS ON CAMPGROUNDS</td>
<td>42</td>
</tr>
<tr>
<td>PERCENT OCCUPANCY OF CAMPGROUNDS AND SITES</td>
<td>44</td>
</tr>
<tr>
<td>Chapter</td>
<td>Page</td>
</tr>
<tr>
<td>-----------------------------------------------------------------------</td>
<td>--------</td>
</tr>
<tr>
<td>USE PATTERNS WITHIN CAMPGROUNDS</td>
<td>47</td>
</tr>
<tr>
<td>VISITOR-DAY ESTIMATES</td>
<td>53</td>
</tr>
<tr>
<td>RELATIONSHIP TO LINCOLN BACKCOUNTRY</td>
<td>56</td>
</tr>
<tr>
<td>IV. CONCLUSIONS AND IMPLICATIONS</td>
<td>57</td>
</tr>
<tr>
<td>APPENDIX A</td>
<td>66</td>
</tr>
<tr>
<td>LITERATURE CITED</td>
<td>69</td>
</tr>
</tbody>
</table>
### LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Campground Statistics—Facilities</td>
<td>10</td>
</tr>
<tr>
<td>2. Campground Statistics—Observations and Interviews</td>
<td>11</td>
</tr>
<tr>
<td>3. Modes of Camping</td>
<td>26</td>
</tr>
<tr>
<td>4. Question: &quot;Where did you last Stay?&quot;</td>
<td>28</td>
</tr>
<tr>
<td>5. Question: &quot;Where do you expect to stay next?&quot;</td>
<td>34</td>
</tr>
<tr>
<td>6. Question: &quot;How would you describe this trip?&quot;</td>
<td>36</td>
</tr>
<tr>
<td>7. Percent Occupancy of Sites</td>
<td>45</td>
</tr>
<tr>
<td>8. Visitor-Day Estimates and Campground Capacities</td>
<td>55</td>
</tr>
<tr>
<td>Figure</td>
<td>Description</td>
</tr>
<tr>
<td>--------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>1</td>
<td>Vicinity Map</td>
</tr>
<tr>
<td>2</td>
<td>Study Area Map</td>
</tr>
<tr>
<td>3</td>
<td>Aspen Grove Campground</td>
</tr>
<tr>
<td>4</td>
<td>Big Nelson Campground</td>
</tr>
<tr>
<td>5</td>
<td>Blackfoot Canyon Campground</td>
</tr>
<tr>
<td>6</td>
<td>Copper Creek Campground</td>
</tr>
<tr>
<td>7</td>
<td>Hooper State Park Campground</td>
</tr>
<tr>
<td>8</td>
<td>Monture Campground</td>
</tr>
<tr>
<td>9</td>
<td>Number of Visiting Parties by State of Origin</td>
</tr>
<tr>
<td>10</td>
<td>Number of Visiting Parties from Montana and Their Origin</td>
</tr>
<tr>
<td>Plate</td>
<td>Description</td>
</tr>
<tr>
<td>-------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>1.</td>
<td>Distant view of Aspen Grove Campground</td>
</tr>
<tr>
<td>2.</td>
<td>A site at Aspen Grove Campground</td>
</tr>
<tr>
<td>3.</td>
<td>A site at Big Nelson Campground</td>
</tr>
<tr>
<td>4.</td>
<td>Parking lot at Big Nelson Campground</td>
</tr>
<tr>
<td>5.</td>
<td>Cooper's Lake at Big Nelson Campground</td>
</tr>
<tr>
<td>6.</td>
<td>A site in Blackfoot Canyon Campground</td>
</tr>
<tr>
<td>7.</td>
<td>A site at Copper Creek Campground</td>
</tr>
<tr>
<td>8.</td>
<td>Hooper State Park Campground showing pump house and electric line</td>
</tr>
<tr>
<td>9.</td>
<td>A used space at Hooper State Park Campground showing movable tables and</td>
</tr>
<tr>
<td></td>
<td>fireplaces</td>
</tr>
<tr>
<td>10.</td>
<td>Monture Campground</td>
</tr>
<tr>
<td>11.</td>
<td>A site at Monture Campground</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

Land use management decisions may have considerable effect on natural and man-made resources. The interrelated nature of these resources is such that a decision made relative to one or more of them has an effect on the rest. It is important and necessary to gather more precise information about the resources in order to develop management alternatives and assess their impact.

Information on soils, timber, range, and other resources is gathered as a basis for proposed management plans. Information about campground use is less frequently available. Such data may be important in order to relate recreation to other forest uses and to aid in campground development, maintenance, and rehabilitation (7).

OBJECTIVE

There has been approximately a ten fold increase in the number of recreation visits to public and private lands in the last 25 years (4). Camping, one recreational use of lands, is expected to continue to increase.
Researchers for Outdoor Recreation Resources Review Commission found that there were 10 million campers in 1960 and estimated that 19 million people would camp per year by 2000 (12).

One need only drive or hike to the more popular areas to see that some are used beyond their capacity. In view of past experience, it seems only reasonable that planned action would be superior to remedial action in the development of campgrounds.

The primary objective of this study is to provide an understanding of the use patterns for six campgrounds in the Upper Blackfoot River Valley of Western Montana. The results of this study provide information about percent occupancy of campgrounds and sites, size of parties using them, length of stay, mode of camping, origin and destination of visitors, use patterns within campgrounds, and relationship of campground use to use of the Lincoln Backcountry. This study provides the type of information which can be used as a basis for desirable planned action.

RELATED STUDIES

Use and Use Measurement

James and Ripley, in their study about estimating recreation visits, suggest that recreation managers need three essential statistics: man hours of use, number of visits, and peak load use rates (5). James and Ripley
think that man hours provide a gauge for wear and tear of sites; that number of visits reflect public approval or dissatisfaction; and that peak load data provide a basis for determination of capacity.

A double sampling system was used to develop a ratio between desired statistics (visits, use, etc.) and traffic counts. When direct observation was not possible, traffic counts were used as a basis for use estimates.

In a study of recreational use of national forest campgrounds in the central Rockies, Love found that in-state parties were more numerous than out-of-state parties and that camping parties slightly outnumbered day-use parties (7). Love also found that less than 10% of the vehicles were pickup campers and tents (40%) outnumbered trailers which were used by 33% of the campers. The length of stay for campers averaged 27.35 hours per visitor.

A recreation use study of the lower portion of the Blackfoot River drainage included a count, made on June 22, 1969, of cars and occupants along the entire river course (8). The count showed that Great Falls residents dominated the upper portion of the river course. Malouf found that the percentages of camping equipment used were: trailers 50%, trucks and campers 7%, tents 10%, and others (converted busses, sleeping bags, motels in towns) 33%.
A study by the Montana Fish and Game Department, in 1968, showed that 58% of the visitors came from within 80 miles driving distance of Hooper State Park and 15% were from out-of-state (11).

In a 1964 Western Montana Recreation Survey, Price determined that almost half of the overnight visitors in the study areas were tent campers (7); just over one third were trailer campers and less than one fifth were truck campers. In the same study, Price found that almost one fourth of the persons contacted indicated less than one day away from home. More than one third indicated 2-10 days away from home and over one fourth planned 11-20 days away from home. Single families was the most prominent group encountered (77.4%). Taking only the U. S. Forest Service area classification from the study shows that 60% of the visitors were on weekend trips.

Reid, in his study of outdoor recreation preferences found that the typical national forest respondent was the head of a single family group on a trip up to a week in length and using tent or trailer campgrounds for overnight lodging (10). He also found the typical state park group leader to be the head of a family or group of families and friends on a day outing within two hours of home.
User Characteristics

Love, in his recreation use study of national forest campgrounds in the central Rockies found that family units were not uniformly used (7).

In a recreation study of the Lower Blackfoot River system, Malouf found that 63% of the people used the river for fishing (8). Out-of-staters complained about lack of developed facilities whereas the Montanans stated that they didn't want the area developed recreationally. Only 4% of the people came to relax or enjoy the scenery.

Wagar, studying relationships between visitor characteristics and recreation activities on two national forest areas found that fishing was more popular with visitors who lived more than 30 miles away than with those who lived closer (14). He also found that fishing was more popular with the men and that sitting and watching were more popular with the women.

In studying outdoor recreation preferences Reid discovered that, on short term visits, swimming, picnicking, and fishing were popular activities and on longer vacations sightseeing, swimming, camping, and picnicking were most enjoyed (10).

In the Western Montana Recreation Survey, Price showed that, over all study areas, relaxing, picnicking, and camping were the highest in activity participation (9).
If only the U. S. Forest Service areas are considered, fishing is the most popular activity.

In "Successful Private Campgrounds," LaPage describes a repeat-visit cycle for private campgrounds. "For example, the camper who states a preference for privately developed facilities is far more likely to make an extended visit to a private campground than is one who says he prefers publicly owned facilities. And, once having made a long visit, he is much more likely to plan on returning to that campground in the future (6)." LaPage also indicates that familiarity with a campground and surrounding areas promotes longer visits.

In a recent article in the Sunday Missoulian, Ellerhoff reports that the Blackfoot Telephone Cooperative, Inc., of Missoula began a four day work week on January 1, 1971 (3). What to do with the extra time seems to be a problem for the employees. Workers, who are also campers, will probably use some of the extra time for more camping and study of this activity will continue to be important in the future.

THE STUDY AREA (Fig. 1 and 2)

The six campgrounds studied are located in a beautiful narrow valley near the headwaters of the Blackfoot River of western Montana. The campgrounds lie in a belt 40 miles long and 10 miles wide in Lewis and Clark
Fig. 1. VICINITY MAP
Fig. 2. STUDY AREA MAP
and Powell counties. The continental divide rises several miles to the east. The Lincoln Backcountry, a roadless area considered by many to be of prime wilderness quality, lies to the north. The town of Lincoln is located on Montana Highway 200 in the valley bottom. Lincoln has a population of several hundred and serves as a center for loggers and packers, ranchers and dude ranchers, tourists, hunters, and fishermen. Highway 200 serves as a link between Missoula, 70 miles to the west, and Great Falls, 80 miles to the northeast. The 1968 non-commercial traffic flow past Hooper State Park was approximately 440,000 vehicles (2). If an average of 4 persons per car is used (1), 1,760,000 people drove the highway adjacent to Hooper State Park.

THE CAMPGROUNDS

Three of the campgrounds, Aspen Grove, Blackfoot Canyon, and Copper Creek, are on the Lincoln District of the Helena National Forest. Monture and Big Nelson Campgrounds are on the Seeley Lake District of the Lolo National Forest. The sixth campground is in Hooper State Park. Each of these areas is described in detail in the following paragraphs. Tables 1 and 2 contain some relevant statistics.
<table>
<thead>
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<td>2 well pumps</td>
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<td>18</td>
<td>17</td>
<td>1.1</td>
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<td>1 faucet</td>
<td>Ballfield</td>
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<td>3 women</td>
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<td>5</td>
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<td></td>
</tr>
</tbody>
</table>

Table 1

Campground Statistics--Facilities
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<tr>
<th>Campground</th>
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</tr>
</thead>
<tbody>
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<tr>
<td>Hooper State Park</td>
<td>12</td>
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<td>17</td>
</tr>
<tr>
<td>Monture</td>
<td>7</td>
<td>2</td>
<td>1</td>
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</tbody>
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Table 2
Campground Statistics—Observations and Interviews

Aspen Grove Campground (Fig. 3, Plates 1 and 2)

Aspen Grove Campground, as the name implies, lies in a beautiful stand of aspen with some cottonwood and lodgepole pine. A large rustic sign, eight miles east of Lincoln on Highway 220, announces the half mile long entrance road which crosses an open grassy field. The grounds are level and the Blackfoot River flows along the southern edge.

In 1959, the five existing sites were used largely for picnicking. Plans for expansion were drawn up in 1961 and in 1964, the campground was re-constructed to its present 19 sites, some of which have double parking spurs. Water is supplied from 4 hand pumps on wells. Toilet
facilities consist of two sets of traditional privies. There are 2.0 sites per usable acre in this 8 acre campground. Usable acres are exclusive of such things as buffer zones and swamps (1).

Plans for future expansion include increased group picnic facilities.

**Big Nelson Campground** (Fig. 4, Plates 3, 4, and 5)

Big Nelson Campground lies on the shore of Cooper's Lake some ten miles north of Highway 200. It is reached by following a dirt road marked by a small rustic sign eight miles east of Ovando. The land surrounding Cooper's Lake is almost entirely private land.

The campground has eight sites, at two per acre, two sets of privies, and a boat ramp. There is no water supply. The timber overstory is lodgepole pine, Douglas-fir, and western larch. The sites are on very steep terrain which presents problems for setting up anything but a pup tent. There are no plans for expansion.

**Blackfoot Canyon Campground** (Fig. 5, Plate 6)

Blackfoot Canyon Campground lies ten miles west of Lincoln between the main highway and the Blackfoot River. It was planned in 1960. In 1962-63 half of it was constructed and in 1964 a flood virtually wiped it out. The following year it was rebuilt and expanded to its present capacity of 24 sites.
The overstory is mostly Douglas-fir with some cottonwood along the water courses. The understory had been thick spruce but this was thinned out and now trampling prevents it from re-establishing.

The ten-acre grounds are level and contain 2.4 sites per acre. Water is supplied by two hand pumps on wells and three sets of privies provide toilet facilities. There is planned expansion across the river and a modernized closed water system is anticipated.

Copper Creek Campground (Fig. 6, Plate 7)

Copper Creek Campground can be reached by turning north from Highway 200 on a dirt road about eight miles east of Lincoln and then driving about nine miles. The large rustic sign on the highway also announces several other places of interest. The campground was designed in 1958-59. Its development took place piecemeal and the eight acre area now contains 20 sites. The density of development is 2.5 sites per acre. According to typical Forest Service practice, each site contains a single or double parking spur outlined by barriers, a permanent table, and a fireplace. Water supply is by two hand pumps on wells and the toilet facilities are provided by two sets of privies.

The overstory vegetation is lodgepole pine and the understory is spruce and lodgepole pine. Copper Creek flows
COPPER CREEK ROAD
20 NORTHERN
COPPER CREEK CAMPGROUND

Fig. 6

COPPER CREEK CAMPGROUND
Fig. 6
close to five or six sites on the northeast side of the campground. About a quarter mile away is a small one to two acre lake named Snowbank.

**Hooper State Park Campground** (Fig. 7, Plates 8 and 9)

Hooper State Park Campground is located on the east side of the town of Lincoln on Highway 200. A grassy area about 200 yards long borders the highway and is used for softball and other sports. The campsites are in the trees back about 75 yards from the highway. The terrain is level and the overstory is Douglas-fir, ponderosa pine, and lodgepole pine.

The sites are not permanent in nature. The tables and fireplaces are not set into the ground and can be moved easily by two or three men. I arbitrarily assigned 18 sites to this campground on the basis of observation of places actually occupied and on study of the trampled vegetation. Water is supplied by a centrally located electric pump. Toilet facilities are provided by three sets of privies.

In 1969, the National Park Service, at the request of the Montana Fish and Game Commission, drew up a general development plan for Hooper State Park. The plan calls for the acquisition of an additional 40 acres and an 18 acre scenic easement to be added to the present 17.2 acres (11). Initial campground development would be for 45 sites.
Additional acquisition of 115 sites of land and 40 acres of scenic easement is suggested for the future.

Monture Campground (Fig. 8, Plates 10 and 11)

Monture Campground was originally developed by the Civilian Conservation Corps in the 1930's and then contained five rustic sites. In 1961 new plans were drawn up for 12 sites plus a picnic area, horse corral, and stock unloading ramps. The five original sites were rebuilt. All of these sites are under the trees around an open grassy meadow 150 feet wide and 240 feet long. The overstory around the meadow is composed of isolated ponderosa pine and western larch with more numerous intermediate size lodgepole pine and mixed sizes of Douglas-fir.

To date no road and barrier system has been developed. Since the early 1960's the main road system has advanced beyond the campground to within eight miles of the Bob Marshall Wilderness Area. The existing plan for Monture Campground may never be completed. Instead, a new campground may be developed at the end of the road system to serve as a jump-off spot for the wilderness.
MONTURE CAMPGROUND

Fig. 8
CHAPTER II

METHODS

OBSERVATION DATES

Dates were chosen by random sampling so that each day of the week would be represented. Dates for holiday weekend sampling were chosen so that each campground would be represented on at least one of two holiday periods (Memorial Day and July 4th).

Interviews were conducted at one campground on each date. Observational data were gathered at that campground and two others. The distance between areas prohibited gathering data at all campgrounds on any one day.

Unforeseen conflicts prohibited following part of the original schedule. If, for example, a particular Tuesday was missed, the run for those campgrounds was made the next open Tuesday. This way the sampling intensity for a particular day of the week was adhered to.

THE QUESTIONNAIRE

The questionnaire consisted of a short section of observational data and a series of 17 questions to be answered by the respondent and filled in by the interviewer. Most of the questions required a short factual
answer. Others dealing with reasons for choosing camp­
grounds and sites required some thought on the part of the
respondent. In general, the questions were designed to
show the visitors origin, destination, length of stay,
activities, and reasons for using the campgrounds (Appen­
dix A).

INTERVIEW METHOD

Time of Interview

Interviewing was done between the hours of 7:00
and 9:00 p.m. Most campers have set up camp and finished
eating by 7:00 p.m. Most campers prepare for bed about
sundown. Interviewing during the hours between 7:00 and
9:00 p.m. resulted in the least bother to the campers.
It may be significant that the interviewer was never refused
an interview.

Interview Procedure

The interviewer approached a party, introduced
himself, stated his business, and asked consent to conduct
a short interview. No attempt was made to single out a
particular party member. The responses to each question
were written down immediately. Uniformity in manner of
questioning was attempted for each interview.
OBSERVATIONAL DATA

Observational data were gathered by driving through a campground and recording the data on a map. These observations included: name of campground, site number of occupied sites, date, time, weather conditions, mode of camping, out-of-site campers, and number of family units per site.
CHAPTER III

RESULTS

MODE OF CAMPING

The modes of camping considered in this study were: bedroll, car, pickup canopy, tent, pickup camper, tent trailer, and other. Day users were also tallied to take care of those parties not staying the night. A bedroll was something thrown on the ground and having no overhead shelter. A pickup canopy is an unfurnished shelter on the back of a pickup as opposed to a camper which is a furnished shelter. The tent trailer category includes anything of the pop-up or folding shelter type which has its own running gear. The "other" category includes such things as Volkswagen campers, converted school busses, and motor homes.

Table 3 shows the mode of camping data for each campground and also the summarized data for all camp­
grounds.

On an overall basis trailers outnumbered the closest rival, tents, better than two to one (trailers, 46%; tents; 20%). Trailers outnumbered other modes in all campgrounds but Big Nelson where tents outnumbered trailers 42% to 39%. Big Nelson Campground had little
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<th>Monture</th>
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Table 3

Modes of Camping
provision for trailers and campers except in the parking lot. This is one reason for the lower trailer percentage.

In the other campgrounds tents and pickup campers were close in number. They had 20% and 17%, respectively, of the total, and tent trailers 9%. Bedrolls, cars, pickup canopies, and "other" together made up less than 5% of the modes of camping.

PLACE OF LAST STAY

The greatest percentage of respondents in all campgrounds, 76%, had come to a study area campground directly from home. Twenty-four percent came from other campgrounds and places. Table 4 shows the percentages for the responses for individual campgrounds. In Aspen Grove, Big Nelson, Copper Creek, and Hooper State Park Campgrounds, most people (between 67% and 78%) stayed at home before coming to the campground.

Examples of "other" places in the questions about where they stayed before coming and where they would stay next are: private campgrounds, off the road, don't know, and, just discharged from the armed forces.

Most of the people who stayed last at campgrounds and other places resided in excess of 80 miles from the study area. Very few people mixed camping trips with stays in motels or resorts.
<table>
<thead>
<tr>
<th>Campground:</th>
<th>Apsen Grove</th>
<th>Big Nelson</th>
<th>Blackfoot Canyon</th>
<th>Copper Creek</th>
<th>Hooper</th>
<th>Monture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
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<td>67</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
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</tr>
</tbody>
</table>

Table 4

Question: "Where did you last stay?"
PREVIOUS CAMPING IN THE AREA

Respondents were asked if they had camped in the general area before. Sixty-four percent said that they had. This large figure indicates that over half of the people find the area desirable for camping on a repetitive basis. The percentage was over 50 in all campgrounds except Blackfoot Canyon where the sample size was very small.

Thirty-four percent of the respondents said that they had looked at other campgrounds before choosing the one in which they were located. The majority of campers are evidently satisfied with the first campground they look at or they have their minds made up in advance as to which campground they will use.

Asked whether they had used the same campground before, 42% of the respondents said that they had done so. A comparison of the 42% campground-returnee figure to the 64% area-returnee figure indicates that some of the area returnees switched campgrounds.

Fifty-six percent of the campers in Hooper State Park were returnees. Big Nelson Campground was next with 44% returnees. In Aspen Grove, Blackfoot Canyon, and Copper Creek, the newest campgrounds and of roughly the same age, 33% were returnees. The older a campground is, the more probable that someone can come back to it.
CHOOSING A CAMPGROUND

Respondents were given 7 choices of ways normally used to find campgrounds. These were: U. S. Forest Service map, highway map, campground guide, highway sign, referral, past experience, and other means. Thirty-two percent gave "referral" as the way they found a campground and 44% gave "past experience" as their way. The remaining 24% of the responses were spread among the other choices. The 44% "past experience" figure agrees very well with the 42% figure for campers who had used the same campground before. Evidently people enjoy the area and recommend it to friends.

REASONS FOR CHOOSING A CAMPGROUND

Respondents were asked why they chose a particular campground. On an overall basis, only two reasons emerged with any regularity. Thirty-two percent of the respondents liked a particular aspect of the campground (shade, water, breeze, etc.) in which they were staying and 14% of the people were there for fishing opportunities in the area. The rest of the reasons varied widely and could not be grouped.

In two of the campgrounds reasons peculiar to each did recur. Fifty percent of the respondents in Big Nelson Campground were there because of access to Cooper's Lake.
Proximity to the town of Lincoln was given by 56% of the respondents as a reason for staying in Hooper State Park Campground.

**REASONS FOR CHOOSING A CAMPSITE**

In answer to the question about reasons for choosing a campsite only three reasons were given with regularity. "Shade" was mentioned by 12% of the respondents, "only one open" by 16%, and "adequate size" by 14%. The other reasons varied widely and showed no patterns.

**AVERAGE LENGTH OF STAY**

The average length of stay for the campgrounds varied between 1 and 2.9 days. The figures were derived from question 8 which asks, "How many nights do you plan to camp here?" The assumption was made that they would stay 12 hours before and 12 hours after midnight. Casual observation showed that some stayed longer and some stayed less than 24 hours in one day.

A 1968 Montana Fish and Game Department study showed the average length of stay in Hooper State Park to be six days (11). Six days is more than twice the average length of stay for Hooper State Park Campground in the present study. No reason could be found for the difference in figures.
ACTIVITY PARTICIPATION

Most people gave more than one answer to question 9, "What have you done here?" Twenty-two of the parties, almost half, said that they had fished. Six others, in Hooper State Park Campground, planned to fish if the rain had stopped. The rest of the activities varied greatly.

In Aspen Grove Campground, four parties mentioned eating as an activity. Six of the parties had fished. Other activities included: driving around, studying, reading, playing cards, swimming, hiking, working, and looking for gold.

In Big Nelson Campground the activities were generally the same with fishing being mentioned six times. Other activities were canoeing and water skiing on the lake. Sitting was also mentioned.

Two of three respondents in Blackfoot Canyon Campground fished. Other activities were: relaxing, sleeping, and eating.

Copper Creek Campground answers ran the gamut of the other three campgrounds with the exception of canoeing and water skiing. Snowbank Lake near the campground isn't big enough for those kinds of water activities. New activities included: cooking, building fires, watching it rain, getting rained upon, passing the time, getting stuck, sunbathing, and playing horseshoes.
Most of the interviews in Hooper State Park Campground were taken on a rainy day, therefore, their activities were somewhat hampered. Besides the six planned fishing activities there were these: horseback riding, bottle hunting, passing time, setting up camp between showers, digging worms, playing cards, sitting, and driving around.

The hunters who were scouting the area around Monture Campground also engaged in some pistol shooting.

Judging from these answers, nearby fishable water is the single biggest inducement for camping in this area. Canoeing and water skiing was possible only at Big Nelson Campground. Most of the other activities were simple and required no special facilities. They could have been done at any campground. In fact, some, such as eating, cooking, and sitting, could have been done at home. The next step, in some future study, should be to determine why these same things are done away from home, apart from their biological necessity.

PLACE OF NEXT STAY

Sixty-eight percent of the respondents expected to stay at home next and 32% expected to stay at another campground or other places. Table 5 shows the percentages for the responses for individual campgrounds. At all campgrounds except Blackfoot Canyon, most people expected
<table>
<thead>
<tr>
<th>Campground:</th>
<th>Aspen Grove</th>
<th>Big Nelson</th>
<th>Blackfoot Canyon</th>
<th>Copper Creek</th>
<th>Hooper</th>
<th>Monture</th>
</tr>
</thead>
<tbody>
<tr>
<td>Response</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
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<td>83</td>
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<td>0</td>
<td>6</td>
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<td>12</td>
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</tr>
</tbody>
</table>

Table 5

Question: "Where do you expect to stay next?"
to stay at home after leaving the campground.

**DESCRIPTING THE TRIP**

Each respondent was asked to describe his trip. He was given a choice of five responses: 1. One day outing, 2. Weekend, 3. Short vacation (3-5 days), 4. Extended vacation (over 5 days), 5. Other. Table 6 shows the percent responses to the choices. The "weekend" received the greatest response in Aspen Grove, Big Nelson, Copper Creek, and Hooper State Park Campgrounds. The figure for Blackfoot Canyon Campground is misleading because the sampling system selected only three respondents. Informal observations showed Blackfoot Canyon to follow the same pattern as the aforementioned campgrounds.

Respondents, who were residents of Montana, accounted for 100% of the responses for the "one day," "Short vacation," and "weekend" choices to the question. Ninety percent of the out-of-state respondents were on extended vacations. Only 12% of the Montana respondents were on extended vacations.

**PARTY SIZE**

The size of the parties varied considerably in the various campgrounds. (It might be wise to disregard the figures for Monture Campground because they were derived from one questionnaire). The figure for Big Nelson
<table>
<thead>
<tr>
<th>Campground:</th>
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<th>Big Nelson %</th>
<th>Blackfoot Canyon %</th>
<th>Copper Creek %</th>
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<td></td>
<td></td>
<td></td>
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<td>Weekend</td>
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<td>67</td>
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<td>62</td>
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<td>22</td>
<td>33</td>
<td>23</td>
<td>13</td>
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Table 6

Question: "How would you describe this trip?"
Campground (9.6) was undoubtedly influenced by the nature of the special day, July 4th, on which interviews were made. Three of the parties, composed of five, three, and two families each, had agreed in advance to come together there on the July 4th weekend. Gatherings as large as these are more rare on normal weekends and weekdays.

The figure for Copper Creek Campground (6.9) was influenced by a large gathering on Memorial Day. A group of four families from Great Falls went there because they knew it had a site large enough to accommodate four trailers. Two other parties, who had agreed in advance to meet there, were also interviewed. The party sizes for Aspen Grove, Blackfoot Canyon, and Hooper State Park Campgrounds were 4.1, 4.3, and 3.7, respectively.

**AGE OF PARTY MEMBERS**

Age was not asked directly but party members were put in categories of over or under 18 years of age. The average number of persons per party under 18 years of age varied from 0 to 4.8. As a percentage of people in the party, the figure varies from 0 to 50%. A 50% figure for Copper Creek and Big Nelson Campgrounds is probably the result of more complete family gatherings on holidays which happened to be in the sampling schedules for both campgrounds.
DESCRIBING THE GROUP

Each respondent was asked to describe his group. He was given a choice of four responses: 1. Organization, 2. Family, 3. Group of families, 4. Group of friends. In addition he was asked to give the number of males and females in the party. Ninety-eight percent of the respondents gave "family" or "group of families" as a response. These responses definitely point out that camping is a family activity in this group of campgrounds. Males made up 51% of the total campers and females 49%.

SIZE OF FAMILIES

In all cases the average size of the party exceeded the average size of the family because a multiple family party was interviewed in every campground except Monture. The average size of the party varies from 3.7 to 9.6. The average size per family varies from 3.2 to 4.8 in individual campgrounds. The overall average is 3.8. This figure agrees closely with the figure of 4.0 used by the U. S. Forest Service in the Northern Region (1). The National Park Service used 3.6 persons per car in computing the number of people passing the Hooper State Park area in cars in 1968 (2).
VISITORS HOME

On an overall basis, 42% of the respondents were from Great Falls, Montana, 76% from Montana, and 24% from out-of-state. Figure 9 shows the origin of visitors by state, and figure 10 shows the origin of Montana residents.

A recreation use study of the lower portion of the Blackfoot River drainage included a count, made on June 22, 1969, of cars and occupants along the entire main river course (8). The count showed the Great Falls residents dominated the upper portion of the river course. The results of the current campground use study confirmed the finding.

A study by the Montana Fish and Game Department, in 1968, showed that 58% of the visitors came from within 80 miles driving distance of Hooper State Park (11). They also found that 15% were from out-of-state. The figure in the current study, 24% for out-of-staters, is slightly higher than the Montana Fish and Game Department study. The figure for an 80 mile driving distance, although not specifically asked for in the current study, might exceed 58% if allowance were made for different routes of travel into the area.

Although the current study took in more area than the Fish and Game Department study, there is enough
Fig. 10. Number of visiting parties from Montana and their origin
similarity in the figures to suggest that the larger area attracts visitors with similar origins as Hooper State Park.

**DESTINATION**

Seventy-six percent of the respondents indicated that their destination was "home." Twenty-four percent indicated other towns and cities as their destination. "Home" as an answer to question 16 indicates that the respondents were probably at the farthest point on their trip and the eventual destination would be home. The question was poorly worded because the answers received did not answer the question in the mind of the interviewer. The focal point of the trip was what the interviewer had in mind.

No attempt was made to clarify a question unless the answer was obviously out of line. A pattern of "wrong" answers showing up under consistent questioning can show which questions need improvement on future questionnaires.

**COMMENTS ON CAMPGROUNDS**

Question 17 asked, "What additional comments do you have about this campground or this area?" "Nice," "Lovely," "Beautiful," and "Nice scenery," was the type of answer most prevalent.
In Aspen Grove Campground one respondent praised camp tender Lou Felton for keeping one of the cleanest campgrounds he had seen. One party would like more trees and more sites on weekends. Some liked the good water, level surfacing of spurs, and the stream close by. Another party liked highway campgrounds that were still "in." Aspen Grove Campground is a half mile "in."

At Big Nelson Campground the comments centered around the nice setting and the need for sites or expansion. One party found it hard to pitch tents on the steep ground. Another wanted more sites, more garbage cans, and drinking water facilities. One party liked the idea of only limited facilities. They felt this was a reason for the campground being a nice place because most people would be kept out. That view was not born out in practice because people simply parked in the parking lot.

Comments at Blackfoot Canyon and Copper Creek Campgrounds followed the pattern at Aspen Grove Campground. People liked the nice grounds, the beauty, the nice place, and the clean restrooms and garbage cans. One party liked Copper Creek Campground because it was the farthest one from the main highway.

Hooper State Park Campground provided some interesting comments. It is the only one that has an electric line coming into it (Plate 8). The electricity runs the
water pump for the single spigot. Three parties expressed a desire for electricity, either at the sites or for coin operated irons etc. This may be an example of the power of suggestion. They see the power line, and therefore, think the power could be made available to all. Four parties thought there could be more water outlets. The only negative comments were about the dirty outhouses and the lack of kids facilities in them.

The scouting party at Monture Campground wanted a pump water supply.

PERCENT OCCUPANCY OF CAMPGROUNDS AND SITES

The percent occupancy of sites in a campground is the number of sites occupied divided by the total number of sites in the campground.

The data were developed for consideration in several ways. Campground use was divided into four time periods: total season, holiday weekends, weekends, and weekdays. Use was also categorized by individual campgrounds, groups of on-highway or off-highway campgrounds, and for all campgrounds combined.

Percent occupancy for each time period category is shown for individual campgrounds and for groups of campgrounds (Table 7).

The seasonal occupancy rate for Aspen Grove Campground was the highest (57%) and Big Nelson Campground was
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<th>Weekend</th>
<th>Weekday</th>
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<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
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<td><strong>On-highway Campgrounds</strong></td>
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<td></td>
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<td>71</td>
<td>36</td>
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<tr>
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<td>45</td>
<td>100</td>
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<td>18</td>
</tr>
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<td>23</td>
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<td></td>
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</tr>
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<td>33</td>
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<td>9</td>
</tr>
<tr>
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<td>4</td>
</tr>
<tr>
<td>Sub Total</td>
<td>14</td>
<td>61</td>
<td>24</td>
<td>6</td>
</tr>
<tr>
<td><strong>Total, all campgrounds</strong></td>
<td>36</td>
<td>74</td>
<td>48</td>
<td>21</td>
</tr>
</tbody>
</table>

Table 7
Percent Occupancy of Sites
the lowest (5%). Holiday weekend use rates range from 100% for Blackfoot Canyon and Monture Campgrounds to 25% for Big Nelson Campground. Regular weekend rates were somewhat lower, ranging from 71% for Aspen Grove Campground to 13% for Big Nelson Campground. The weekday rate was lowest, ranging from 36% at Aspen Grove Campground to 0% at Big Nelson Campground.

Recreation use was found to be highest on holiday weekends in all campgrounds followed by weekend use and weekday use, in that order.

If we separate the campgrounds into on-highway and off-highway groups, we find that the occupancy rate for highway campgrounds exceeds that for off-highway campgrounds in all categories. One could only speculate about the reasons for the difference in occupancy rates because none of the questionnaire data gave a concrete indication for it.

One reason might be the necessity for travelling on dirt roads to reach the off-highway campgrounds although access never entered directly into peoples answers. A positive indication of highway campground preference was that five identical answers were received to the question, "Why did you choose this campground?" At Hooper State Park Campground, five parties answered, "close to town." If this is a representative sample, more convenient access
to civilization might cause highway figures to be higher.

Assuming that there is more traffic on a through highway, (all off-highway campgrounds were on terminal roads), the probability of people stopping by chance would also be greater in these campgrounds than in the others. Several answers to the same questions indicated this. A through traveler in Aspen Grove Campground answered, "It's our farthest travel of the day." In Hooper State Park Campground one answered, "It's getting late, this is the last one for some distance." In Balckfoot Canyon Campground an answer was, "No reason--just travelling through and asked for a campground close by." This type of answer wasn't given in the off-highway campgrounds.

USE PATTERNS WITHIN CAMPGROUNDS

In Aspen Grove Campground sites were observed in use 117 times and parties were camped outside of designated sites 7 times. The use is quite even although sites 5, 6, and 8 were used three times as much as some of the others. There is no apparent reason for differences in use.

There were nine interviews in this campground. Four parties mentioned shade as a factor in choice. This was the only recurring reason. There is a nice selection of sites with some more open than others and some nearer the river than others. These slight variations and the variety of answers to question 7 help to explain the well
rounded use of the campground.

A great deal of off-site use occurred at Big Nelson Campground. The terrain is very steep (30 - 40 degrees) and with the exception of number 7, none of the sites has a level spot large enough to set up anything but a pup tent (Fig. 3, Pl. 3). The entrance road is very narrow and the parking spots for six of the sites are nothing more than wide spots in the road. Trailers and campers, when parked in these spots, become partial obstructions to traffic. The absence of large level areas and the closeness of passing traffic evidently prevent many people from using these otherwise pleasant sites. Cooper's Lake is but a few feet away through the trees (Pl. 5).

The parking area (Fig. 3, Pl. 4) is the only spot large enough to provide usable space for larger tents, trailers, and campers, and this is where the off-site use is concentrated. The mode of camping for the majority of these people (Table 3) prevents them from using designated sites. Only four on-site users were observed. There were 23 off-site observations and 18 of these were in the parking lot. Five were in a nice spot overlooking the lake. It seemed to be an ideal spot but there was no facility or site designation.

The only recurring theme was that there was "Nothing else available." This answer was given by campers
in the parking lot and on-site campers. In reality, each time this answer was given, there were at least five designated sites open. They could have meant that it was the only thing available as far as their mode of camping was concerned.

Reid, in his study of user preferences, interpreted comments and observed conditions to suggest that camping and associated activities were themselves the primary attraction, particularly in forest campgrounds. In other areas, where unique scenic attractions were present, camping played a subordinate role (10).

If a party wanted something (an attraction) that wasn't available but they camped anyway, that "something" might be subordinate to camping. If they wanted something that wasn't available and they turned away because it was not provided, that attraction might be primary and camping subordinate to it. The attraction had to be there in order for the party to participate in the camping experience.

If the people came to see Cooper's Lake at Big Nelson Campground, expecting to stay in a regular site and found none big enough to serve them and then camped in the parking lot, the lake would have been a primary attraction. If, on the other hand, they turned back because no site would accommodate them, the primary attraction would have been the camping experience.

It is possible that many of the parking lot campers
saw Cooper's Lake as a primary attraction and camped there despite the lack of certain facilities. It is also possible that some of the campers were sufficiently self contained to be very little inconvenienced by the lack of facilities. However, 50% of the respondents did give Cooper's Lake as a primary reason for choosing that campground.

Blackfoot Canyon Campground has the most evenly distributed use of any of the campgrounds (Fig. 4). Ninety-two parties were observed using sites. Only three parties were interviewed here so no general pattern of reasons could be discerned for choosing sites. One party gave shade as a reason and another said they would have liked a site closer to the water but they were full.

The vegetation type is quite uniform, the terrain is flat, and the sites are of like quality. This uniformity probably helps promote well distributed use.

Copper Creek Campground experienced uneven use (Fig. 5). Two interviews in site 2 revealed spur-of-the-moment decisions. One party found a fire still going and another said they stopped at the first open site because they were hungry. Site 8 was used because of its size, according to two interviews. The one party had four trailers and the site accommodated them.

Sites 12 and 13 are near the creek and one party gave that as a reason for staying there. Available space
was also a factor for site 13. Sites 15, 16, and 17 are also near the creek but they didn't have the observed use of 12 and 13. One difference is that 15, 16, and 17 only have single parking spurs. Although this point was not mentioned, people with trailers seemed to prefer the double spur for ease in backing the trailer into place.

Shade wasn't mentioned as a factor in this campground. Space was a factor in five out of eleven interviews. The rest of the answers seemed to be single personal reasons.

Hooper State Park Campground is, of course, different from the Forest Service campgrounds because it has no designated sites (Fig. 6). However, the users distributed themselves quite evenly between sites 2 and 12. There are no site designations but lines were drawn on the map to separate normally used areas. If a party wasn't in one site it automatically fell into another. No one camped in the large open meadow between the sites and the highway. The water supply is between sites 6 and 7, and the restrooms are located about 100 feet away to the rear. The water and restroom facilities are almost centrally located and the heaviest use is distributed to either side.

One respondent chose site 6 because it was close to the water supply. Another chose site 7 because all facilities were handy. Parties also chose sites 10 and 11
because they were "convenient." Size was also a factor to one respondent and trees were a factor to two others. Shade was not mentioned in this campground.

Monture Campground had so little use during observation periods that it is impossible to establish any use patterns (Fig. 7).

Examination of the answers to question 7, "Why did you choose this particular campsite?" indicates that it is probable that no two people choose the same site for the same reasons. If the responses were identical, did they "mean" the same things? If this question is used again in a survey, it would be wise to probe into the real meaning of the initial response. This approach would require much more time and more complete note taking. The sample would undoubtedly be much smaller for a given amount of time but the approach might give more meaningful responses.

Reid explores the value of "feedback" and its apparent absence in recreation administration. He believes user opinions are valuable in ascertaining wants and needs and that they serve as useful checks on programs and objectives (10).

From the response to the 50 questionnaires in this study, only three factors came up several times. These were: shade, adequate space, and, there was nothing else
available.

Shade can be well defined. We know how many trees are present, their height, crown density, crown diameter, relationship to the site at various sun angles, etc., but the idea of "space" is a bit elusive. A future study should probe for a measurable unit of space. Does a camper mean parking space, picnic preparation space, table space, roaming space, or a feeling of space defined by the effect of density of tree spacing on a person's subconscious? A determination of a space unit for various camping publics would be valuable in determining the most efficient space utilization from an enjoyment standpoint.

**VISITOR-DAY ESTIMATES**

The visitor-day, defined as a twelve hour period, is becoming a standard measure for comparing capacities or use of recreation areas. In making the projections the assumption was made that one overnight stay would equal two visitor-days of use. Casual observation showed that campers in this area stayed approximately 24 hours or multiples thereof on overnight stays.

In the sampling procedure, it was decided that the days would be divided into three time periods: weekdays, weekends, and holiday weekends. The campground use data (sites occupied) was averaged by campground for each period.

The average number of sites occupied times the
average size of the party times 2 visitor-days per person equals the number of visitor-days of use expected in that period in a given campground.

Example:

Holiday weekends in Aspen Grove Campground

<table>
<thead>
<tr>
<th>Data gathered</th>
<th>No. of sites occupied</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fri. 5/30</td>
<td>19</td>
<td></td>
</tr>
<tr>
<td>Sat. 5/31</td>
<td>17</td>
<td>18.3</td>
</tr>
<tr>
<td>Sun. 8/31</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

Other holiday weekend days: Thur. 7/3, Fri. 7/5, Fri. 8/29, Sat. 8/30. A total of 8.

Average number per party derived from all questionnaires collected in Aspen Grove Campground is 4.1.

18.3 (# of sites occupied) X 4.1 (# per party) X 2 (visitor-days per person) X 8 (days in holiday weekends) = 1200.5 visitor-days of estimated use.

Table 8 shows the visitor-day estimates of use and the visitor-day capacities for the campgrounds. Total capacity was determined by multiplying the total number of sites times the average size per party times 2 visitor-days of use per person times the number of days in the season.

The estimate of total use for all campgrounds, is
<table>
<thead>
<tr>
<th>Highway Campgrounds</th>
<th>Holiday Weekends</th>
<th>Weekends</th>
<th>Weekdays</th>
<th>Season</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aspen Grove</td>
<td>1201</td>
<td>2878</td>
<td>4187</td>
<td>8266</td>
<td>16,826</td>
</tr>
<tr>
<td>Blackfoot Canyon</td>
<td>1651</td>
<td>3242</td>
<td>2673</td>
<td>7566</td>
<td>22,291</td>
</tr>
<tr>
<td>Hooper State Park</td>
<td>669</td>
<td>1058</td>
<td>2245</td>
<td>3972</td>
<td>14,386</td>
</tr>
<tr>
<td>Off-highway Campgrounds</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Big Nelson</td>
<td>307</td>
<td>499</td>
<td>0</td>
<td>806</td>
<td>16,589</td>
</tr>
<tr>
<td>Copper Creek</td>
<td>718</td>
<td>2153</td>
<td>1736</td>
<td>4606</td>
<td>29,808</td>
</tr>
<tr>
<td>Monture</td>
<td>320</td>
<td>208</td>
<td>118</td>
<td>646</td>
<td>4,320</td>
</tr>
<tr>
<td>TOTAL</td>
<td>26,268</td>
<td>104,220</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 8
Visitor-Day Estimates and Campground Capacities
25,863 visitor-days. The total visitor-day capacity for all campgrounds is 104,220. Comparing use with capacity shows that the campgrounds are used to roughly 1/4 capacity over the season.

The estimated visitor-day use figure for Big Nelson Campground (806.4) does not indicate the true popularity of that campground. There were a great many parties who camped in the parking lot and, therefore, did not become included in the "sites filled" figures. If those people are taken into consideration, the estimated visitor-day use figure would be about 3300.

**RELATIONSHIP TO LINCOLN BACKCOUNTRY**

The Lincoln Backcountry is the center of a controversy as to whether or not it should receive wilderness classification. An attempt was made to determine if there is any relationship between campground use and backcountry use.

The three off-highway campgrounds lie just south of the backcountry. The backcountry was never mentioned by the interviewer so as to rule out the possibility of suggestion. Only two out of the 50 parties interviewed mentioned their intention to go into the Lincoln Backcountry and only one actually did. Therefore it is concluded that the relationship is negligible at this time.
CHAPTER IV

CONCLUSIONS AND IMPLICATIONS

Using the results of this study, one can describe or paint a picture of the typical visiting group in the study campgrounds.

The typical group is a Montana family, probably from Great Falls, which has come to stay for the weekend. They park their trailer in a campsite at a campground where they have stayed on previous occasions. They picked a shady spot near the river. The four members of the family, three of which are over 18 years of age, are here to fish. They will return home directly after their stay.

It would be dangerous, from a management standpoint, to rely entirely on a generalization such as this as the guide for area campground design. However, it is a good starting point.

Two of the conclusions reached in the study seem especially important from the standpoint of campground design and location. These are: 1. That trailers are the most popular mode of camping, and 2. That fishing is the single most popular activity. A majority of the camp-sites in new campground construction might be designed specifically for trailers. A study should be designed to determine what the physical needs of the various modes of
camping are and what the wants of the users are before beginning new designs.

The popularity of fishing indicates that new campgrounds should be located near fishing waters and that the fishing resource should be protected and developed.

Another important finding was that the most popular length of stay was the weekend. A current trend is that industries are moving to a four day work week and a three day weekend. If an increasing number of families camp for a three day weekend, the added use will significantly increase the wear and tear on campground vegetation and facilities. It may become necessary to institute a rest-rotation system for campgrounds within a management area sometime in the future.

The conclusion that camping is primarily a family activity lends a certain degree of stability to future developments. Family activities tend not to be faddish. Although most family recreational expenditures are tied to disposable income and therefore more subject to economic ups and downs than expenditures for non-disposable income items, the boom and bust of fads is largely absent and a relatively continuous pressure will probably be felt from campers. Therefore, funds for campground construction and management will undoubtedly be wisely spent.
There are other factors which also probably will influence camping in general. Better, farther reaching roads, faster automobiles, more leisure time and an expanding population, all combine to make hitherto unavailable lands open to more people. In 1950, auto travel volume was estimated at 363 billion miles per year. The prediction for 1970 is 1000 billion miles per year (13). The decrease in hours worked per week is expected to be about 8 hours between 1960 and 2000. The population is expected to increase from 180 million in 1960 to 351 million by 2000. The occupancy rate figures for the current study could be expected to rise with the advance in the aforementioned factors.

According to the figures cited earlier, from the ORRC projection of camper numbers, it appears that there is an approximate doubling in campers every 15 years. The planned expansion of the present campgrounds should suffice for peak loads through 1985. A general inventory of probable locations for new campgrounds should begin now so that plans, financing, and construction can keep pace with the increased use after 1985.
Plate 1
Distant view of Aspen Grove Campground

Plate 2
A site at Aspen Grove Campground
Plate 3
A site at Big Nelson Campground

Plate 4
Parking lot at Big Nelson Campground
Plate 5
Cooper's Lake at Big Nelson Campground

Plate 6
A site in Blackfoot Canyon Campground
Plate 7

A site at Copper Creek Campground

Plate 8

Hooper State Park Campground showing pump house and electric line
Plate 9
A used space at Hooper State Park Campground showing movable tables and fireplaces

Plate 10
Monture Campground
Plate 11

A site at Monture Campground
APPENDIX A

Campground __________
Unit ________________
Date _____ Time _____

Weather: Temp. _____ Clear [ ] Part Cl. [ ] Cl. [ ] Overcast[ ] Rain [ ]
Comment ___________________________________________________

Mode of Camping: Day only [ ] Bedroll [ ] In car [ ] Pickup
Canopy [ ] Tent [ ] Camper [ ] Tent Trailer [ ] Trailer [ ]
Other ______________
Comment on equipment, etc. ______________________________

Interview

1. Where did you last stay?
[ ] Home
[ ] Motel or hotel (where ____________________________
[ ] Resort (where ____________________________
[ ] Campground (where __________ Name _______
[ ] Other ______________________________

2. Have you camped in this general area before?
[ ] Yes [ ] No  No. of times ______ or years _____

3. Did you look at other campgrounds before choosing this one? [ ] Yes [ ] No

4. Have you camped in this campground before?
[ ] Yes [ ] No  No. of times _________
5. How did you choose this campground?
   [ ] USFS Map   [ ] Referral
   [ ] Highway Map   [ ] Past Experience
   [ ] Campground Guide   [ ] Other ______________
   [ ] Highway Sign

6. Why did you choose this campground? ______________

7. Why did you choose this particular campsite? ______________

8. How many nights do you plan to camp here? ______________

9. What have you done here? ________________

10. Where do you expect to stay next?
   [ ] Home
   [ ] Motel or hotel (where ________________
   [ ] Resort (where ________________
   [ ] Campground (where ________________ (name ________________
   [ ] Other ________________

11. How would you describe this trip?
   [ ] One day outing   [ ] Weekend
   [ ] Short vacation (3-5 days)
   [ ] Extended (over 5 days) [ ] Other

12. What is the size of your party? ________________

13. How many under 18 years of age? ________________
14. How would you describe your group?

[ ] Organization (name ____________
[ ] Family  [ ] Several families  [ ] Group of friends

Male _____  Female ______

15. Where is you home? city ______________ state____

16. What is your destination? ______________________

17. Do you have any comments about this campground?

______________________________________________
LITERATURE CITED


