# SUMMARY OF THE 1990 CAMPGROUND RECEIPT STUDY 

by

Terè A. DeMoss, Tracy C. Trichell
Environmental Laboratory
DEPARTMENT OF THE ARMY
Waterways Experiment Station, Corps of Engineers 3909 Halls Ferry Road, Vicksburg, Mississippi 39180-6199


July 1992
Final Report

Approved For Public Release; Distribution Is Unlimited

RESEARCH LIBRARY
US ARMY ENGINEER WATERWAYS
EXPERIMENT STATION
VICKSBURG, MISSISSIPPI

Prepared for DEPARTMENT OF THE ARMY
US Army Corps of Engineers
Washington, DC 20314-1000


## Contents

Preface ..... iv
1-Introduction ..... 1
Purpose ..... 1
Background ..... 1
Study Procedures ..... 2
Multiyear Procedural Development ..... 3
2-Data Analysis ..... 4
1990 CRS Data ..... 4
Trend Analysis ..... 8
Potential Uses of CRS Database ..... 10
3-Conclusions and Recommendations ..... 12
Conclusions ..... 12
Recommendations ..... 13
References ..... 14
Figures 1-25
Appendix A: 1990 CRS Data Summaries for Individual Recreation Areas ..... A1
Appendix B: 1990 CRS Data Analysis of Occupancy Rates (July) ..... B1
Appendix C: Formulas Used for Calculations in This Report ..... C1

## Preface

The work reported herein was conducted as part of the Natural Resources Research Program (NRRP). The NRRP is sponsored by the Headquarters, US Army Corps of Engineers (HQUSACE), and is assigned to the US Army Engineer Waterways Experiment Station (WES) under the purview of the Environmental Laboratory (EL). Funding was provided under Department of the Army Appropriation No. 96X3121, General Investigation. The NRRP is managed under the Environmental Resources Research and Assistance Programs (ERRAP), Mr. J. L. Decell, Manager. Dr. A. J. Anderson was Assistant Manager, ERRAP, for the NRRP. Technical Monitors during this study were Ms. Judy Rice and Mr. Robert Daniel, HQUSACE.

This report was prepared by Ms. Terè DeMoss and Ms. Tracy C. Trichell, Resource Analysis Group (RAG), EL. Mr. Sammy Franco, RAG, contributed technical expertise to this report. Review and comments were provided by Mr. H. Roger Hamilton and Mr. John P. Titre, Jr., RAG.

The report was prepared under the general supervision of Mr. Hamilton, Chief, RAG; Dr. Conrad J. Kirby, Chief, Environmental Resources Division; and Dr. John Harrison, Chief, EL.

At the time of publication of this report, Director of WES was Dr. Robert W. Whalin. Commander and Deputy Director was COL Leonard G. Hassell, EN.

This report should be cited as follows:
DeMoss, Terè A., and Trichell, Tracy C. 1992. Summary of the 1990 campground receipt study. Technical Report R-92-3. Vicksburg, MS: US Army Engineer Waterways Experiment Station.

## 1 Introduction

## Purpose

This is the tenth in a series of reports that summarize the results of the Campground Receipt Study (CRS). The CRS has undergone continual improvement in procedures and in the application of data analysis. Changes in procedures are generally found in the earlier reports (198082), while improvements in special data applications tend to be found in the later reports (1982-90). The main purpose of each report, however, is to describe the CRS data so that a database can be established to analyze trends in camping use each year. This summary uses the 1990 data and examines the trends from 1984 through 1990.

## Background

In 1978, the Recreation Research and Demonstration System (RRDS) was established under the Natural Resources Research-Program of the US Army Corps of Engineers. The RRDS units serve as permanently designated outdoor laboratories at which information on recreation and resource aspects of lake management can be systematically gathered. In constructing a representative sample of sites, Title V economic development and physiographic regions ${ }^{1}$ were combined to produce 30 physioeconomic regions. Twenty-four units were selected from these regions, representing approximately 5 percent of the then 465 Corps projects. From these 24 units, the 16 projects with fee camping programs agreed to participate in the CRS (Figure 1). The 24 projects were chosen to represent a wide variety of multipurpose reservoirs, locks and dams, and dry lakes. A US Army Engineer Waterways Experiment Station (WES) publication (Hart 1981) contains a detailed explanation of the RRDS units and their selection. Specific criteria for selection are provided below.

[^0]a. Full range of activities.
b. Spectrum of resource characteristics.
c. Nationwide distribution of units.
d. Range of conditions at multipurpose projects.
$e$. Planning, design, and management tasks.
One of the main uses of the RRDS has been the CRS. Through the CRS, a database has been developed on one of the Corps' most popular activities: camping. Four factors guided the development of the CRS (Curtis and Hansen 1982):
$a$. The procedures and instruments developed were to place a minimum burden on project personnel.
$b$. The procedures were to have a minimum impact on the recreation visitor when registering at the campground.
$c$. The monitoring procedures were intended to be cost-effective and efficient.
d. The data collected were designed to be valid and reliable.

Two important distinctions concerning the CRS database should be noted. First, the information gathered, as a subset of the CRS, includes only fee campers; therefore, these campers do not describe the "Corps visitor" per se. Second, the analyses are done to illustrate potential uses rather than to provide a definitive portrayal of all possible applications. Users are encouraged to further utilize the database as the management tool for which it was intended.

## Study Procedures

Data collection for this study was done by rangers and campground gate attendants as campers registered. Most of the data were collected through observation, so impact on the visitor was minimal. Data were recorded on Engineer Form 4457-1. A thorough discussion of the development of this form was provided in the 1983 Campground Receipt Study report by Akers-Fritschen (1985). Since 1988, several research and development units have implemented the Automated Use Permit System to register campers and collect CRS data.

After the CRS data were collected and sent to the corresponding Corps District offices for keypunching, they were forwarded to WES for analysis. For the analysis, a FORTRAN program, the Recreation Analysis Program (RAP), was developed. This program generates two reports. The Area Report provided a summary of the CRS data for each recreation area, while the Site-Specific Data Report provided most of the same information for each campsite. District offices that participated in the CRS were provided with a copy of the RAP for their own analysis purposes.

For the 1986-90 analysis, data from the RAP output were transferred into the Statistical Analysis System (SAS). SAS is an advanced data manager and statistical software package. The creation of SAS data sets for the CRS provides greater options for examining the data with specific research questions.

## Multiyear Procedural Development

Data gathered at the research and demonstration units have undergone three distinct phases of development. Initially, the study focused attention on the campground receipt in terms of defining how and what types of data were to be collected. Forms went through improvements and were finalized during the early part of the study. Comparison of key variables across projects has provided an assessment of campground market behavior in the Corps.

A second stage of development has been the documentation of general results over time, such as reporting on the changes in types of camping equipment. Important trends are highlighted in the report series (e.g., an increase in camping parties with tents and camping parties with powerboats during the years 1981 through 1984) (Lawrence and Akers-Fritschen 1986).

The third stage of CRS development has included the use of data for analyses beyond routine summaries. The present report is an extension of previous efforts, as it reports on key trends while illustrating management applications. These are aimed at improving the efficiency of project operations, which will provide for a general understanding of the Corps customer who stays overnight at a Corps campground.

## 2 Data Analysis

## 1990 CRS Data

The data summarized in this report were collected from the nine projects that participated in the CRS during 1990. The CRS data were analyzed as independent recreation areas and projects, and then for the entire sample of projects. In this section, both the individual project and entire sample data are described. The recreation area data can be found in Appendix A.

## Data limitations

In 1986 and 1987, the supply of Engineer Form 4457-1 was inadequate to meet the needs of all CRS projects. In 1986, the number of camping permits decreased to 81,499 (from 146,087 in 1985). In 1987, the number of projects participating decreased to nine, and the number of permits decreased to 44,531 . In 1988, nine projects participated (only seven of the nine from 1987), but the permits increased to 114,042 . In 1989, nine projects participated, with total permits of 61,630 . In 1990, nine projects participated with a slight decrease of permits to 60,591 . Since the lack of forms was not a problem in 1985, Table 1 includes the 1985 data instead of the 1986-87 permit summary. Readers are advised to compare the number of permits issued in 1990 to the number issued in 1985 and 1989 to judge how completely the data in this table represent camping use during that time period.

## 1990 data

Campers at the CRS recreation areas accounted for 457,864 recreation days ${ }^{1}$ of use in 1990 (Table 2). The average occupancy rate ranged from 12.1 at Milford Lake to 68.6 at Lake Ouachita. The average for the entire CRS in 1990 was an occupancy rate of 36.6 , with a rate of 28.8 on the weekdays and 55.0 on the weekends.

[^1]
## Table 1 <br> 1990 Camping Permit Summary ${ }^{1}$

| Project | Number of Permits |  |  |  | Number of Groups, 1990 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1985 | 1988 | 1989 | 1990 |  |
| Lake Barkley, KY | 5,939 | - ${ }^{2}$ | 4,033 | 5,002 | 4,726 |
| Hartwell Lake, GA/SC | 8,455 | - | 7,130 | 7,601 | 5,566 |
| Milford Lake, KS | 4,408 | 4,088 | - | 2,967 | 2,242 |
| Mississippi Pool 16, IA | 1,873 | 2,581 | 2,113 | 3,545 | 2,977 |
| Lake Oahe, SD ${ }^{3}$ | 8,086 | 11,883 | 2,653 | 1,714 | 1,438 |
| Lake Ouachita, AR | 8,621 | 7,555 | 7,842 | 9,396 | 6,116 |
| Lake Shelbyville, IL | 18,405 | 10,254 | 13,708 | 15,166 | 13,190 |
| Shenango River Lake, PA | 7,618 | 7,270 | 3,655 | 7,137 | 4,443 |
| West Point Lake, GA | 8,876 | 10,336 | 6,176 | 8,063 | 6,692 |
| CRS total | $(72,281)^{4}$ | $(53,967)$ | $(47,310)$ | 60,591 | 47,390 |

1 In 1986 and 1987, the supply of Engineer Form 4457-1 was inadequate to meet the needs of all CRS projects. This was not a problem in 1985. By comparing the number of permits issued for each project to the 1985 record, changes in 1990 data (increases or decreases) can be noted.
2 Project did not report for that particular year.
3 Incomplete data set that represents only July and August of this season.
4 Totals given in parentheses are for the projects reporting in 1990, not the total permits for 1985, 1988, or 1989.

Table 2
1990 Calculated Use Characteristics

| Project | Recreation Days ${ }^{1}$ | Occupancy Rate |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Mean ${ }^{2}$ | Weekends ${ }^{3}$ | Weekdays ${ }^{3}$ |
| Lake Barkley | 42,596 | 33.2 | 43.8 | 28.8 |
| Hartwell Lake | 64,319 | 24.9 | 39.4 | 18.4 |
| Milford Lake | 17.817 | 12.1 | 22.8 | 7.6 |
| Mississippi Pool 16 | 19,552 | 57.2 | 83.7 | 46.2 |
| Lake Oahe | 8,544 | 26.9 | 41.4 | 20.5 |
| Lake Ouachita | 70,120 | 68.6 | 93.1 | 58.3 |
| Lake Shelbyville | 112,988 | 39.0 | 64.0 | 29.2 |
| Shenango River Lake | 53,981 | 38.9 | 59.6 | 30.3 |
| West Point Lake | 67,947 | 28.2 | 47.1 | 20.3 |
| CRS total | 457,864 | 36.6 | 55.0 | 28.8 |
| 1 Recreation days of use was calculated by multiplying the number in the group times the length of stay for each fee receipt. Each individual recreation day was then added to produce a project total. Any receipts not showing the number in group or length of stay were deleted from the calculations. Therefore, this measure of use may be conservative. <br> The occupancy rate is calculated by the number of permits divided by (the number of nights $\times$ the number of $\delta_{3}$ sites) for the entire project. <br> The weekend was represented by Friday night and Saturday night. Other is counted as weekday. |  |  |  |  |

The average length of stay ranged from 2.2 to 3.4 nights (Table 3). The average for the entire CRS in 1990 was 3.0 nights. The size of the camping parties in 1990 averaged 3.3 persons, ranging from 2.4 at Mississippi Pool 16 to 3.7 at Hartwell Lake. Nationwide, 79.7 percent of the parties had previously visited the project. This variable tends to show a broad range in variation between projects, as evidenced by the value of 98.7 percent at Milford Lake and 47.7 percent at Lake Barkley. Also, 89.9 percent of the camping parties at CRS projects indicated that the project was the primary destination for their trip. However, at Lake Shelbyville, 97.3 percent of the camping parties reported the project as the primary destination for their trip. At the individual projects, the lowest percentage of Golden Age passports was found at Lake Ouachita ( 16.0 percent) and the highest at Mississippi Pool 16 (47.8 percent).

| Table 3 1990 General Use | Characteri | tics |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Project | Mean Length of Stay, nights | Mean Number in Group | Percent Prior Visits ${ }^{1}$ | Percent Primary Destination ${ }^{1}$ | Percent <br> Golden Age <br> Passport |
| Lake Barkley | 3.3 | 2.8 | 47.4 | 51.4 | 33.6 |
| Hartwell Lake | 3.2 | 3.7 | 85.4 | 94.5 | 25.5 |
| Milford Lake | 2.4 | 3.3 | 98.7 | 96.5 | 20.7 |
| Mississippi Pool 16 | 2.9 | 2.4 | 76.8 | 96.5 | 47.8 |
| Lake Oahe | 2.2 | 2.8 | 69.1 | 73.2 | 28.6 |
| Lake Ouachita | 3.4 | 3.4 | 69.4 | 89.8 | 16.0 |
| Lake Shelbyville | 2.7 | 3.2 | 86.6 | 97.3 | 17.9 |
| Shenango River Lake | 3.4 | 3.5 | 89.6 | 97.1 | 18.4 |
| West Point Lake | 3.0 | 3.4 | 84.0 | 92.0 | 20.4 |
| CRS mean | 3.0 | 3.3 | 79.7 | 89.9 | 22.8 |
| ${ }^{1}$ Percent of camping parties. |  |  |  |  |  |

For the cumulative 1990 data, an analysis of the type of vehicle(s) used by camping parties (Table 4) indicates that more parties used trucks (49.1 percent) than cars ( 33.9 percent). The highest percentage of truck use was at West Point Lake ( 60.9 percent), while the lowest percentage of car use was at Lake Oahe ( 17.0 percent). Relatively few of the camping groups arrived in vans ( 14.7 percent), motor homes ( 19.5 percent), or via other modes of transportation ( 0.8 percent). The exception was Mississippi Pool 16, where 40.3 percent of the camping parties reported using motor homes.

During 1990, as shown in Table 5, the most popular type of camping equipment at the CRS projects was a tent ( 32.2 percent nationwide). At Lake Ouachita, 45.8 percent of the camping parties used at least one tent. It must be noted that the equipment categories are not mutually exclusive;

| Table 4 |
| :--- |
| 1990 Distribution of Vehicle Types (Percent of Camping Groups) ${ }^{1} 1$ |


| Project | Car | Truck | Van | Motor Home | Other $^{2}$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Lake Barkley | 18.7 | 31.1 | 7.3 | 12.3 | 1.7 |
| Hartwell Lake | 36.9 | 52.6 | 14.0 | 19.0 | 0.8 |
| Milford Lake | 30.2 | 56.0 | 16.1 | 15.8 | 0.4 |
| Mississippi Pool 16 | 36.3 | 43.9 | 12.0 | 40.3 | 0.4 |
| Lake Oahe | 17.0 | 55.9 | 11.8 | 24.1 | 0.6 |
| Lake Ouachita | 33.6 | 56.4 | 13.4 | 14.8 | 1.0 |
| Lake Shelbyvilie | 36.2 | 45.6 | 19.8 | 17.4 | 0.8 |
| Shenango River Lake | 47.6 | 44.8 | 16.3 | 16.7 | 0.0 |
| West Point Lake | 32.7 | 60.9 | 11.6 | 26.2 | 0.6 |
| CRS total/mean | 33.9 | 49.1 | 14.7 | 19.5 | 0.8 |

${ }^{1}$ These categories are not mutually exclusive. Camping groups could bring with them multiple types of gamping equipment, which may account for nationwide totals that exceed 100 percent.
2 This category includes any mode of transportation that was not listed, including motorcycles, bicycles, etc.

## Table 5

1990 Distribution of Camping Equipment and Powerboats (Percent of Camping Groups) ${ }^{1}$

| Project | Tent | Pop-Up Traller | Pickup Camper | Travel Traller | Powerboat |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Lake Barkley | 16.2 | 4.1 | 4.5 | 17.4 | 21.1 |
| Hartwell Lake | 30.1 | 11.9 | 2.3 | 33.5 | 23.2 |
| Milford Lake | 30.2 | 5.9 | 7.8 | 31.4 | 42.9 |
| Mississippi Pool 16 | 6.3 | 5.3 | 3.5 | 42.5 | 12.2 |
| Lake Oahe | 23.6 | 6.8 | 13.6 | 27.9 | 38.6 |
| Lake Ouachita | 45.8 | 10.6 | 4.0 | 25.7 | 39.2 |
| Lake Shelbyville | 39.7 | 11.8 | 5.3 | 23.9 | 40.5 |
| Shenango River Lake | 38.1 | 10.7 | 5.7 | 23.4 | 34.4 |
| West Point Lake | 27.9 | 7.4 | 3.9 | 24.2 | 43.6 |
| CRS total/mean | 32.2 | 9.3 | 4.8 | 26.3 | 34.5 |
| Inese |  |  |  |  |  |

${ }^{1}$ These categories are not mutually exclusive. Camping groups could bring with them multiple types of camping equipment, which may account for nationwide totals that exceed 100 percent.
therefore, tents may not necessarily be the principal means of camping for those groups that reported using them. Overall, the nationwide averages of other types of camping equipment included travel trailers ( 26.3 percent), pop-up trailers ( 9.3 percent), and pickup campers ( 4.8 percent). In terms of other recreation equipment, more than one third ( 34.5 percent) of all camping parties brought a powerboat to CRS projects.

## Trend Analysis

One of the primary purposes of the CRS was to create a database that would enable the prediction of trends in recreational use. Each year of data collection improves the predictability of a trend analysis. A comparison of the CRS databases for the years 1984 through 1990 is presented in Figures 2-15. Where no bars appear on the bar charts, data were unavailable or missing. Because of the inadequacy of forms for the 1986-87 data (DeMoss and Titre 1991), Lake Oahe was not included in the 1987 analysis. Also, because of a very high rate of no response at Lake Barkley, Lake Ouachita, and Lake Shelbyville (1987), the values in Figures 7-15 are extremely low. Lake Barkley and Hartwell Lake did not participate in the 1988 study (DeMoss 1991). Therefore, the figures will also reflect this lack of information in all charts.

Across the nine projects, mean party size has not changed dramatically since 1984 (Figure 2). For Shenango Lake, the averages continued to decrease from 3.8 in 1984 to 3.6 in 1986, but returned to 4.0 in 1989 (DeMoss 1992) and decreased again in 1990 to 3.5. Mississippi Pool 16 reported some of the smallest party sizes, with a steady decrease from 2.7 in 1984 to 2.4 in 1990. Less than a 1 -percent difference was noted between the highest and lowest years. Mean length of stay (Figure 3) exhibits greater variation among the projects than mean group size. The averages ranged from a low of 1.7 nights for 1984 at Milford Lake to a high of 4.5 during 1986 at Lake Shelbyville.

From 1984 to 1990 a general increase occurred in the percentage of campers with prior visits to the project and with the project as their primary destination (Figures 4 and 5). However, Lake Barkley showed a decrease, from 78.3 percent in 1989 to 47.7 percent in 1990. For Lake Barkley, the percentage of campers with primary destination decreased from 93.4 in 1989 to 51.4 in 1990.

Golden Age passport use tended to be highly variable between projects, yet fairly stable within projects with a few exceptions (Figure 6). Percentages ranged from 49.3 percent for Shenango Lake in 1985 to 3.1 percent for Lake Oahe in 1990 (Lake Oahe's data are for 2 months only). The 0.0 and 3.0 percent values reported at Mississippi Pool 16 in 1986-87 tended to be low for this project. Mississippi Pool 16 and Shenango Lake (1985) displayed relatively high percentages.

Parties with cars displayed consistent patterns over the 7-year period (Figure 7). Each project showed a decrease in the use of cars. Hartwell Lake had the largest variation, with a range from 58.3 to 29.4 percent. Parties with trucks (Figure 8) exhibited a different pattern of increases and decreases. The use of trucks tended to increase slightly except for Lake Barkley, where it decreased in 1990 only.

Figure 9 shows a slight increase in the use of vans by camping parties except at Lake Barkley and West Point Lake. Lake Barkley showed an increase from 9.1 to 10.6 percent and a decrease to 7.3 percent in 1990. Hartwell Lake decreased 1.6 percent in 1985; however, there has been an increase since then ( 8.8 to 14.0 percent in 1990).

Motor home use exhibited considerable variability across projects as can be seen in Figure 10. The highest use occurred at Mississippi Pool 16, where the data showed a steady increase to 41.2 percent in 1989 with a slight drop to 40.3 in 1990. Overall, the use of motor homes as camping vehicles was low compared to other types of camping equipment.

As shown in Figure 11, for the category parties with tents, a stable pattern within projects was evident. However, the pattern among projects displayed a decrease in use or a very slight increase. For example, the lowest use occurred at Mississippi Pool 16, where about 6.3 percent of the camping parties in 1990 used tents. The highest occurrence was 65.4 percent, in 1984, for parties at Lake Ouachita, with a decrease to 45.8 percent in 1990.
:The use of pop-up trailers tended to be fairly stable across and within projects, with the exception of a single high value of 62.3 percent at Hartwell Lake in 1985 (Figure 12). There was a general decrease, with the exception of West Point Lake and Lake Shelbyville. This was similar to camping parties with pickup campers (Figure 13), in which a pattern of decrease was shown within each project. The use of this type of camping equipment was very low for projects such as Hartwell Lake ( 2.0 percent in 1989); in contrast, pickup campers were more popular at Lake Oahe, with a high of 20.0 percent of the camping parties in 1985 using them.

In contrast to the previous figure, Mississippi Pool 16 shows the overall highest use of travel trailers, with percentages ranging from 39.9 to 49.4 (Figure 14). Most projects report the use of this equipment to be an average of about 25 percent.

Except for the 1986-87 data record, the use of powerboats tended to be relatively uniform across projects, except Hartwell Lake, which had asteady decrease from 37.4 to 23.2 percent (Figure 15). Powerboat use by camping parties decreased at Lake Barkley from 48.8 percent in 1989 to 21.1 percent in 1990.

## Potential Uses of CRS Database

## Analysis of visitor origin

In Figures 16-24, an analysis was performed using Zip Codes to reveal the origin of camping parties to CRS projects. The figures show how projects differ in relation to their ability to draw visitors from different parts of the country. For each figure, the first map (Figure 16a, for example) illustrates all visitors, while the second map (Figure 16b) shows only visitors that claimed this project as their primary destination. Figure 17 illustrates that Hartwell Lake, on the eastern border of Georgia, received visitors from the Mid-Atlantic, Great Lakes area, Southeast, California, and Texas. The majority of these users, however, were from just four states: Georgia, Florida, and North and South Carolina. In contrast, Lake Oahe (Figure 20), which is located in North and South Dakota, received visitors from over almost all of the states. In addition, the majority of those users were from a six-state region rather than a four-state region. In four campgrounds, there was no visual difference between the two maps. The removal of the primary destination visitors did not change the percentage in any of the states for Hartwell Lake, Milford Lake, Mississippi Pool 16, and Lake Shelbyville.

## Occupancy rates

Additional uses of the CRS include an examination of occupancy rates. Occupancy rates are a key indicator of economic viability in the hotelmotel industry. They were also used successfully to reveal a decline of 19 percent in average daily occupancy rates for nationwide camping during the 1978 fuel shortage (LaPage and Cormier 1979).

Occupancy rates were examined by year and month and on a daily basis (Appendix B). A calendar was used to show how camping is distributed throughout the month (Figure 25). The month of July was chosen since the months of June, July, and August are usually the months of highest usage. However, the three highest months were used to calculate monthly and yearly occupancy rates. For most projects, the months of June, July, and August were the highest months. There were exceptions, such as Lake Barkley, where the three highest months were May, June, and July. A special event such as flooding or drought could decrease the monthly occupancy rates; however, Figure 25 shows the most "normal" occupancy rate. It shows a high occupancy rate for the first week of July (a holiday). The following weeks of July return to the "normal" rates, with lower values on Sunday through Thursday and a jump to high values on weekends (Friday and Saturday).

This type of analysis can be useful in helping managers evaluate utilization patterns at campgrounds with a view toward improving efficiency.

## Fee paid per site

In Table 6, the average fee revenue generated per campsite was calculated for each project. This statistic was calculated by taking the total fee revenue generated at each project and dividing that amount by the total number of campsites at each project. This formula can be found in Appendix C, along with other formulas used in analyzing 1990 CRS data. Lake Barkley had the highest revenue per site at $\$ 105.03$, and Lake Milford was the lowest at $\$ 30.70$. Lake Oahe was mathematically lower than the other projects, because the fee paid per site represented 2 months instead of 3 months. This information can be used to show on an average how much revenue each site is contributing to the project and to compare the efficiency of fees collected at different projects.

| Table 6 <br> Total Fee per Site Paid at Each Project, 1990 <br> Project |  |
| :--- | :--- |
| Lake Barkiey Pald per Slte ${ }^{1}$ |  |
| Hartwell Lake | 105.03 |
| Milford Lake | 46.80 |
| Mississippi Pool 16 | 30.70 |
| Lake Oahe ${ }^{2}$ | 93.78 |
| Lake Ouachita | 26.72 |
| Lake Shelbyville | 90.64 |
| Shenango River Lake | 84.37 |
| West Point Lake | 95.65 |
| Represents the total fee paid at each project for the three highest months divided by the <br> number of sites at each project. <br> Lake Oahe figures are based on only two months of data. |  |

## 3 Conclusions and Recommendations

## Conclusions

The recent availability of computer technology at the field level has dramatically changed the possibilities regarding data entry and retrieval for analysis and reporting of campground information. The development of the Automated Use Permit System (AUPS) (Akers-Fritschen 1988) was an advancement in the direction of computer-aided management information systems. AUPS allows campground attendants to use microcomputers to register campers and collect and track camping fees. It was designed to incorporate the data requirements of the CRS so that any Corps project utilizing AUPS can collect CRS data. CRS-related questions are displayed by AUPS while campers register according to whether a program "switch" was set. This capability eliminates the need for keypunching and error checking and provides some onsite data analysis capability.

Currently, field-level personnel can use dBASE software to generate reports on variables such as site occupancy, average length of stay, Zip Codes, average group size, and number of Golden Age and Access permit holders. AUPS provides data that managers can review to resolve problems in a timely manner or to improve the efficiency of operating and maintaining campgrounds. These data can be useful to planners when evaluating future recreation area designs, as well as rehabilitation projects. For example, District planners can compare key variables such as site occupancy across projects and recreation areas, since the data have been gathered using the same methods.

The applications illustrated in this report are merely examples for managers to use to identify additional applications. The transition from paper forms to the AUPS will enhance future management applications of the data.

## Recommendations

The data in the CRS and the AUPS have reached the point at which project managers and District personnel can make decisions rapidly in response to on-the-ground changes in the use of Corps areas. This AUPS/CRS combined system has been shown to improve overall efficiency and can address current problems by giving resource managers better information in order to manage within a constantly changing environment. It is recommended that the CRS effort continue and that researchers and managers search for common ground in devising strategies to better serve the Corps visitor, based on current information.

## References


#### Abstract

Akers-Fritschen, Janet. 1985. Summary of the 1983 campground receipt study. Miscellaneous Paper R-85-2. Vicksburg, MS: US Army Engineer Waterways Experiment Station.


$\qquad$ . 1988. The automated use permit system. Recnotes. Vol R-88-3. Vicksburg, MS: US Army Engineer Waterways Experiment Station.

Curtis, G. L., and Hansen, W. J. 1982. Summary of the 1981 campground receipt study. Miscellaneous Paper R-82-3. Vicksburg, MS: US Army Engineer Waterways Experiment Station.

DeMoss, Terè A., and Titre, John P., Jr. 1991. Summary of the 1986-87 campground receipt study. Miscellaneous Paper R-91-2. Vicksburg, MS: US Army Engineer Waterways Experiment Station.

DeMoss, Terè A. 1991. Summary of the 1988 campground receipt study. Miscellaneous Paper R-91-3. Vicksburg, MS: US Army Engineer Waterways Experiment Station.
$\qquad$ . 1992. Summary of the 1989 campground receipt study. Technical Report (in preparation). Vicksburg, MS: US Army Engineer Waterways Experiment Station.

Hart, William J. 1981. Recreation research and demonstration system: Its selection, operation and potential utility. Technical Report R-81-1. Vicksburg, MS: US Army Engineer Waterways Experiment Station.

LaPage, Wilbur F., and Cormier, Paula L. 1979. The National campground occupancy index. Report to the Board of Directors, National Campground Owners Association, US Department of Agriculture, and US Forestry Service.

Lawrence, Larry R., and Akers-Fritschen, Janet. 1986. Summary of the 1984 campground receipt study. Miscellaneous Paper R-86-1. Vicksburg, MS: US Army Engineer Waterways Experiment Station.


Figure 1. Campground Receipt Study project locations


Figure 2. Mean number in party, 1984-90


Figure 3. Mean length of stay (in days), 1984-90


Figure 4. Percent of camping parties with prior visits to the project, 1984-90


Figure 5. Percent of camping parties having the project as their primary destination, 1984-90


Figure 6. Percent of camping parties using Golden Age passports, 1984-90


Figure 7. Percent of camping parties with cars, 1984-90


Figure 8. Percent of camping parties with trucks, 1984-90


Figure 9. Percent of camping parties with vans, 1984-90


Figure 10. Percent of camping parties with motor homes, 1984-90


Figure 11. Percent of camping parties with tents, 1984-90


Figure 12. Percent of camping parties with pop-up trailers, 1984-90


Figure 13. Percent of camping parties with pickup campers, 1984-90


Figure 14. Percent of camping parties with travel trailers, 1984-90


Figure 15. Percent of camping parties with powerboats, 1984-90


Figure 16. Lake Barkley, 1990


Figure 17. Hartwell Lake, 1990


Figure 18. Milford Lake, 1990


Figure 19. Mississippi Pool 16, 1990


Figure 20. Lake Oahe, 1990


Figure 21. Lake Ouachita, 1990


Figure 22. Lake Shelbyville, 1990

a. Percent of camping groups by state

b. Percent of camping groups for which this campground was their primary destination by state

Percent of All Groups


Figure 23. Shenango River Lake, 1990


Figure 24. West Point Lake, 1990

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 93.67 | 94.94 | 94.94 | 84.81 | 83.54 | 87.34 | 81.01 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 22.78 | 24.05 | 13.92 | 24.05 | 39.24 | 48.10 | 40.51 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22.78 | 26.58 | 20.25 | 21.52 | 27.85 | 53.16 | 53.16 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 18.99 | 12.66 | 18.99 | 20.25 | 37.97 | 64.56 | 58.23 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 16.46 | 13.92 | 15.19 |  |  |  |  |  |


| Occupancy Rate for Month | 43.08 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 54.01 |
| Occupancy Rate for Weekdays During Month | 38.61 |

[^2]Figure 25. Site occupancy for Hartwell Lake-Springfield, July 1990. Occupancy rate was calculated by the number of nights paid divided by (number of calendar nights $\times$ number of campsites)

# Appendix A <br> 1990 CRS Data Summaries <br> for Individual Recreation Areas 

The contents of Tables A1-A9 are summarized below.

| Project | Area | Recreatlon Management Area No. | Table |
| :---: | :---: | :---: | :---: |
| Lake Barkley | Eureka <br> Canal <br> Boyds Landing Hurricane Creek Devels Elbow Bumpus Mills | $\begin{aligned} & 104 \\ & 105 \\ & 108 \\ & 124 \\ & 134 \\ & 145 \end{aligned}$ | A1 |
| Hartwell Lake | Watsadlers <br> Springfield <br> Milltown <br> Paynes Creek Oconee Point <br> Twin Lake <br> Coneross Park | 005 011 027 038 066 068 070 | A2 |
| Milford Lake | Curtis Creak Farnum Creek Rolling Hills School Creek Timber Creek | $\begin{aligned} & 003 \\ & 004 \\ & 008 \\ & 009 \\ & 010 \end{aligned}$ | A3 |
| Mississippi Pool 16 | Clarks Ferry Shady Creak | $\begin{aligned} & 001 \\ & 003 \\ & \hline \end{aligned}$ | A4 |
| Lake Oahe | Downstream North | 002 | A5 |
| Lake Ouachita | Denby Point Crystal Springs Brady Mountain | 011 <br> 014 <br> 015 | A6 |
| Lake Shelbyville | Opposum Creek <br> Coon Creek <br> Lone Point <br> Lithia Springs <br> Forest Wood <br> Whitley Creek | 001 <br> 002 <br> 003 <br> 016 <br> 018 <br> 019 | A7 |
| Shenango River Lake | Shenango Rec. Area | 002 | A8 |
| West Point Lake | R. Shaefer Heard Holiday Park State Line Park Amity Park White Tail Ridge | $\begin{aligned} & 001 \\ & 031 \\ & 036 \\ & 040 \\ & 045 \end{aligned}$ | A9 |

Table A1
Lake Barkley 1990 CRS Data

|  | Boyds Landing | Bumpus Mills | Conal | Devels Elbow | Eureka | Hurricane Creek | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sumpary Statistic |  |  |  |  |  |  |  |
| Total Permits ${ }^{1}$ | 197 | 381 | 2,768 | 363 | 276 | 1.017 | 5,002 |
| \|rotal groups ${ }^{2}$ | 182 | 3611 | 2,591 | 3271 | 2761 | 989 | 4,726 |
| \|Recreation Days ${ }^{1,2}$ | 1,595 | 2,516 | 26,104 | 1,586 | 2,384 | 8,411 | 42,596 |
| \|Nights Spent | 2.8 | 2.5 | 3.7 | 1.8 | 2.71 | 3.1 | 3.3 |
| Party size Occupancy Rate: ${ }^{3}$ | 3.1 | 2.7 | 2.7 | 2.8 | 3.3 | 2.8 | 2.8 |
| Total | 29.6 | 19.0 | 62.6 | 22.7 | 27.4 | 38.0 | 33.2 |
| Heekend | 38.1 | 26.8 | 75.1 | 37.8 | 37.2 | 47.8 | 43.8 |
| ${ }_{\text {Weekdays }}^{1}$ | 26.0 | 15.6 | 57.4 | 16.4 | 23.4 | 33.9 | 28.8 |
| Total Fees ${ }^{1}$ | \$1,038 | \$1,409 | \$13,520 | 5886 | \$1,298 | \$5,272 | \$23,421 |
| Average Fee Paid per site | \$74 | 343 | \$159 | \$47 | 362 | \$103 | 581 |
| User Characteristics |  |  |  |  |  |  |  |
| Prior Visits | 92.9 | 68.4 | 45.7 | 84.7 | 84.8 | 14.8 | 47.7 |
| Primary Destination | 97.3 | 99.7 | 44.7 | 89.9 | 97.5 | 17.6 | 51.4 |
| Golden Age | 20.3 | 15.5 | 41.3 | 18.0 | 38.0 | 26.4 | 33.6 |
| colden Access | 5.5 | 4.2 | 8.2 | 2.4 | 0.7 | 9.1 | 7.1 |
| Vehicle Equipment |  |  |  |  |  |  |  |
| Car | 33.5 | 28.3 | 18.1 | 23.2 | 51.4 | 3.4 | 18.7 |
| Truck | 52.7 | 53.2 | 28.8 | 56.0 | 59.1 | 9.4 | 31.1 |
| Van | 22.5 | 6.6 | 6.8 | 10.4 | 12.7 | 3.3 | 7.3 |
| Motor Home | 6.6 | 17.5 | 15.5 | 5.5 | 8.0 | 6.4 | 12.3 |
| Camping Equipment |  |  |  |  |  |  |  |
| Tent | 48.9 | 38.0 | 7.8 | 57.5 | 44.9 | 2.6 | 16.2 |
| Pop-up Trailer | 8.8 | 8.9 | 3.4 | 4.3 | 11.2 | 1.1 | 4.1 |
| Pickup Camper | 13.7 | 9.1 | 3.0 | 6.4 | 12.3 | 2.3 | 4.5 |
| Travel Irailer |  |  | 22.8 | 8.0 | 27.2 | 4.7 | 17.4 |
| Recreational Equipment |  |  |  |  |  |  |  |
| Powerboat | 34.1 | 48.2 | 11.8 | 55.0 | 53.3 | 12.6 | 21.1 |
| Sailboat | 0.0 | 0.0 | 0.3 | 0.6 | 12.0 | 0.0 | 0.9 |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total nuber of permits for each area 3 to compute project averages. The total was a sun.
3 Occupancy Rate is calculated by the number of nights paid divided by (the number of calendar nights multiplied by the number of sites at each campground).
4 Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A2
Hartwell Lake 1990 CRS Data

|  | Coneross Park | Milttom | Oconee Point | Paynes Creek | Springfield | Twin Lake | Ustsadlers | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Summary Statistic |  |  |  |  |  |  |  |  |
| Total Permits ${ }^{1}$ | 520 | 141 | 170 | 349 | 1,868 | 1,979 | 2,574 | 7.601 |
| \|Total groups ${ }^{1}$ | 369 | 871 | 1341 | 268 | 1,377 | 1,442 | 1,889 | 5,566 |
| \|Recreation Days ${ }^{1,2}$ | 5,233 | 1,316 | 1.174 | 3,360 | 18,846 | 16,917 | 17,473 | 64,319 |
| Nights Spent | 3.5 | 3.1 | 2.1 | 3.0 | 3.2 | 3.0 | 3.4 | 3.2 |
| $\begin{aligned} & \text { Party size } \\ & \text { Occupency Rate } \end{aligned}$ | 4.2 | 3.8 | 4.1 | 4.7 | 4.1 | 4.1 | 2.8 | 3.7 |
| rotal | 14.8 | 8.6 | 8.4 | 11.8 | 41.0 | 31.1 | 58.7 | 24.9 |
| Weekend | 22.9 | 16.6 | 15.2 | 21.2 | 60.0 | 54.9 | 84.6 | 39.4 |
| Heekdays ${ }_{\text {\% }}$ | S3 11.1 | $\begin{array}{r}4.7 \\ \hline 353\end{array}$ | 5 | $\begin{array}{r}7.3 \\ \hline 1588\end{array}$ | 31.8 | 21.1 | 47.8 | 18.4 |
| Total Fees ${ }^{1}$ | \$3,340 | \$353 | \$411 | \$1,558 | 88,048 | \$7,369 | \$7,377 | \$28,456 |
| Average Fee Paid <br> per Site | \$32 | \$7 | 57 | \$20 | \$102 | \$72 | \$145 | \$55 |
| User Characteristics |  |  |  |  |  |  |  |  |
| Prior Visits | 48.0 | 88.5 | 87.3 | 67.9 | 95.3 | 80.0 | 91.8 | 85.4 |
| Primary Destination | 52.8 | 94.3 | 97.0 | 94.4 | 98.6 | 95.5 | 98.8 | 94.5 |
| Golden Age | 19.0 | 3.4 | 0.7 | 10.1 | 21.4 | 16.9 | 41.5 | 25.5 |
| Golden Access | 1.1 | 0.0 | 0.7 | 1.1 | 6.8 | 3.3 | 4.7 | 4.3 |
| Vehicle Equipment |  |  |  |  |  |  |  |  |
| Car | 37.1 | 31.0 | 45.5 | 36.6 | 46.7 | 36.7 | 29.6 | 36.9 |
| Truck | 46.1 | 63.2 | 50.7 | 52.6 | 51.1 | 52.4 | 54.6 | 52.6 |
| Van | 12.7 | 18.4 | 9.7 | 16.8 | 17.8 | 13.9 | 11.2 | 14.0 |
| Motor Home | 12.7 | 4.6 | 3.0 | 13.4 | 20.5 | 18.0 | 22.6 | 19.0 |
| Camping Equipment |  |  |  |  |  |  |  |  |
| Tent | 38.8 | 66.7 | 79.9 | 47.4 | 29.9 | 36.1 | 16.2 | 30.1 |
| Pop-up Trailer | 11.1 | 10.3 | 8.2 | 13.4 | 14.3 | 11.9 | 10.3 | 11.9 |
| Pickup Camper | 3.0 | 1.1 | 3.0 | 2.2 | 1.5 | 2.2 | 2.8 | 2.3 |
| Travel $\mathrm{Trail}^{\text {a }}$ | 28.7 | 8.0 | 3.0 | 17.2 | 36.2 | 24.4 | 45.1 | 33.5 |
| Recreational Equipment |  |  |  |  |  |  |  |  |
| Powerboat | 18.4 | 48.3 | 30.6 | 34.0 | 29.5 | 28.4 | 12.2 | 23.2 |
| Sailboat | 1.9 | 0.0 | 0.0 | 3.4 | 1.0 | 0.9 | 0.9 | 1.1 |

[^3]Table A3
Milford Lake 1990 CRS Data

|  | curtis Creek | Farnum Creek | Rolling Hills | school Creek | Timber Creek | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Summary Statistic |  |  |  |  |  |  |
| Total Permits ${ }^{1}$ | 1,036 | 408 | 1,184 | 159 | 180 | 2,967 |
| \|rotal groups ${ }^{1}$ | 976 | 123 | 961 | 154 | 281 | 2,242 |
| \|Recreation Days ${ }^{1,2}$ | 6,356 | 3,094 | 6,3351 | 1,200 | 8321 | 17,817 |
| Wights Spent | 2.01 | 6.5 | 2.1 | 2.6 | 8.4 | 2.4 |
| Party Size Occupancy Rate ${ }^{3}$ | 3.4 | 4.2 | 3.1 | 2.8 | 4.2 | 3.3 |
| Total | 17.8 | 7.8 | 25.6 | 7.3 | 2.0 | 12.1 |
| Weekend | 35.7 | 14.8 | 44.4 | 13.9 | 5.0 | 22.8 |
| ${ }^{\text {Heekdays }}$ | 10.3 | 4.98 | 17.7 | 4.5 | 0.8 | 7.6 |
| Total fees ${ }^{1}$ | \$4,329 | \$1,327 | 84,359 | 5334 | \$304 | \$10,653 |
| Average Fee Paid per site | \$54 | \$17 | \$75 | 58 | 84 | \$31 |
| User Characteristics |  |  |  |  |  |  |
| Prior Visits | 99.2 | 95.9 | 98.6 | 100.0 | 85.7 | 98.7 |
| Primery Destination | 98.5 | 58.5 | 99.2 | 100.0 | 82.1 | 96.5 |
| Golden Age | 16.3 | 22.0 | 23.3 | 33.8 | 7.1 | 20.7 |
| Golden Access | 0.9 | 1.6 | 3.2 | 0.0 | 0.0 | 1.9 |
| Vehicle Equipment |  |  |  |  |  |  |
| Car | 33.2 | 26.8 | 29.3 | 18.2 | 35.7 | 30.2 |
| Truck | 58.8 | 46.3 | 53.8 | 61.0 | 50.0 | 56.0 |
| Van | 15.3 | 11.4 | 18.7 | 6.5 | 32.1 | 16.1 |
| Motor Home | 15.4 | 19.5 | 15.6 | 18.2 | 10.7 | 15.8 |
| Comping Equipment |  |  |  |  |  |  |
| rent | 31.9 | 1.6 | 32.3 | 26.6 | 46.4 | 30.2 |
| Pop-up Yraller | 5.4 | 3.3 | 6.7 | 6.5 | 3.6 | 5.9 |
| Pickup Camper | 7.1 | 15.4 | 5.5 | 20.1 | 10.7 | 7.8 |
| Travel Trailer | 29.0 | 30.1 | 34.5 | 30.5 | 21.4 | 31.4 |
| Recreational Equipment |  |  |  |  |  |  |
| Powerboat | 55.2 | 50.4 | 33.1 | 20.8 | 39.3 | 42.9 |
| Sailboat | 1.3 | 0.0 | 0.6 | 0.0 | 0.0 | 0.8 |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total nuber of permits for each area
3 to compute project averages. The total was a sum.
3 occupancy Rate is calculated by the number of nights paid divided by (the mumber of
4 calendar nights multiplied by the number of sites at each camporound).
4 Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A4
Mississippi Pool 161990 CRS Data

|  | Clarks Ferry | Shady Creek | Total |
| :---: | :---: | :---: | :---: |
| Summary Statistic |  |  |  |
| Total Permits ${ }^{1}$ | 2,081 | 1,464 | 3,545 |
| \|Total groupa ${ }^{1}$ | 1,653 | 1,324 | 2,977 |
| \|Recreation Days ${ }^{1,2}$ | 11,551 | 8,001 | 19,552 |
| Wights spent | 3.0 | 2.7 | 2.9 |
| party size Occupancy Rate ${ }^{3}$ | 2.4 | 2.4 | 2.4 |
| rotal | 62.11 | 52.4 | 57.2 |
| Weekend | 87.1 | 80.2 | 83.7 |
| Weekdays | 51.6 | 40.8 | 46.2 |
| rotal Fees ${ }^{1}$ | 35,723 | \$3,467 | \$9,191 |
| Average Fee Paid per Site | \$108 | 577 | 593 |
| User Characteristics |  |  |  |
| Prior Visits | 72.1 | 82.7 | 76.8 |
| Primary Destination | 95.5 | 97.8 | 96.5 |
| Golden Age | 43.0 | 53.7 | 47.8 |
| Golden Access | 8.2 | 8.6 | 8.4 |
| Vehicie Equipment |  |  |  |
| Car | 37.2 | 35.2 | 36.3 |
| Truck | 46.8 | 40.2 | 43.9 |
| Van | 13.0 | 10.8 | 12.0 |
| Motor Home | 36.5 | 45.1 | 40.3 |
| Camping Equipment |  |  |  |
| Tent | 5.6 | 7.1 | 6.3 |
| Pop-up Trailer | 6.7 | 3.5 | 5.3 |
| Pickup Camper | 3.6 | 3.3 | 3.5 |
| Travel iraiter | 45.6 | 38.6 | 42.5 |
| Recreational Equipment |  |  |  |
| Powerboat | 17.4 | 5.7 | 12.2 |
| Sailboat | 0.0 | 0.0 | 0.0 |

${ }^{1}$-These tetals are reported as stan - calt others are the percent of tilt users).
Recreation area averages were weighted by the total number of permits for each area 3 to compute project averages. The total mas a sum.
Occupancy Rate is calculated by the number of nights paid divided by (the number of
calendar nights multiplied by the number of sites at each campground).
Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A5
Lake Oahe 1990 CRS Data

|  | Downstream North | Total |
| :---: | :---: | :---: |
| Summary Statistic |  |  |
| Total Permits ${ }^{1}$ \| Total groups | Recrestion Days | 1,714 1,438 8,544 | 1,714 1,438 8,544 |
| Nights Spent Party size Occupency Rate ${ }^{3}$ | $\begin{aligned} & 2.2 \\ & 2.8 \end{aligned}$ | 2.2 2.8 |
| Total Weekend Weekdays Total Fees ${ }^{1}$ | 26.9 41.4 20.5 510,687 | $\begin{array}{r} 26.9 \\ 41.4 \\ 20.5 \\ \$ 10,687 \end{array}$ |
| Average Fee Paid per site | 886 | \$66 |
| User Characteristics |  |  |
| Prior Visits Primary Destination Golden Age Golden Access | 69.1 73.2 28.6 3.1 | 69.1 73.2 28.6 3.1 |
| Vehicle equipment |  |  |
| Car <br> Truck <br> Van <br> Hotor Home | 17.0 55.9 11.8 24.1 | 17.0 55.9 11.8 24.1 |
| Comping Equipment |  |  |
| Tent <br> Pop-up Trailer Pickup Comper Travel Trailer | $\begin{array}{r} 23.6 \\ 6.8 \\ 13.6 \\ 27.9 \end{array}$ | 23.6 6.8 13.6 27.9 |
| Recreational Equipment |  |  |
| Powerboat Sailboat | $\begin{array}{r} 38.6 \\ 0.1 \end{array}$ | 38.6 0.1 |

1 These totals are roperted as- sums (alt others are-thepercent of atitusers):
2 Recreation area averages were woighted by the total number of permits for each area to compute project averages. The total was a sum.
3 Occupancy Rate is calculated by the number of nights paid divided by (the rumber of calendar nights multiplied by the number of sites at each campround).
4 Average fee poid per site was the total fee collected at each area divided by the number of sites at that area.

Table A6
Lake Ouachita 1990 CRS Data

|  | $\left\|\begin{array}{c} \text { Brady } \\ \text { Mountain } \end{array}\right\|$ | Crystal Springs | Denby Point | Total |
| :---: | :---: | :---: | :---: | :---: |
| Summery Statistic |  |  |  |  |
| Total Permits ${ }^{1}$ | 3,892 | 2,712 | 2,792 | 9,396 |
| \|Total groups ${ }^{\text {² }}$. | 2,462 | 1,835 | 1,819 | 6,116 |
| \|Recreation Days ${ }^{1,2}$ | 29,008 | 19,439 | 21,673 | 70,120 |
| Wights Spent | 3.2 | 3.2 | 3.7 | 3.4 |
| $\left\lvert\, \begin{aligned} & \text { Party Size } \\ & \text { Occupency Rate } \end{aligned}\right.$ | 3.6 | 3.3 | 3.4 | 3.4 |
| Total | 81.5 | 59.1 | 65.0 | 68.6 |
| Weekend | 102.3 | 85.3 | 91.6 | 93.1 |
| ${ }_{\text {Weekdoys }}^{1}$ | 72.8 | 48.2 | 533.9 | 58.3 |
| Total fees ${ }^{1}$ | \$15,970 | \$11,391 | \$10,707 | \$38,067 |
| Average Feq Paid <br> per Site | \$216 | \$154 | \$160 | \$177 |
| User Characteristics |  |  |  |  |
| Prior Visits | 76.1 | 61.6 | 68.3 | 69.4 |
| Primary Destination | 91.2 | 86.2 | 91.5 | 89.8 |
| colden Age | 10.6 | 15.7 | 23.7 | 16.0 |
| Golden Access | 3.4 | 4.0 | 6.6 | 4.5 |
| Vehicle Equipment |  |  |  |  |
| Car | 40.0 | 33.5 | 25.2 | 33.6 |
| Truck | 50.9 | 60.2 | 59.9 | 56.4 |
| Van | 45.3 | 12.8 | 11.4 | 13.4 |
| Motor Home | 12.8 | 13.2 | 19.2 | 14.8 |
| Cemping Equipment |  |  |  |  |
| Tent | 55.1 | 43.9 | 35.2 | 45.8 |
| Pop-up Trailer | 12.8 | 9.6 | 8.7 | 10.6 |
| Pickup Camper | 3.9 | 2.9 | 5.3 | 4.0 |
| Travel Trailer | 17.9 | 27.9 | 33.9 | 25.7 |
| Recreational Equipnent |  |  |  |  |
| Powerboat | 30.6 | 44.4 | 45.5 | 39.2 |
| Sailboat | 5.0 | 6.4 | 8.3 | 5.8 |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total number of permits for each area to compute project overages. The total was a sum.
3 occupancy Rate is calculated by the number of nights paid divided by (the number of calendar nights multiplied by the number of sites at each campground).
4 Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A7
Lake Shelbyville 1990 CRS Data

|  | Coon Creek | Forest Hood | Lithia Springs | Lone Point | Opposum Creek | Whitey Creek | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sumery Statistic |  |  |  |  |  |  |  |
| Total Permits ${ }^{1}$ | 5,477 | 2,924 | 4,095 | 828 | 722 | 1,120 | 15,166 |
| Total groups ${ }^{1}$ | 4.783 | 2,523 | 3,525 | 655 | 6391 | 1,065 | 13,190 |
| Recreation Days ${ }^{1,2}$ | 42,260 | 20,370 | 28,958 | 6,912 | 5,0991 | 9,389 | 112,988 |
| Wights Spent | 2.6 | 3.0 | 2.6 | 3.0 | 2.6 | 2.3 | 2.7 |
| Party size Occupancy Rate ${ }^{3}$ | 3.3 | 2.8 | 3.1 | 3.5 | 3.3 | 3.8 | 3.2 |
| Total | 42.2 | 57.0 | 53.2 | 23.4 | 26.9 | 31.3 | 39.0 |
| Weekend | 68.9 | 77.6 | 82.5 | 46.1 | 49.2 | 59.7 | 64.0 |
| Weekdays, | 31.1 | 48.4 | 41.0 | 16.9 | 18.8 | 20.7 | 29.2 |
| Total Fees ${ }^{1}$ | \$21,655 | \$11,281 | \$18,240 | 32,641 | 32,360 | \$1,782 | \$57,960 |
| Average Fee Paid per site | $\$ 98$ | \$138 | 5148 | \$28 | \$29 | \$21 | \$77 |
| User Characteristics |  |  |  |  |  |  |  |
| Prior Visits | 90.0 | 99.5 | 72.7 | 69.3 | 87.6 | 96.9 | 86.6 |
| Primary Destination | 97.7 | 99.8 | 96.7 | 86.6 | 96.9 | 99.1 | 97.3 |
| Golden Age | 14.3 | 35.2 | 17.1 | 9.5 | 14.7 | 2.5 | 17.9 |
| Golden Access | 2.0 | 2.0 | 2.0 | 3.1 | 3.4 | 0.2 | 2.0 |
| Vehicle Equipnent |  |  |  |  |  |  |  |
| Car | 36.1 | 35.0 | 33.2 | 32.4 | 44.1 | 46.7 | 36.2 |
| Truck | 49.0 | 50.6 | 38.7 | 48.4 | 43.8 | 40.4 | 45.6 |
| Van | 18.3 | 20.7 | 21.9 | 19.2 | 12.4 | 22.4 | 19.8 |
| Notor Home | 16.4 | 25.8 | 17.6 | 17.3 | 10.5 | 6.1 | 17.4 |
| Camping Equipment |  |  |  |  |  |  |  |
| Tent | 39.0 | 17.4 | 42.9 | 43.1 | 55.2 | 73.6 | 39.7 |
| Pop-up Trailer | 13.4 | 8.7 | 13.7 | 11.8 | 5.6 | 9.8 | 11.8 |
| Pickup Camper | 5.7 | 6.6 | 4.5 | 4.6 | 4.4 | 4.3 | 5.3 |
| Travel Trailer | 24.9 | 40.9 | 15.9 | 23.4 | 23.8 | 6.6 | 23.9 |
| Recreational Equipment |  |  |  |  |  |  |  |
| Powerboat | 42.3 | 42.8 | 37.3 | 44.4 | 29.0 | 42.6 | 40.5 |
| Sailboat | 0.4 | 0.1 | 0.3 | 11.1 | 0.9 | 0.6 | 0.9 |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total number of permits for each area to compute project averages. The total was a sum.
3 Occupancy Rate is calculated by the number of nights paid divided by (the number of calendar nights multiplied by the number of sites at each campground).
Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A8
Shenango River Lake 1990 CRS Data

|  | Shenango Rec Aree | Total |
| :---: | :---: | :---: |
| Sumary Statistic |  |  |
| Total Permits ${ }^{1}$ | 7.137 | 7,137 |
| \|rotal groups ${ }^{1}$ | 4,443 | 4,443 |
| (Recreation Days ${ }^{1,2}$ | 53,981 | 53,981 |
| Wights Spent | 3.4 | 3.4 |
| $\left\lvert\, \begin{aligned} & \text { Party size } \\ & \text { Occupancy Rate } \end{aligned}\right.$ | 3.5 | 3.5 |
| Total | 38.9 | 38.9 |
| Heekend | 59.6 | 59.6 |
| ${ }_{\text {Heekdays }}$ | 330.3 | 30.3 |
| Total fees ${ }^{1}$ | 331,565 | \$31,565 |
| Average Feg Paid <br> per Site | \$96 | 398 |
| User Characteristics |  |  |
| Prior Visits | 89.6 | 89.6 |
| Primary Destination | 97.1 | 97.1 |
| Golden Age | 18.4 | 18.4 |
| Golden Acces: | 4.4 | 4.4 |
| Vehicle Equipment |  |  |
| Car | 47.6 | 47.6 |
| Truck | 44.8 | 44.8 |
| Van | 16.3 | 16.3 |
| Motor Mome | 16.7 | 16.7 |
| Comping Equipment |  |  |
| Tent | 38.9 | 38.1 |
| Pop-up Trailer | 10.7 | 10.7 |
| Pickup Camper | 5.7 | 5.7 |
| Travel traller | 23.4 | 23.4 |
| Recreational Equipment |  |  |
| Powerboat Sailboat | $\begin{aligned} & 34.4 \\ & 36.6 \end{aligned}$ | $\begin{aligned} & 34.4 \\ & 36.6 \end{aligned}$ |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total number of permits for each area
3 to compute project averages. The total was a sum.
Occupancy Rate is calculated by the number of nights paid divided by (the number of
4 calendar nights multiplied by the number of sites at each campground).
Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

Table A9
West Point Lake 1990 CRS Data

|  | Amity Park | Holiday Park | R. Sheafer Heard | State Line Park | Wite Tail Ridge | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sumary Statistic |  |  |  |  |  |  |
| Total Permits ${ }^{\text {I }}$ | 1,004 | 2,969 | 2,119 | 853 | 1.126 | 8,063 |
| Total groups ${ }^{2}$ | 828 | 2,393 | 1,721 | - 734 | 1,016 | 6,692 |
| Recreation Days ${ }^{1,2}$ | 8,389 | 25,1791 | 16,591 | 7.866 | 9.922 | 67,947 |
| Nights Spent | 3.0 | 3.2 | 2.9 | 2.7 | 2.9 | 3.0 |
| Party size Occupancy Rate ${ }^{3}$ | 3.5 | 3.4 | 3.3 | 3.9 | 3.4 | 3.4 |
| Total | 19.6 | 36.7 | 38.0 | 14.2 | 32.6 | 28.2 |
| Weekend | 30.7 | 58.8 | 63.6 | 27.4 | 54.9 | 47.1 |
|  | 15.0 | 27.3 | 27.3 | 8.7 | 23.3 | 20.3 |
| Total Fees ${ }^{1}$ | S4,696 | \$13,135 | \$7,941 | \$4,234 | \$5,194 | \$35,200 |
| Average Fee Paid per site | 349 | \$91 | \$92 | \$34 | \$90 | \$71 |
| User Characteristics |  |  |  |  |  |  |
| Prior Visits | 63.3 | 95.2 | 75.8 | 84.1 | 88.0 | 84.0 |
| Primary Destination | 69.4 | 97.6 | 91.4 | 94.4 | 96.4 | 92.0 |
| Golden Age | 22.7 | 21.0 | 26.6 | 6.1 | 16.6 | 20.4 |
| Golden Access | 2.9 | 4.2 | 6.7 | 2.7 | 7.4 | 5.0 |
| Vehicle Equipment |  |  |  |  |  |  |
| Car | 35.4 | 25.6 | 34.7 | 46.6 | 33.9 | 32.7 |
| Truck | 60.1 | 65.2 | 54.0 | 56.3 | 66.3 | 60.9 |
| Van | 40.9 | 10.7 | 12.1 | 15.0 | 10.8 | 11.6 |
| Motor Home | 22.1 | 29.3 | 27.0 | 14.4 | 29.1 | 26.2 |
| Camping Equipment |  |  |  |  |  |  |
| Tent | 24.4 | 21.6 | 26.4 | 55.0 | 28.6 | 27.9 |
| Pop-up Trailer | 9.2 | 6.1 | 6.1 | 4.4 | 13.1 | 7.4 |
| Pickup Camper | 4.1 | 5.3 | 2.8 | 3.0 | 2.9 | 3.9 |
| Travel Trailer | 24.0 | 19.5 | 32.3 | 16.6 | 27.2 | 24.2 |
| Recreational Equipment |  |  |  |  |  |  |
| Powerbost | 36.6 | 58.0 | 26.6 | 50.7 | 39.2 | 43.6 |
| Sailboat | 7.1 | 0.6 | 2.4 | 13.9 | 1.3 | 3.4 |

1 These totals are reported as sums (all others are the percent of all users).
2 Recreation area averages were weighted by the total number of permits for each area to compute project averages. The total was a sum.
3 occupancy Rate is calculated by the number of nights paid divided by (the number of
calendar nights multiplied by the number of sites at each campground).
Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

## Appendix B <br> 1990 CRS Data Analysis of Occupancy Rates (July)

The contents of Tables B1-B36 are summarized below.

| Project | Area | Recreation Management Area No. | Table |
| :---: | :---: | :---: | :---: |
| Lake Barkley | Eureka <br> Canal <br> Boyds Landing Hurricane Creek Devels Elbow Bumpus Mills | $\begin{aligned} & 104 \\ & 105 \\ & 108 \\ & 124 \\ & 134 \\ & 145 \\ & \hline \end{aligned}$ | $\begin{aligned} & \text { B1 } \\ & \text { B2 } \\ & \text { B3 } \\ & \text { B4 } \\ & \text { B5 } \\ & \text { B6 } \end{aligned}$ |
| Hartwell Lake | Watsadlers <br> Springfield <br> Milltown <br> Paynes Creek Oconee Point <br> Twin Lake <br> Coneross Park | 005 <br> 011 <br> 027 <br> 038 <br> 066 <br> 068 <br> 070 | $\begin{aligned} & \text { B7 } \\ & \text { B8 } \\ & \text { B9 } \\ & \text { B10 } \\ & \text { B11 } \\ & \text { B12 } \\ & \text { B13 } \end{aligned}$ |
| Milford Lake | Curtis Creek Farnum Creek Rolling Hills School Creek Timber Creek | 003 <br> 004 <br> 008 <br> 009 <br> 010 | B14 <br> B15 <br> B16 <br> B17 <br> B18 |
| Mississippi Pool 16 | Clarks Ferry <br> Shady Creek | $\begin{aligned} & 001 \\ & 003 \end{aligned}$ | $\begin{aligned} & \text { B19 } \\ & \text { B20 } \end{aligned}$ |
| Lake Oahe | Downstream North | 002 | B21 |
| Lake Ouachita | Denby Point Crystal Springs Brady Mountain | 011 <br> 014 <br> 015 | $\begin{aligned} & \text { B22 } \\ & \text { B23 } \\ & \text { B24 } \\ & \hline \end{aligned}$ |
| Lake Shelbyville | Opposum Creek <br> Coon Creek <br> Lone Point <br> Lithia Springs <br> Forest Wood <br> Whitley Creek | $\begin{aligned} & 001 \\ & 002 \\ & 003 \\ & 016 \\ & 018 \\ & 019 \end{aligned}$ | $\begin{array}{\|l} \hline \text { B25 } \\ \text { B26 } \\ \text { B27 } \\ \text { B28 } \\ \text { B29 } \\ \text { B30 } \end{array}$ |
| Shenango River Lake | Shenango Rec. Area | 002 | B31 |
| West Point Lake | R. Shaefer Heard Holiday Park State Line Park Amity Park White Tail Ridge | $\begin{aligned} & 001 \\ & 031 \\ & 036 \\ & 040 \\ & 045 \end{aligned}$ | $\begin{aligned} & \text { B32 } \\ & \text { B33 } \\ & \text { B34 } \\ & \text { B35 } \\ & \text { B36 } \end{aligned}$ |

Table B1
Lake Barkley - Eureka
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 19.05 | 52.38 | 61.90 | 71.43 | 47.62 | 76.19 | 80.95 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 38.10 | 14.29 | 19.05 | 23.81 | 38.10 | 47.62 | 47.62 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 14.29 | 19.05 | 9.52 | 9.52 | 14.29 | 23.81 | 23.81 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 19.05 | 19.05 | 19.05 | 19.05 | 23.81 | 28.57 | 23.81 |  |
| 29 | 30 | 31 |  |  |  |  |  |
|  | 9.52 | 4.76 |  |  |  |  |  |

Occupancy Rate for Month
29.65

Occupancy Rate for Weekend During Month
39.15

Occupancy Rate for Weekdays During Month-
25.76

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by the 21 campsites).

Table B2
Lake Barkley - Canal
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 81.18 | 76.47 | 82.35 | 76.47 | 67.06 | 77.65 | 78.82 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 54.12 | 65.88 | 64.71 | 69.41 | 65.88 | 75.29 | 83.53 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 56.47 | 50.59 | 69.41 | 72.94 | 75.29 | 77.65 | 81.18 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 54.12 | 57.65 | 55.29 | 63.53 | 64.71 | 82.35 | 77.65 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 57.65 | 49.41 | 40.00 |  |  |  |  |  |

[^4]Table B3
Lake Barkley - Boyds Landing
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 71.43 | 71.43 | 85.71 | 50.00 | 21.43 | 42.86 | 57.14 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 21.43 | 28.57 | 35.71 | 35.71 | 28.57 | 35.71 | 64.29 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 28.57 | 21.43 | 28.57 | 28.57 | 14.29 | 35.71 | 21.43 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 14.29 | 7.14 | 7.14 | 14.29 | 14.29 | 7.14 | 14.29 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 14.29 | 14.29 | 14.29 |  |  |  |  |  |

Occupancy Rate for Month<br>30.65<br>Occupancy Rate for Weekend During Month<br>30.95<br>Occupancy Rate for Weekdays During Month<br>30.52

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 14 campsites).

Table B4
Lake Barkley - Hurricane Creek

## Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 70.59 | 64.71 | 70.59 | 82.35 | 82.35 | 64.71 | 68.63 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 25.49 | 39.22 | 50.98 | 43.14 | 41.18 | 47.06 | 45.10 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 33.33 | 29.41 | 27.45 | 27.45 | 29.41 | 47.06 | 45.10 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 21.57 | 31.37 | 25.49 | 23.53 | 31.37 | 49.02 | 43.14 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 35.29 | 37.25 | 41.18 |  |  |  |  |  |


| Occupancy Rate for Month | 44.34 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 45.53 |
| Occupancy Rate for Weekdays During Month | 43.85 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 51 campsites).

## Table B5

> Lake Barkley - Devels Elbow
> Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 36.84 | 31.58 | 42.11 | 36.84 |  | 31.58 | 42.11 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 5.26 | 10.53 | 21.05 | 5.26 |  | 21.05 | 31.58 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 29 | 30 | 10.53 | 15.79 | 10.53 | 31.58 | 36.84 |  |
| 26.32 | 21.05 | 26.32 |  | 21.05 | 42.11 | 47.37 |  |


| Occupancy Rate for Month | 22.75 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 31.58 |
| Occupancy Rate for Weekdays During Month | 19.14 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 19 campsites).

Table B6
Lake Barkley - Bumpus Mills

$$
\text { Daily Occupancy Rate }{ }^{1}
$$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 48.48 | 60.61 | 84.85 | 36.36 | 33.33 | 45.45 | 42.42 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 18.18 | 9.09 | 12.12 | 6.06 |  | 6.06 | 15.15 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 3.03 | 6.06 |  | 3.03 | 6.06 | 33.33 | 18.18 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 15.15 | 18.18 | 6.06 |  |  |  |  |  |


| Occupancy Rate for Month | 18.08 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 20.88 |
| Occupancy Rate for Weekdays During Month | 16.94 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 33 campsites).

Table B7
Hartwell Lake - Watsadlers
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | $S$ |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 92.16 | 82.35 | 84.31 | 84.31 | 80.39 | 82.35 | 84.31 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 43.14 | 29.41 | 37.25 | 49.02 | 45.10 | 70.59 | 72.55 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 49.02 | 31.37 | 31.37 | 47.06 | 62.75 | 66.67 | 68.63 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 33.33 | 19.61 |  |  |  | 5.88 | 5.88 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 23.53 | 43.14 | 47.06 |  |  |  |  |  |


| Occupancy Rate for Month | 47.50 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 50.76 |
| Occupancy Rate for Weekdays During Month | 46.17 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 51 campsites).

Table B8
Hartwell Lake - Springfield
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 93.67 | 94.94 | 94.94 | 84.81 | 83.54 | 87.34 | 81.01 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 22.78 | 24.05 | 13.92 | 24.05 | 39.24 | 48.10 | 40.51 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22.78 | 26.58 | 20.25 | 21.52 | 27.85 | 53.16 | 53.16 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 18.99 | 12.66 | 18.99 | 20.25 | 37.97 | 64.56 | 58.23 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 16.46 | 13.92 | 15.19 |  |  |  |  |  |


| Occupancy Rate for Month | 43.08 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 54.01 |
| Occupancy Rate for Weekdays During Month | 38.61 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 79 campsites).

Table B9

## Hartwell Lake - Milltown <br> Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 1.96 | 1.96 | 1.96 |  |  |  |  |  |

Occupancy Rate for Month
2.78

Occupancy Rate for Weekend During Month
7.63

Occupancy Rate for Weekdays During Month
0.80

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 51 campsites).

Table B10
Hartwell Lake - Paynes Creek
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 1.32 | 1.32 |  |  |  | 1.32 | 1.32 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 7 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 7.89 | 13.16 | 13.16 | 11.84 | 10.53 | 23.68 | 35.53 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 7.89 | 3.95 | 1.32 |  |  |  |  |  |

Occupancy Rate for Month ..... 4.67
Occupancy Rate for Weekend During Month ..... 8.04
Occupancy Rate for Weekdays During Month ..... 3.29

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 76 campsites).

Table Bll

## Hartwell Lake - Oconee Point

$$
\text { Daily Occupancy Rate }{ }^{1}
$$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 3.17 | 3.17 |  |  |  |  |  |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 29 | 30 | 31 |  | 1.59 | 4.76 | 22.22 |  |


| Occupancy Rate for Month | 2.20 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 6.17 |
| Occupancy Rate for Weekdays During Month | 0.58 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 63 campsites).

## Table B12

Hartwell Lake - Twin Lake Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 0.98 | 0.98 |  |  |  |  |  |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 11.76 | 22.55 | 13.73 | 10.78 | 38.24 | 92.16 | 74.51 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 10.78 | 3.92 | 0.98 |  |  |  |  |  |

Occupancy Rate for Month
10.56

Occupancy Rate for Weekend During Month
23.53

Occupancy Rate for Weekdays During Month
5.26

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 102 campsites).

Table B13
Hartwell Lake - Coneross Park
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|  |  | 9.43 | 16.98 | 11.32 | 4.72 | 2.83 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14$5.66$ |
|  |  |  |  |  |  |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 15.09 | 10.38 | 5.66 | 0.94 |  |  |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 7.55 | 14.15 | 20.75 | 21.70 | 17.92 | 38.68 | 36.79 |
| 29 | 30 | 31 |  |  |  |  |
| 7.55 | 3.77 | 1.89 |  |  |  |  |


| Occupancy Rate for Month | 8.19 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 9.85 |
| Occupancy Rate for Weekdays During Month | 7.50 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 106 campsites).

Table B14
Milford Lake - Curtis Creek
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 7.50 | 7.50 | 16.25 | 17.50 | 20.00 | 35.00 | 38.75 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 16.25 | 13.75 | 13.75 | 20.00 | 21.25 | 36.25 | 41.25 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 8.75 | 8.75 | 8.75 | 18.75 | 21.25 | 56.25 | 53.75 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 8.75 | 7.50 | 8.75 | 15.00 | 22.50 | 57.50 | 60.00 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 16.25 | 13.75 | 10.00 |  |  |  |  |  |


| Occupancy Rate for Month | 22.62 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 42.08 |
| Occupancy Rate for Weekdays During Month | 14.66 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 80 campsites).

Table B15

## Milford Lake - Farnum Creek

Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 8.86 | 7.59 | 11.39 | 15.19 | 15.19 | 22.78 | 16.46 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 1.27 | 1.27 | 1.27 | 1.27 |  | 2.53 | 8.86 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 3.80 | 2.53 | 1.27 | 3.80 | 6.33 | 17.72 | 13.92 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 2.53 | 1.27 | 5.06 | 3.80 | 2.53 | 2.53 | 7.59 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 5.06 | 3.80 | 6.33 |  |  |  |  |  |

$\begin{array}{lr}\text { Occupancy Rate for Month } & 6.57 \\ \text { Occupancy Rate for Weekend During Month } & 10.27 \\ \text { Occupancy Rate for Weekdays During Month } & 5.06\end{array}$

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 79 campsites).

Table B16

$$
\begin{gathered}
\text { Milford Lake - Rolling Hills } \\
\text { Daily Occupancy Rate }{ }^{1}
\end{gathered}
$$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $S$ | $M$ | $T$ | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 37.93 | 46.55 | 48.28 | 41.38 | 24.14 | 44.83 | 58.62 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 17.24 | 8.62 | 10.34 | 13.79 | 10.34 | 41.38 | 53.45 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 10.34 | 3.45 | 10.34 | 13.79 | 22.41 | 48.28 | 46.55 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 22.41 | 20.69 | 18.97 | 12.07 | 12.07 | 25.86 | 37.93 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 6.90 | 15.52 | 13.79 |  |  |  |  |  |

Occupancy Rate for Month
25.81

Occupancy Rate for Weekend During Month 39.66
Occupancy Rate for Weekdays During Month
20.14

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 58 campsites).

Table B17
Milford Lake - School Creek
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 6.82 | 6.82 | 6.82 | 9.09 | 18.18 | 27.27 | 22.73 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 2.27 |  | 2.27 | 2.27 |  |  |  |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 29 | 30 | 31 |  | 2.27 | 4.55 | 11.36 |  |
|  |  | 2.27 |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

Occupancy Rate for Month
4.55

Occupancy Rate for Weekend During Month 8.08
Occupancy Rate for Weekdays During Month 3.10

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 44 campsites).

Table B18
Milford Lake - Timber Creek
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | $F$ | $S$ |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 1.16 | 1.16 | 2.33 | 1.16 |  |  | 2.33 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 2.33 |  |  |  |  | 2.33 | 8.14 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 29 | 30 | 31.16 | 1.16 | 2.33 | 9.30 | 9.30 |  |
|  |  |  |  |  | 1.16 | 2.33 |  |
|  |  |  |  |  |  |  |  |

Occupancy Rate for Month
1.58

Occupancy Rate for Weekend During Month
3.88

Occupancy Rate for Weekdays During Month
0.63

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 86 campsites).

Table B19
Mississippi Pool 16 - Clarks Ferry
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 53.33 | 64.15 | 73.58 | 58.49 | 64.15 | 88.68 | 83.02 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 30.19 | 32.08 | 33.96 | 41.51 | 64.15 | 81.13 | 88.68 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 50.94 | 50.94 | 58.49 | 64.15 | 69.81 | 100.00 | 98.11 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 54.72 | 43.40 | 41.51 | 52.83 | 90.57 | 98.11 | 94.34 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 39.62 | 39.62 | 50.94 |  |  |  |  |  |


| Occupancy Rate for Month | 63.48 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 81.34 |
| Occupancy Rate for Weekdays During Month | 56.17 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 45 campsites).

Table B2O

> Mississippi Pool 16 - Shady Creek
> Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 66.04 | 71.11 | 84.44 | 73.33 | 77.78 | 75.56 | 68.89 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 26.67 | 31.11 | 28.89 | 24.44 | 44.44 | 62.22 | 71.11 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 15.56 | 33.33 | 31.11 | 44.44 | 60.00 | 75.56 | 77.78 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 33.33 | 37.78 | 33.33 | 40.00 | 75.56 | 95.56 | 97.78 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 28.89 | 22.22 | 24.44 |  |  |  |  |  |


| Occupancy Rate for Month | 52.26 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 69.38 |
| Occupancy Rate for Weekdays During Month | 45.25 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 53 campsites).

Table B21

Lake Oahe - Downstream North
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 36.65 | 32.30 | 41.61 | 34.78 | 37.27 | 48.45 | 48.45 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 28.57 | 34.16 | 31.68 | 32.30 | 35.40 | 50.93 | 54.66 |
| 29 | 30 | 31 |  |  |  |  |
| 23.60 | 27.33 | 25.47 |  |  |  |  |


| Occupancy Rate for Month | 25.17 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 34.71 |
| Occupancy Rate for Weekdays During Month | 21.26 |
|  |  |
|  |  |
| Daily Occupancy Rate is calculated by taking the number of |  |
| campsites). |  |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 161 campsites).

Table B 22
Lake Ouachita - Denby Point
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 91.04 | 97.01 | 101.49 | 88.06 | 86.57 | 108.96 | 111.94 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 58.21 | 62.69 | 53.73 | 44.78 | 67.16 | 107.46 | 102.99 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 67.16 | 59.70 | 59.70 | 68.66 | 89.55 | 105.97 | 102.99 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 40.30 | 50.75 | 50.75 | 55.22 | 62.69 | 104.48 | 94.03 |
| 29 | 30 | 31 |  |  |  |  |
| 38.81 | 35.82 | 35.82 |  |  |  |  |

Occupancy Rate for Month 74.34

Occupancy Rate for Weekend During Month 93.20

Occupancy Rate for Weekdays During Month
66.62

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by' 67 campsites).

Table B23
Lake Ouachita - Crystal Springs

$$
\text { Daily Occupancy Rate }{ }^{1}
$$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 81.08 | 83.78 | 95.95 | 83.78 | 79.73 | 105.41 | 104.05 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 45.95 | 52.70 | 50.00 | 60.81 | 66.22 | 109.46 | 101.35 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 45.95 | 41.89 | 47.30 | 50.00 | 75.68 | 102.70 | 97.30 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 51.35 | 50.00 | 32.43 | 43.24 | 50.00 | 87.84 | 93.24 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 27.03 | 28.38 | 41.89 |  |  |  |  |  |


| Occupancy Rate for Month | 67.31 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 89.04 |
| Occupancy Rate for Weekdays During Month | 58.42 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 74 campsites).

Table B24
Lake Ouachita - Brady Mountain
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 104.05 | 109.46 | 116.22 | 101.35 | 97.30 | 105.41 | 97.30 |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |
| 70.27 | 66.22 | 67.57 | 74.32 | 97.30 | 106.76 | 106.76 |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |
| 59.46 | 64.86 | 63.51 | 93.24 | 94.59 | 101.35 | 102.70 |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |
| 62.16 | 67.57 | 75.68 | 85.14 | 90.54 | 101.35 | 104.05 |
| 29 | 30 | 31 |  |  |  |  |
| 51.35 | 66.22 | 60.81 |  |  |  |  |


| Occupancy Rate for Month | 85.96 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 91.74 |
| Occupancy Rate for Weekdays During Month | 83.60 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 74 campsites).

## Table B25

Lake Shelbyville - Opposum Creek

$$
\text { Daily Occupancy Rate }{ }^{1}
$$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 11.11 | 16.05 | 23.46 | 18.52 | 14.81 | 24.69 | 28.40 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 11.11 | 17.28 | 18.52 | 17.28 | 23.46 | 28.40 | 33.33 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 19.75 | 19.75 | 20.99 | 18.52 | 25.93 | 50.62 | 54.32 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 16.05 | 17.28 | 17.28 | 16.05 | 18.52 | 30.86 | 37.04 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 8.64 | 3.70 | 11.11 |  |  |  |  |  |


| Occupancy Rate for Month | 21.70 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 31.96 |
| Occupancy Rate for Weekdays During Month | 17.51 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 81 campsites).

Table B26
Lake Shelbyville - Coon Creek
Daily Occupancy Rate

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 39.82 | 42.53 | 42.53 | 33.94 | 38.01 | 67.42 | 69.68 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 16.74 | 18.10 | 19.91 | 24.43 | 40.72 | 74.66 | 71.95 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 34.84 | 39.82 | 40.72 | 47.06 | 54.30 | 86.43 | 87.78 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 37.56 | 38.46 | 36.65 | 38.01 | 50.23 | 76.92 | 76.47 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 18.10 | 31.22 | 34.39 |  |  |  |  |  |

$\begin{array}{ll}\text { Occupancy Rate for Month } & 46.11 \\ \text { Occupancy Rate for Weekend During Month } & 67.92 \\ \text { Occupancy Rate for Weekdays During Month } & 37.19\end{array}$
${ }^{1}$ Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 221 campsites).

Table B27
Lake Shelbyville - Lone Point
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 19.79 | 21.87 | 20.83 | 18.75 | 13.54 | 15.63 | 22.92 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 7.29 | 7.29 | 7.29 | 8.33 | 12.50 | 26.04 | 25.00 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 7.29 | 7.29 | 11.46 | 12.50 | 26.04 | 36.46 | 35.42 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 3.12 | 4.17 | 7.29 | 10.42 | 15.63 | 32.29 | 32.29 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 1.04 | 9.38 | 7.29 |  |  |  |  |  |


| Occupancy Rate for Month | 15.69 |
| :--- | :---: |
| Occupancy Rate for Weekend During Month | 25.12 |
| Occupancy Rate for Weekdays During Month | 11.84 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 96 campsites).

Table B28
Lake Shelbyville - Lithia Springs
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 59.35 | 53.66 | 65.85 | 59.35 | 72.36 | 99.19 | 98.37 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 45.53 | 43.90 | 40.65 | 43.90 | 50.41 | 61.79 | 69.11 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 33.33 | 40.65 | 43.90 | 46.34 | 65.04 | 99.19 | 99.19 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 37.40 | 40.65 | 46.34 | 51.22 | 60.98 | 100.00 | 97.56 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 45.53 | 36.59 | 41.46 |  |  |  |  |  |

Occupancy Rate for Month<br>59.64<br>Occupancy Rate for Weekend During Month<br>80.49<br>Occupancy Rate for Weekdays During Month<br>51.11<br>1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 123 campsites).

Table B29
Lake Shelbyville - Forest Wood
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 75.61 | 81.71 | 84.15 | 84.15 | 89.02 | 95.12 | 92.68 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 48.78 | 37.80 | 42.68 | 43.90 | 50.00 | 71.95 | 69.51 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 43.90 | 41.46 | 43.90 | 51.22 | 64.63 | 76.83 | 79.27 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 37.80 | 42.68 | 50.00 | 50.00 | 63.41 | 91.46 | 87.80 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 45.12 | 41.46 | 50.00 |  |  |  |  |  |

Occupancy Rate for Month
62.20

Occupancy Rate for Weekend During Month
73.85

Occupancy Rate for Weekdays During Month
57.43

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 82 campsites).

Table B30
Lake Shelbyville - Whitley Creek
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $S$ | $M$ | $T$ | W | T | $F$ | $S$ |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 29.76 | 28.57 | 27.38 | 14.29 | 19.05 | 47.62 | 53.57 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 14.29 | 10.71 | 10.71 | 15.48 | 19.05 | 30.95 | 30.95 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 14.29 | 17.86 | 15.48 | 20.24 | 23.81 | 45.24 | 41.67 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 9.52 | 9.52 | 16.67 | 11.90 | 13.10 | 45.24 | 57.14 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 15.48 | 4.76 | 11.90 |  |  |  |  |  |


| Occupancy Rate for Month | 23.43 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 39.15 |
| Occupancy Rate for Weekdays During Month | 16.99 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 84 campsites).

Table B31
Shenango River Lake - Shenango Rec Area
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 51.21 | 50.91 | 58.18 | 47.58 | 50.61 | 71.21 | 72.73 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 30.91 | 30.00 | 33.33 | 32.42 | 30.30 | 42.42 | 37.27 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 21.82 | 28.79 | 30.91 | 36.06 | 47.88 | 71.82 | 73.03 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 30.91 | 29.70 | 32.12 | 39.09 | 51.52 | 84.85 | 94.85 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 37.27 | 30.61 | 32.73 |  |  |  |  |  |


| Occupancy Rate for Month | 45.58 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 60.91 |
| Occupancy Rate for Weekdays During Month | 39.31 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 330 campsites).

Table B32
West Point Lake - R. Shaefer Heard Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 69.77 | 69.77 | 82.56 | 83.72 | 83.72 | 98.84 | 90.70 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 33.72 | 27.91 | 26.74 | 22.09 | 17.44 | 36.05 | 44.19 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 22.09 | 17.44 | 18.60 | 20.93 | 24.42 | 50.00 | 59.30 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 10.47 | 13.95 | 19.77 | 18.60 | 32.56 | 54.65 | 63.95 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 16.28 | 6.98 | 3.49 |  |  |  |  |  |

Occupancy Rate for Month
40.02

Occupancy Rate for Weekend During Month
55.30

Occupancy Rate for Weekdays During Month
33.77

[^5]Table B33
West Point Lake - Holiday Park
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 49.66 | 49.66 | 55.17 | 53.79 | 51.03 | 66.21 | 57.93 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 15.17 | 19.31 | 17.93 | 17.24 | 20.69 | 30.34 | 35.17 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 14.48 | 13.79 | 15.17 | 17.24 | 24.83 | 44.14 | 53.10 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 14.48 | 15.86 | 15.86 | 17.24 | 17.93 | 34.48 | 41.38 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 13.79 | 7.59 | 5.52 |  |  |  |  |  |


| Occupancy Rate for Month |  |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 40.31 |
| Occupancy Rate for Weekdays During Month | 24.70 |

29.23
40.31
24.70

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 145 campsites).

Table B34
West Point Lake - State Line Park Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 34.96 | 32.52 | 35.77 | 36.59 | 26.02 | 39.02 | 38.21 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 8.94 | 4.88 | 2.44 | 4.88 | 13.82 | 13.82 | 13.01 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 3.25 | 0.81 | 1.63 | 3.25 | 3.25 | 10.57 | 14.63 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 4.07 | 5.69 | 5.69 | 2.44 | 2.44 | 11.38 | 8.13 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 0.81 |  |  |  |  |  |  |  |


| Occupancy Rate for Month | 12.35 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 16.53 |
| Occupancy Rate for Weekdays During Month | 10.64 |
|  |  |
|  |  |
| Daily Occupancy Rate is calculated by taking the number of |  |
| Oampsites). |  |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 123 campsites).

Table B35

> West Point Lake - Amity Park Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 55.21 | 55.21 | 65.62 | 58.33 | 42.71 | 38.54 | 29.17 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 9.38 | 8.33 | 9.38 | 9.38 | 10.42 | 16.67 | 14.58 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 5.21 | 7.29 | 5.21 | 7.29 | 7.29 | 12.50 | 19.79 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 6.25 | 6.25 | 7.29 | 8.33 | 5.21 | 16.67 | 20.83 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 4.17 | 1.04 |  |  |  |  |  |  |


| Occupancy Rate for Month | 18.18 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 18.75 |
| Occupancy Rate for Weekdays During Month | 17.95 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 96 campsites).

Table B36
West Point Lake - White Tail Ridge
Daily Occupancy Rate ${ }^{1}$

| July 1990 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| S | M | T | W | T | F | S |  |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |  |
| 55.17 | 60.34 | 65.52 | 74.14 | 58.62 | 74.14 | 60.34 |  |
| 8 | 9 | 10 | 11 | 12 | 13 | 14 |  |
| 10.34 | 12.07 | 8.62 | 13.79 | 15.52 | 34.48 | 36.21 |  |
| 15 | 16 | 17 | 18 | 19 | 20 | 21 |  |
| 12.07 | 13.79 | 15.52 | 17.24 | 18.97 | 58.62 | 62.07 |  |
| 22 | 23 | 24 | 25 | 26 | 27 | 28 |  |
| 20.69 | 12.07 | 13.79 | 17.24 | 22.41 | 37.93 | 46.55 |  |
| 29 | 30 | 31 |  |  |  |  |  |
| 20.69 | 17.24 | 18.97 |  |  |  |  |  |


| Occupancy Rate for Month | 32.42 |
| :--- | :--- |
| Occupancy Rate for Weekend During Month | 45.59 |
| Occupancy Rate for Weekdays During Month | 27.04 |

1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 58 campsites).

## Appendix C Formulas Used for Calculations in This Report

| Data Formulas Used in 1990 CRS Report ${ }^{1}$ |  |
| :---: | :---: |
| Number of permits | Sum of all permits (including renewals) |
| Number of renewals | Sum of all renewal permits |
| Number of groups | (Number of permits) - (Number of renewals) |
| Recreation days | Sum of [Each permit (the number in party) * (Nights paid)] |
| Mean length of stay | $\frac{\text { Sum of nights paid (including renewals) }}{\text { Number of groups }}$ |
| Mean number in group | $\frac{\text { Sum of number in party (no renewals) }}{\text { Number of groups }}$ |
| Percent of prior visitor | $\frac{\text { Number of permits, prior visits }=\text { yes (no renewals) }}{\text { Number of groups }} * 100$ |
| Percent of primary destination | $\frac{\text { Number of permits, primary destination }=\text { yes (no renewals) }}{\text { Number of groups }} * 100$ |
| Percent Golden Age passport | $\frac{\text { Number of permits, Golden Age }=\text { yes (no renewals) }}{\text { Number of groups }} * 100$ |
| Percent use: Vehicle/camping/ recreational equipment | $\frac{\text { Number of parties using equipment }{ }^{2} \text { (no renewals) }}{\text { Number of groups }} * 100$ |
| Occupancy rate | Sum of nights paid (including renewals) (Number of calendar nights) * (Total sites) |
| Average fee paid | $\frac{\text { Sum of total fee paid (including renewals) }}{\text { Number of sites }}$ |
| 1 Variable names used in this report are those from ENG Form 4457. <br> 2 Represents all vehicle/camping/recreational equipment reported from car 37 through powerboat 49. |  |

## Waterways Experiment Station Cataloging-In-Publication Data

## DeMoss, Terè A.

Summary of the 1990 Campground Receipt Study / by Terè A. Demoss, Tracy C. Trichell ; prepared for Department of the Army, U.S. Army Corps of Engineers.

95 p. : ill. ; 28 cm . - (Technical report ; R-92-3)
Includes bibliographic references.

1. Camp sites, facilities, etc. - United States. 2. Recreation areas Use studies. 3. Lakes - Recreational use. 4. Recreation studies. I. Title. II. Trichell, Tracy C. III. United States. Army. Corps of Engineers. IV. U.S. Army Engineer Waterways Experiment Station.
V. Natural Resources Research Program (US Army Corps of Engineers) VI. Series: Technical report (U.S. Army Engineer Waterways Experiment Station) ; R-92-3.
TA7 W34 no.R-92-3

[^0]:    1 Title V, Public Works and Economic Development Act of 1964.

[^1]:    1 A recreation day was defined as a visit by one individual to the project for recreation purposes during all or any reasonable portion of the 24 -hr period.

[^2]:    1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 79 campsites).

[^3]:    i These totals are reported as sums (all others are the percent of all users).
    2 Recreation area averages were weighted by the total number of permits for each area to compute project averages. The total was a sum.
    3 occupancy Rate is calculated by the number of nights paid divided by (the number of calendar nights multiplied by the number of sites at each campground).
    Average fee paid per site was the total fee collected at each area divided by the number of sites at that area.

[^4]:    Occupancy Rate for Month
    67.89

    Occupancy Rate for Weekend During Month
    70.46

    Occupancy Rate for Weekdays During Month
    66.84

    1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 83 campsites).

[^5]:    1 Daily Occupancy Rate is calculated by taking the number of nights paid and dividing by (the number of nights multiplied by 86 campsites).

