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SUMMARY OF THE 1983 CAMPGROUND  
RECEIPT STUDY

by

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March 1985

Final Report

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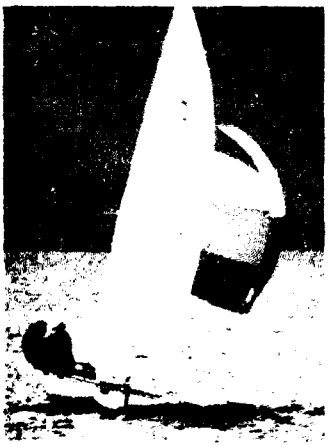
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## **CAMPGROUND RECEIPT STUDY**

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MP R-82-3	Summary of the 1981 Campground Receipt Study	Oct 1982
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The Campground Receipt Study (CRS) was established to systematically collect information on visitor characteristics at Corps of Engineers fee campgrounds. This system has proved to be an effective and efficient method of collecting trend data. The system was pretested in 1979, then expanded to include all CRS projects in 1980. Since the creation of the CRS there have been a great many changes in the (Continued)		

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20. ABSTRACT (Continued).

study procedures, data collection form, and study sites. These changes are described in this report. The main purpose of the report, however, is to describe the 1983 CRS data and the trends in camping use indicated by the CRS data collected from 1981 to 1983.

The CRS data represent the best available nationwide sample of descriptive characteristics of visitors to Corps campgrounds. The data base could be used effectively at all levels within the Corps to examine current use patterns and, with several years of data, to monitor and evaluate changes in visitor characteristics over time.

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PREFACE

Data collection on the Campground Receipt Study (CRS) began in 1979 and has continued every year since then. Each year the data have been summarized and a report written to present the results. This is the fourth such report (1979 data were not reported formally). Contained in this report are descriptions of the CRS program, the 1983 data analyses, and the 1981 through 1983 data comparisons.

The author of this report was Ms. Janet Akers Fritschen, Environmental Laboratory (EL), US Army Engineer Waterways Experiment Station (WES), Vicksburg, Miss. The study was supervised by Mr. William J. Hansen, Chief, Resource Analysis Group, and Dr. Conrad J. Kirby, Chief, Environmental Resources Division, EL. Dr. Adolph Anderson (EL) was Manager of the Natural Resources Research Program. Dr. John Harrison was Chief, EL. Ms. Nancy Tessaro, DAEN-CWO-R, was Technical Monitor.

COL Tilford C. Creel, CE, was the Commander and Director of WES during this study. Mr. F. R. Brown was the Technical Director.

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## SUMMARY OF THE 1983 CAMPGROUND RECEIPT STUDY

### PART I: INTRODUCTION

#### Purpose

1. This is the fourth of a series of reports which summarize the procedures and results of the Campground Receipt Study (CRS). Since the creation of the CRS there have been a great many changes in the study procedures, data collection form, and study sites. These changes are described in the beginning of this report. The main purpose of the report, however, is to describe the 1983 CRS data and to analyze trends in camping use as indicated by the CRS data collected from 1981 to 1983.

#### Background

2. The Campground Receipt Study is part of a larger study designed to establish a research and demonstration system to support the Natural Resources Research Program (NRRP). The purpose of the CRS is two-fold. First is the development of a workable methodology for collecting and analyzing data on Corps campers. This portion of the study has been accomplished. The second purpose of the CRS is to develop a data base on project campers which could be used, not only to characterize current camping populations, but to develop camping trends. The second purpose of the CRS can only be accomplished by the accumulation of a minimum of several years of data.

3. Four factors guided the development of the CRS:\*

- 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 used must be cost-effective and cost-efficient.
- d. The data collected must be valid and reliable.

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\* G. L. Curtis and W. J. Hansen. 1982. "Summary of the 1981 Campground Receipt Study," Miscellaneous Paper R-82-3, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

### Study Procedures

4. In keeping with these constraints, the study procedures were developed. The required data were to be collected by the campground gate attendants or park rangers as they registered campers. Most of the data could be collected through observation, so there was minimum impact on the visitor.

5. The data collection form and procedures were pretested in 1979. Based on the results of that year and subsequent years, changes have been made in the form and study sites. These changes are described below. In terms of the data collection procedures, no problems were encountered; therefore, no changes were made.



6. For data analysis, a FORTRAN program, the Recreation Analysis Program (RAP), was developed. Two reports are generated by the RAP. The "Area Report" provides a summary of the CRS data for each recreation area, while the "Site Specific Data Report" provides most of the same information for each campsite. An example of each of these reports is contained in Appendix A.

7. After the CRS data are collected, they are sent to the corresponding District Office for keypunching, and are then forwarded to WES for analysis. The District Offices which participate in the CRS are provided with a copy of the RAP for their own analysis purposes.

### Data Collection Form

8. The Corps has been registering campers and collecting fees for some time. When the CRS was initiated, continuing through the present, this was accomplished with Engineer Form 4457 (Figure 1). Although some data on use characteristics were included on the form, they were rarely analyzed because such analysis required lengthy hand calculations. The CRS was designed to overcome this problem. The first CRS data collection form (Figure 2) supplemented ENG Form 4457. The additional characteristics collected on the supplemental form included the visitor's zip code, type of camping equipment, type of any additional vehicles at the site (other than the primary vehicle), and time of day the visitor arrived and expected to depart. The form was pretested during part of the 1979 summer season.

9. Based on the pretest results and the recommendations of those involved in the study, including field personnel, a number of changes were made

<b>U.S. ARMY-CORPS OF ENGINEERS</b>  <b>USER PERMIT</b> 		DISTRICT	<b>SERIAL NUMBER</b>  <b>SAMPLE</b>
		PROJECT	
NAME OF AREA			
NAME OF CAMPER	SITE NUMBER		
TYPE OF FEE AREA <input type="checkbox"/> CAMPING <input type="checkbox"/> GROUP <input type="checkbox"/> DAY USE <input type="checkbox"/> OTHER _____			
NO. OF PEOPLE IN PARTY		CAR LICENSE	STATE
DATE ARRIVED		EXPECTED DEPARTURE	
FEE PAID		GOLDEN AGE PASSPORT NO.	
NOTE: 50% REDUCTION FOR BEARERS OF GOLDEN AGE PASSPORT.		_____ <b>RANGER</b>	

ENG FORM 1 AUG 78 4457

PREVIOUS EDITION MAY BE USED.

RANGER COPY

Figure 1. ENG Form 4457

<b>RECREATION RESEARCH PROGRAM</b> <b>USER IMPACT MONITORING PROJECT</b> <b>CAMPSITE USE RECORD</b>	
RECREATION AREA _____	SITE NO. _____
DATE IN _____	TIME ( ) AM ( ) PM
DATE OUT _____	TIME ( ) AM ( ) PM
ZIP CODE _____	
NO. IN GROUP _____	
EQUIPMENT - CAMPING:	EQUIPMENT - OTHER THAN PRIMARY MOTOR VEHICLE:
( ) TENT	( ) SECOND CAR/TRUCK
( ) POP UP	( ) MOTORCYCLE
( ) PICK-UP CAMPER	( ) BOAT
( ) TRAILER	( ) TRAILER
( ) R V	( ) BICYCLE

Figure 2. 1979 CRS supplemental form

PROJECT \_\_\_\_\_ DATE \_\_\_\_\_

CAMPSITE USE RECORD

REC AREA \_\_\_\_\_ SITE NO. \_\_\_\_\_ ZIP CODE \_\_\_\_\_

NO. IN GROUP \_\_\_\_\_ LENGTH OF STAY \_\_\_\_\_

IS THIS YOUR PRIMARY DESTINATION \_\_\_\_ OR STOPOVER FOR LONGER TRIP \_\_\_\_?



HOW MANY TIMES DID YOU VISIT THIS AREA LAST YEAR? \_\_\_\_\_

<u>PRIMARY VEHICLE</u>	<u>EQUIPMENT (NON-CAMPING)</u>
<input type="checkbox"/> CAR	<input type="checkbox"/> SECOND CAR/TRUCK (NON 4 WHEEL DRIVE)
<input type="checkbox"/> TRUCK	<input type="checkbox"/> 4 WHEEL DRIVE VEHICLE
<input type="checkbox"/> VAN	<input type="checkbox"/> MOTORCYCLE
<input type="checkbox"/> MOTORHOME (INCLUDES CONVERTED BUSES)	<input type="checkbox"/> SAILBOAT
<input type="checkbox"/> OTHER _____	<input type="checkbox"/> CANOE/KAYAK/RAFT
	<input type="checkbox"/> POWERBOAT
<u>EQUIPMENT (CAMPING)</u>	<input type="checkbox"/> BOAT TRAILER
<input type="checkbox"/> TENT	<input type="checkbox"/> BICYCLE
<input type="checkbox"/> POP-UP TRAILER	<input type="checkbox"/> OTHER _____
<input type="checkbox"/> VAN	
<input type="checkbox"/> PICKUP CAMPER	
<input type="checkbox"/> TRAVEL TRAILER	

Figure 3. 1980 CRS supplemental form

to the form. The vehicle question was modified and questions were added to collect data on use patterns, specifically destination and previous visit information. Analysis of the camper's length of stay was simplified by including it as a specific question. This second form (Figure 3) was used in 1980, from 15 May until 15 September. During this period, 14,690 supplemental forms were completed.

10. At the conclusion of the 1980 data collection period, changes were again made to the form. To begin with, the information requirements of ENG Form 4457 and the supplemental form were combined so that only one form was necessary. This was designated ENG Form 4457 (TEST), a copy of which is reproduced as Figure 4. It was anticipated that this change would decrease the

		U.S. ARMY—CORPS OF ENGINEERS						SERIAL NUMBER								
<b>USER PERMIT</b>												<b>SAMPLE</b>				
DISTRICT 1 2			PROJECT 3 4 5 6 7				REC AREA 8 9 10			SITE NUMBER 11 12 13						
NAME OF CAMPER				NO. OF PEOPLE IN PARTY 14 15			PRIOR VISITS Y N 16 17		PRIMARY DESTINATION Y N 18 19							
CAR LICENSE <small>(OPTIONAL)</small>		ZIP CODE		DATE ARRIVED MO DAY YR			EXPECTED DEPARTURE MO DAY			TOTAL NIGHTS PD.						
STATE	NUMBER	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
PRIMARY VEHICLE				EQUIPMENT (CAMPING)				EQUIPMENT (NONCAMPING)								
35	<input type="checkbox"/>	CAR		40	<input type="checkbox"/>	TENT		45	<input type="checkbox"/>	POWERBOAT						
36	<input type="checkbox"/>	TRUCK		41	<input type="checkbox"/>	POP-UP TRAILER		46	<input type="checkbox"/>	SAILBOAT						
37	<input type="checkbox"/>	VAN		42	<input type="checkbox"/>	PICKUP CAMPER		47	<input type="checkbox"/>	BOAT TRAILER						
38	<input type="checkbox"/>	OTHER		43	<input type="checkbox"/>	TRAVEL TRAILER		48	<input type="checkbox"/>	BICYCLE						
39	<input type="checkbox"/>	4 WHEEL DRIVE VEHICLE		44	<input type="checkbox"/>	MOTORHOME (INCLUDES CONVERTED BUSES)		49	<input type="checkbox"/>	MOTORCYCLE						
								50 <input type="checkbox"/> ORV (NONMOTORCYCLE)								
								51 <input type="checkbox"/> OTHER								
GOLDEN AGE PASSPORT NO.				TOTAL FEE PAID				ATTENDANT								
				\$ 53 54 55 56												

ENG FORM 4457 (TEST), Mar 81

FISCAL



(Proponent: DAEN CWO RI)

Figure 4. 1981 CRS form, ENG Form 4457 (TEST)

logistical problems of having two forms and increase the validity of the CRS data.

11. Changes to the data were made to clarify the questions and assist in the coding of results. "Length of stay" was changed to "total nights paid" so that there would be no confusion as to whether days or nights were required. The questions on prior visits and destination were rewritten so that the gate attendant simply had to check the correct answer. Equipment and vehicle types were reclassified and a space was added to record Golden Age Passports. Finally, two changes were made to simplify keypunch procedures: column numbers were marked on the form and an extra carbon was included with the form for keypunch use.

12. The ENG Form 4457 (TEST) was used during the entire fee season of 1981. In all, 120,204 were issued. An evaluation of its use led to the following form changes. The form was reorganized so that the sequence of questions was more logical (Figure 5). Two new data elements were added. The first was to indicate if the form was a renewal. Thus, renewal permits could be separated from original permits, thereby avoiding the possible bias introduced by campers who were registering for additional nights at the campground. Second, a question was added concerning the use of electric hookups. The

 U. S. ARMY--CORPS OF ENGINEERS <b>USER PERMIT</b> 														SERIAL NUMBER <b>SAMPLE</b>								
DISTRICT		PROJECT					REC AREA		SITE NUMBER				RENEWAL	CAR LICENSE		ZIP CODE						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	Y	STATE	NUMBER	15	16	17	18	19	20
NAME OF CAMPER (OPTIONAL)				NUMBER IN PARTY		PRIOR VISITS		PRIMARY DESTINATION		STARTING DATE			ENDING DATE									
				21	22	Y	23	Y	24	MO	DAY	YR	MO	DAY	YR							
VEHICLE(S)				CAMPING EQUIPMENT				RECREATIONAL EQUIPMENT														
33 <input type="checkbox"/> CAR 34 <input type="checkbox"/> TRUCK 35 <input type="checkbox"/> VAN 36 <input type="checkbox"/> MOTORHOME 37 <input type="checkbox"/> MOTORCYCLE 38 <input type="checkbox"/> OTHER				39 <input type="checkbox"/> TENT 40 <input type="checkbox"/> POP UP TRAILER 41 <input type="checkbox"/> PICKUP CAMPER 42 <input type="checkbox"/> TRAVEL TRAILER 43 <input type="checkbox"/> NONE				45 <input type="checkbox"/> POWERBOAT 46 <input type="checkbox"/> SAILBOAT 47 <input type="checkbox"/> BICYCLE 48 <input type="checkbox"/> MOTORCYCLE 49 <input type="checkbox"/> ORV-NONMOTORCYCLE 50 <input type="checkbox"/> OTHER 51 <input type="checkbox"/> OTHER 52 <input type="checkbox"/> OTHER														
				Y 44 ELECTRIC HOOKUP																		
1. GOLDEN AGE NO.				NIGHTS PD.		TOTAL FEE PAID		ATTENDANT														
2. GOLDEN ACCESS NO.				53	54	55	\$	56	57	58	59											

ENG FORM 4457(TEST), Feb 82 EDITION OF MAR 81 IS OBSOLETE (Proponent DAEN CWO R) FISCAL

Figure 5. 1982 CRS form, ENG Form 4457 (TEST)

inclusion of this data element would enable the calculation of electric hookup usage and provide a check for the gate attendents when collecting fees.

13. Other changes to the form involved modification of the existing elements. Entries in the vehicle and equipment categories were shifted once again to more accurately depict use. Also, for vehicles, camping equipment, and recreational equipment, the gate attendant was asked to write in the number of each type of vehicle or piece of equipment rather than just a checkmark. A "none" category was included under "camping equipment" in order to separate the camping parties with no special camping equipment from those for which camping equipment was not recorded. Finally, the Golden Age question was expanded to include Golden Access permits.

14. During the 1982 fee season, 149,576 of the new permits were completed. Only a few modifications were deemed necessary at the end of this period. The "Y" response for renewal, prior visits, primary destination, and electric hookup was changed to a "1" to simplify keypunch procedures (Figure 6). To accommodate large camping groups, an extra column was added to "number in party" and "total fee paid" and a data element entitled "permit type" was added. Although the year the permit was issued had been recorded


 <b>U. S. ARMY -- CORPS OF ENGINEERS</b> <b>USER PERMIT</b>														<b>SERIAL NUMBER</b> <b>SAMPLE</b>							
DISTRICT		PROJECT					REC AREA			SITE NUMBER				RENEWAL	CAR LICENSE		ZIP CODE				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	STATE	NUMBER	16	17	18	19	20
NAME OF CAMPER (OPTIONAL)				PERMIT TYPE	NUMBER IN PARTY			PRIOR VISITS	PRIMARY DESTINATION	STARTING DATE			END DATE								
				21	22	23	24	25	26	MO	DAY	YR	MO	DAY							
											27	28	29	30	31	32	33	34	35	36	
VEHICLE(S)				CAMPING EQUIPMENT				RECREATIONAL EQUIPMENT													
37	<input type="checkbox"/> CAR			43	<input type="checkbox"/> TENT			49	<input type="checkbox"/> POWERBOAT												
38	<input type="checkbox"/> TRUCK			44	<input type="checkbox"/> POP-UP TRAILER			50	<input type="checkbox"/> SAILBOAT												
39	<input type="checkbox"/> VAN			45	<input type="checkbox"/> PICKUP CAMPER			51	<input type="checkbox"/> OTHER WATERCRAFT												
40	<input type="checkbox"/> MOTORHOME			46	<input type="checkbox"/> TRAVEL TRAILER			52	<input type="checkbox"/> BICYCLE												
41	<input type="checkbox"/> MOTORCYCLE			47	<input type="checkbox"/> NONE			53	<input type="checkbox"/> MOTORCYCLE												
42	<input type="checkbox"/> OTHER			<input type="checkbox"/> ELECTRIC HOOKUP				54	<input type="checkbox"/> ORV (NONMOTORCYCLE)												
				48				55	<input type="checkbox"/> OTHER												
1. GOLDEN AGE NO.				NIGHTS PD.		TOTAL FEE PAID				ATTENDANT											
2. GOLDEN ACCESS NO.				56	57	58	\$	59	60	61	62	63									

Figure 6. 1983 CRS form, ENG Form 4457 (TEST)

previously, it was only included with the keypunch data on the 1973 form. Finally, some changes were made to recreational equipment.

15. During the 1983 season, 144,935 permits were issued. No additional form changes were seen as necessary. The form in use during the 1984 fee season is identical to that used in 1983.

16. Since the ENG Form 4457 (TEST) is an accountable form, its use has to be authorized by the Office, Chief of Engineers. To accommodate project managers who want to collect the CRS data but are not a part of the CRS, the supplemental form has been updated as changes were made to the test form. It is used with the ENG Form 4457 as the original CRS permits were.

#### Study Sites

17. All 15 projects in the NRRP research and demonstration system were included in the CRS. The names and locations of these projects are included in Figure 7. The 1979 pretest was conducted at one recreation area per each of three projects: Denby Point, Lake Ouachita; Shenango Recreation Area,

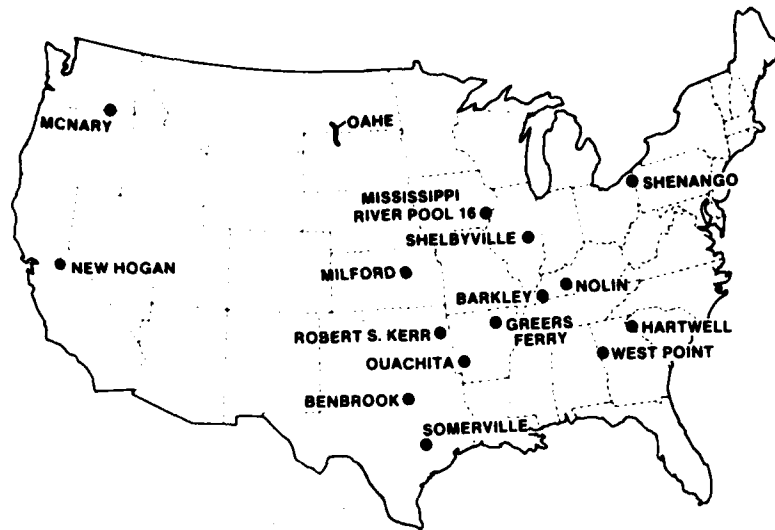


Figure 7. Campground Receipt Study Project Locations

Shenango River Lake; and Amity Park, West Point Lake. Except for New Hogan,\* all 15 projects have participated in the CRS since 1980.

18. The individual recreation areas included in the CRS have changed each year. In 1980, the study was conducted at only one recreation area per project, with the exception of Greers Ferry, Hartwell, and Ouachita, which had two, three, and two areas, respectively. Since then, all projects except McNary, New Hogan, and Shenango have added recreation areas to the program. A listing of these areas and the years in which they were included is contained in Appendix B. For the 1984 fee season, Mississippi Pool 16 (Rock Island District) has been added to the CRS.

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\* New Hogan did not participate in the 1980 CRS due to a change of management and manpower shortages.



## PART II: DATA ANALYSIS

### 1983 CRS Data

19. The 1983 data summarized in this report were collected from the 15 CRS projects. The CRS data were analyzed according to recreation area, project, and the entire sample of projects. In this section, the project and entire sample data will be described. The recreation area data can be found in Appendix C.

20. At the 15 CRS projects, 144,935 camping permits were issued. As 24 percent of the permits were renewals, a total of 110,541 groups camped at the CRS recreation areas. The number of permits and camping groups and percent of renewal receipts for each project are displayed in Table 1.

Table 1  
1983 User Permit Summary

<u>Project</u>	<u>Number of Permits</u>	<u>Number of Groups</u>	<u>Percent Renewal Receipts</u>
Lake Barkley	6,540	4,263	34.8
Benbrook Lake	7,511	5,808	22.7
Greers Ferry Lake	28,503	22,042	22.7
Hartwell Lake	10,741	7,301	32.0
McNary L&D	3,318	2,635	20.6
Milford Lake	4,062	3,327	18.1
New Hogan Lake	7,090	5,184	26.9
Nolin River Lake	2,414	2,092	13.2
Lake Oahe	8,672	6,465	25.2
Lake Ouachita	8,878	6,638	25.2
R. S. Kerr L&D	2,115	1,494	29.4
Lake Shelbyville	18,206	13,991	23.2
Shenango River Lake	6,974	4,433	14.0
Somerville Lake	18,765	16,070	14.4
West Point Lake	11,146	8,798	21.1
Nationwide total	144,935	110,541	23.7

21. Campers at the CRS recreation areas accounted for 999,795 recreation days of use.\* The average length of stay ranged from 1.74 nights at

\* A recreation day is defined as a visit by one individual to the project for recreation purposes during all or any reasonable portion of a 24-hr period.

Nolin to 3.58 nights at Shenango. The average for the entire CRS was 2.58 nights.

22. Size of the camping parties averaged 3.62 persons, ranging from 2.84 at McNary to 4.26 at Somerville. Nationwide, 64.0 percent of the parties had previously visited the project at which they were camping. At the individual projects the variation in previous visits was large, ranging from 32.8 percent at Nolin to 86.9 percent at Shenango. Three fourths, or 76.4 percent, of the camping parties at the CRS projects indicated that the project was the primary destination for their trip. At McNary, less than half of the parties (42.8 percent) had the project as a primary destination, while at Shenango almost all (97.1 percent) did. Golden Age or Golden Access passports were used by 25.1 percent of the camping parties nationwide. At the individual projects, the lowest percentage of these passports was found at Nolin (3.7 percent), the highest at McNary (52.9 percent). Use characteristics for all of the projects can be found in Table 2.

23. An analysis of the type of vehicle, or vehicles, used by the camping party indicates that, nationwide, slightly more parties used trucks (46.7 percent) than cars (42.1 percent). The highest percentage of cars (61.4 percent) was found at Hartwell, while the highest percentage of trucks was found at R. S. Kerr (71.5 percent). Relatively few of the camping groups drove vans (11.1 percent), motorhomes (12.6 percent), or arrived at the site via other modes of transportation (1.9 percent). The exceptions were McNary and Oahe, which received 27.0 percent and 26.9 percent motorhomes, respectively.

24. The type of camping equipment used most often at the CRS projects was a tent (41.3 percent nationwide). At Nolin, two thirds (67.4 percent) of the camping parties used at least one tent. Overall, other types of camping equipment included travel trailers (21.6 percent), pickup campers (11.2 percent), and pop-up trailers (8.8 percent). Use of travel trailers, especially, varied by project. At R. S. Kerr, 45.8 percent of the camping groups had travel trailers, while at Nolin, only 4.0 percent did. Ten percent of the camping groups indicated that they had no special camping equipment. The project with the largest percentage of campers with no special camping equipment was Benbrook (31.6 percent). The type of recreational equipment brought by campers most often was a powerboat; nationwide, one third of all parties had a powerboat.

25. Many camping parties had more than one vehicle (including trailers)

Table 2  
1983 General Use Characteristics

Project	Recreation Days†	Mean Length of Stay Nights	Mean Number in Group	Percent Prior Visits††	Percent Primary Destination††	Percent Golden Age/Access Passport††
Lake Barkley	45,909	3.46	3.21	39.8	69.5	37.6
Benbrook Lake	43,040	2.23	3.75	50.5	74.4	24.3
Greers Ferry Lake	171,323	2.29	3.48	71.3	76.8	23.9
Hartwell Lake	81,506	2.94	3.78	68.1	77.9	20.2
McNary L&D	13,379	1.82	2.84	41.7	42.8	52.9
Milford Lake	27,913	2.20	3.67	67.3	81.4	14.5
New Hogan Lake	49,952	3.05	3.15	62.8	83.1	35.0
Nolin River Lake	13,081	1.74	3.56	32.8	90.7	3.7
Lake Oahe	43,854	2.21	3.15	44.2	44.6	31.4
Lake Ouachita	79,050	3.01	3.93	65.9	80.3	15.0
R. S. Kerr L&D	13,404	2.54	3.77	76.9	90.8	48.4
Lake Shelbyville	140,687	2.95	3.48	70.8	93.5	18.5
Shenango River Lake	67,006	3.58	4.05	86.9	97.1	26.7
Somerville Lake	125,162	2.07	4.26	53.5	67.0	20.9
West Point Lake	84,529	2.94	3.38	80.7	76.5	37.8
Nationwide total	999,795	2.58	3.62	64.0	76.4	25.1

† Recreation days of use is calculated by multiplying the number in group times the length of stay for each fee receipt. The individual recreation days are then added to produce a project total. Any receipts which have the number in group or length of stay missing would have been deleted from the calculations. Therefore, this measure of use may be low. The extent of this variation depends on the number of permits missing a group size or length of stay value. These ranged from 0.0 percent to 2.4 percent of the receipts at a given project, comprising 0.9 percent of the receipts at all CRS projects.

†† Percent of camping parties.

at the site\*. The extremes in this regard were Nolin, which averaged 1.1 vehicles per camping party and 9.7 percent groups towing a pop-up or travel trailer, and R. S. Kerr, which averaged 1.8 and 46.1 percent, respectively. Vehicle and equipment summaries for projects can be found in Tables 3, 4, and 5.

26. By examining the data for each project, it is possible to obtain

\* Included in this calculation were cars, trucks, vans, motorhomes, pop-up trailers, and travel trailers. Boat trailers were not included as this information was not collected on the survey form.

Table 3  
1983 Distribution of Vehicles Types  
(Percent of Camping Groups)

<u>Project</u>	<u>Car</u>	<u>Truck</u>	<u>Van</u>	<u>Motor-home</u>	<u>Others*</u>
Lake Barkley	38.6	56.2	9.7	15.2	0.9
Benbrook Lake	43.4	46.9	13.6	9.6	1.8
Greers Ferry Lake	40.1	46.4	8.9	9.1	2.0
Hartwell Lake	61.4	48.6	9.8	7.7	2.4
McNary L&D	25.8	40.4	10.2	27.0	2.8
Milford Lake	37.8	52.0	9.5	15.5	1.6
New Hogan Lake	28.9	51.5	13.0	15.7	1.4
Nolin River Lake	51.0	38.0	14.0	6.0	1.3
Lake Oahe	24.1	44.7	10.6	26.9	2.6
Lake Ouachita	47.5	50.2	12.2	7.0	2.1
R. S. Kerr L&D	32.6	71.5	9.4	12.1	1.7
Lake Shelbyville	44.9	35.4	13.7	13.6	2.9
Shenango River Lake	58.7	39.7	11.1	11.0	3.3
Somerville Lake	44.5	49.4	10.9	8.8	1.1
West Point Lake	37.2	51.1	11.8	21.1	1.0
Nationwide total	42.1	46.7	11.1	12.6	1.9

\* The "Other" category includes any mode of transportation that is not listed. This may include such things as motorcycle, bicycle, walking, etc.

Table 4  
1983 Distribution of Camping Equipment and Powerboats  
(Percent of Camping Groups)

<u>Project</u>	<u>Tent</u>	<u>Pop-up Trailer</u>	<u>Pickup Camper</u>	<u>Travel Trailer</u>	<u>No Camping Equipment</u>	<u>Powerboat</u>
Lake Barkley	26.8	9.6	17.9	29.6	6.9	46.7
Benbrook Lake	27.6	4.8	9.5	19.8	31.6	18.5
Greers Ferry Lake	51.0	9.4	6.7	21.4	5.5	15.1
Hartwell Lake	48.5	14.9	7.9	20.4	2.5	40.7
McNary L&D	20.2	3.4	17.2	33.6	7.3	4.6
Milford Lake	34.6	6.3	13.6	29.2	4.8	37.4
New Hogan Lake	37.2	1.8	21.7	17.1	11.6	42.1
Nolin River Lake	67.4	6.7	14.9	4.0	3.0	50.3
Lake Oahe	21.4	8.7	19.6	23.8	3.0	40.6
Lake Ouachita	64.3	12.3	9.2	15.6	6.5	44.6
R. S. Kerr L&D	29.6	3.4	21.8	45.8	1.0	50.9
Lake Shelbyville	40.6	11.3	9.6	20.7	5.9	37.9
Shenango River Lake	38.2	13.4	10.5	23.9	4.1	36.2
Somerville Lake	41.8	6.6	6.8	17.2	23.0	35.4
West Point Lake	34.4	7.0	17.0	26.6	20.7	54.1
Nationwide total	41.3	8.8	11.2	21.6	10.4	35.6

Table 5

1983 Vehicle Distribution Within Groups†

<u>Project</u>	<u>Mean Number of Vehicles/Group</u>	<u>Percent Groups Towing a Pop-up or Travel Trailer</u>
Lake Barkley	1.6	39.2
Benbrook Lake	1.4	24.2
Greers Ferry Lake	1.4	29.9
Hartwell Lake	1.7	33.5
McNary L&D	1.4	35.9
Milford Lake	1.6	34.7
New Hogan Lake	1.3	18.7
Nolin River Lake	1.1	9.7
Lake Oahe	1.4	30.2
Lake Ouachita	1.4	25.7
R. S. Kerr L&D	1.8	46.1
Lake Shelbyville	1.5	31.4
Shenango River Lake	1.7	37.0
Somerville Lake	1.4	20.7
West Point Lake	1.5	31.6

† Excludes group camping permits.

additional information on the characteristics of the camping populations. In the analysis of the 1981 CRS data,\* it was suggested that a large percentage of the campers at McNary and Oahe were in transit to other locations. This was based on the fact that data for these lakes represented the lowest percentage of prior visits, a low percentage of primary destination, and a low average length of stay. Furthermore, a high percentage of motorhomes at McNary and Oahe indicated a correlation between motorhomes and mobile camping populations. These same statements could be made in regard to the 1983 CRS data for these two lakes.

27. In contrast to McNary and Oahe, a large percentage of 1983 campers at Shenango, R. S. Kerr, and Shelbyville had previously visited the project and said it was their primary destination. Thus, it would seem that these three projects had a more stable population of users. Furthermore, campers at Shenango had the longest mean trip length.

28. Nolin was also the primary destination for most of its campers;

\* Curtis and Hansen, op. cit.

however, its campers had the lowest percentage of prior visits and the shortest length of stay. In addition, of all the projects, Nolin had the highest percentage of tents and the lowest percentage of motorhomes and travel trailers. This seems to indicate that, as a whole, the camping population at Nolin is more dynamic than that at Shenango, R. S. Kerr, and Shelbyville. Individually, though, the campers at Nolin are more sedentary than those at McNary and Oahe.

### Trend Analysis

29. One of the primary purposes of the CRS was to create a data base which would enable the predication of trends in recreational use. With the completion of the third full year of data collection, it becomes possible to do some trend analysis. Although the recreation areas included in the CRS have changed somewhat during the past 3 years, it is believed that this will not have a major impact on nationwide averages. A comparison of the complete CRS data bases for the years 1981, 1982, and 1983 is included in the following pages.

30. Overall, the number of permits issued increased from 1981 to 1982, then dropped somewhat in 1983 (Table 6).<sup>\*</sup> At three of the projects, however, the number of permits increased steadily from 1981 to 1983. These are Benbrook, Somerville, and West Point. Hartwell and Oahe also showed an increase between 1981 and 1983, though it was not the steady increase observed in the other three.

31. Nationwide, mean group size for the CRS projects has not changed since 1981 (Table 7). Mean length of stay, though, increased from 1981 to 1982, 2.05 to 2.58 nights, then held constant in 1983. There were, however, differences in group size and length of stay trends at the individual projects. At Barkley, Benbrook, and Somerville, group size increased from 1981 to 1983 (Figure 8). Four other projects showed a decrease in group size of at least 0.3: Hartwell, New Hogan, Ouachita, and West Point. Length of stay also varied by project. At all projects except Somerville, length of stay increased from 1981 to 1982 (Figure 9). In 1983, though, only seven projects

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<sup>\*</sup> Some of the drop may be due to weather conditions. Nolin and New Hogan, for example, experienced unusually heavy spring rains.

Table 6  
Number of Permits, 1981-1983

<u>Project</u>	<u>Year</u>		
	<u>1981</u>	<u>1982</u>	<u>1983</u>
Lake Barkley	7,416	7,937	6,540
Benbrook Lake	3,463	5,472	7,511
Greers Ferry Lake	25,272	32,054	28,503
Hartwell Lake	8,050	10,714	10,741
McNary L&D	4,237	4,729	3,318
Milford Lake	4,207	4,856	4,062
New Hogan Lake	4,410	7,456	7,090
Nolin River Lake	4,724	3,243	2,414
Lake Oahe	7,816	7,493	8,672
Lake Ouachita	5,805	9,259	8,878
R. S. Kerr L&D	2,885	2,603	2,115
Lake Shelbyville	18,974	20,496	18,206
Shenango River Lake	5,231	7,241	6,974
Somerville Lake	10,436	16,874	18,765
West Point Lake	7,278	9,149	11,146
Nationwide total	120,204	149,576	144,935

Table 7  
Mean Group Size and Length of Stay for Entire CRS  
1981-1983

<u>Factor</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Mean number of people per group	3.60	3.58	3.62
Mean length of stay (nights)	2.05	2.58	2.58

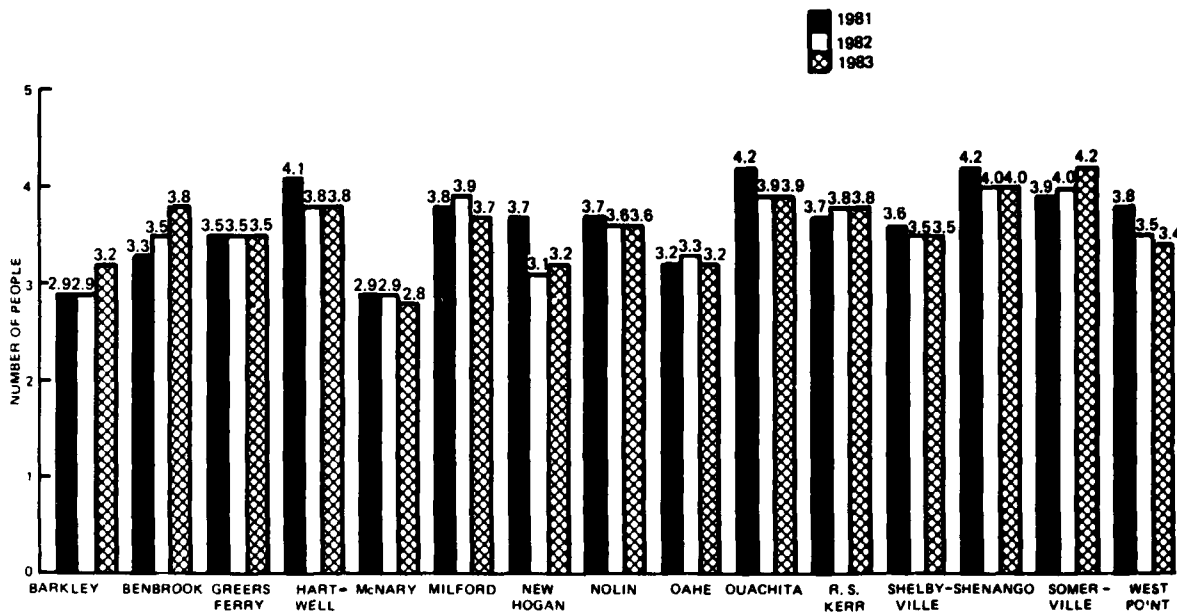


Figure 8. Mean number in party, 1981-1983

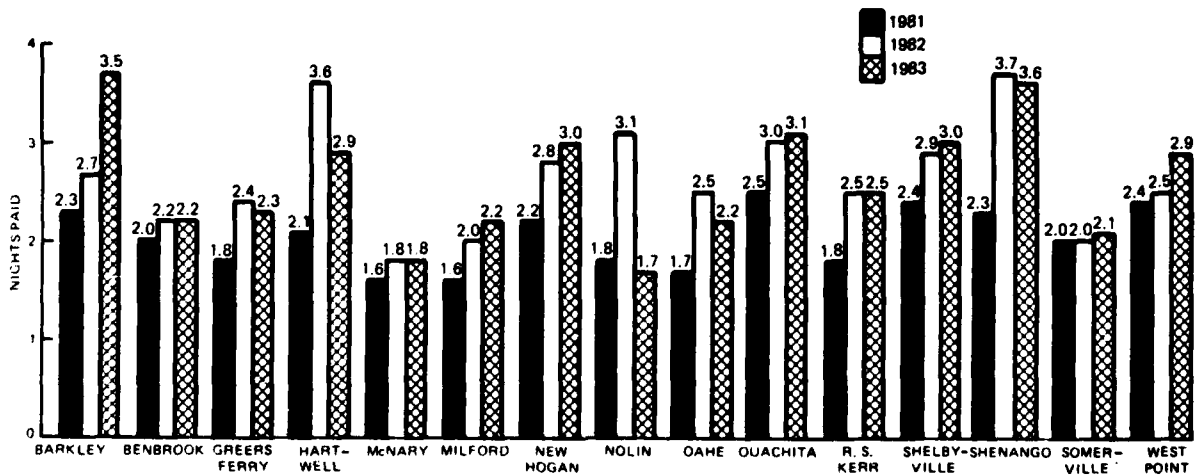


Figure 9. Mean length of stay, 1981-1983



showed a continuing increase. Five projects showed a decrease in length of stay, with Nolin showing the most significant decrease.

32. From 1981 to 1983, there was a decrease in the percentage of campers with prior visits to the project and the percentage of campers having the project as their primary destination (Figure 10\*). This nationwide trend is reflected in most of the individual projects, as can be seen in Figures 11 and 12. Some of the projects do differ from the average, though. In regard to percent prior visits, five projects (Ouachita, R. S. Kerr, Shelbyville, Shenango, and West Point) show an increase in 1983, though only at Shenango does the 1983 figure exceed that of 1981. This pattern is also exhibited for primary destination. Here, Nolin, Ouachita, R. S. Kerr, and Somerville show an increase in 1983, though it remains below the 1981 level. Shelbyville is the only project which had a constant increase in primary destination from 1981 to 1983.

33. Over the entire CRS, the percent of campers using Golden Age or Golden Access passports has increased over the past 3 years. All of the projects except Hartwell and Nolin reflect this trend (Figure 13). The increase in use of these passports could be a function of increased mobility among the elderly and handicapped, or it could be due to an improvement in access to facilities at Corps campgrounds.

34. From 1981 to 1983, there was an increase in the percentage of camping parties with trucks, cars, and vans (Figure 14\*). Since the percentage of parties with motorhomes and other types of vehicles stayed roughly constant over the same period, the increase is likely due to an increase in the number of vehicles at the site rather than a change in the type of vehicle used.

35. Figures 15 through 18 illustrate vehicle trends for the individual projects. For all vehicle types the changes in percentage between years were small, if any. The largest was at Hartwell, where the percent of camping parties with cars increased from 48 percent in 1982 to 61 percent in 1983. For the most part, the nationwide vehicle trends were replicated at the individual projects. With cars, however, half of the projects showed a decrease in 1983. With vans and motorhomes, the changes between 1981 and 1983 were small and inconsistent enough that they appear to be due to chance rather than a particular trend.

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\* The actual values can be found in Appendix D.

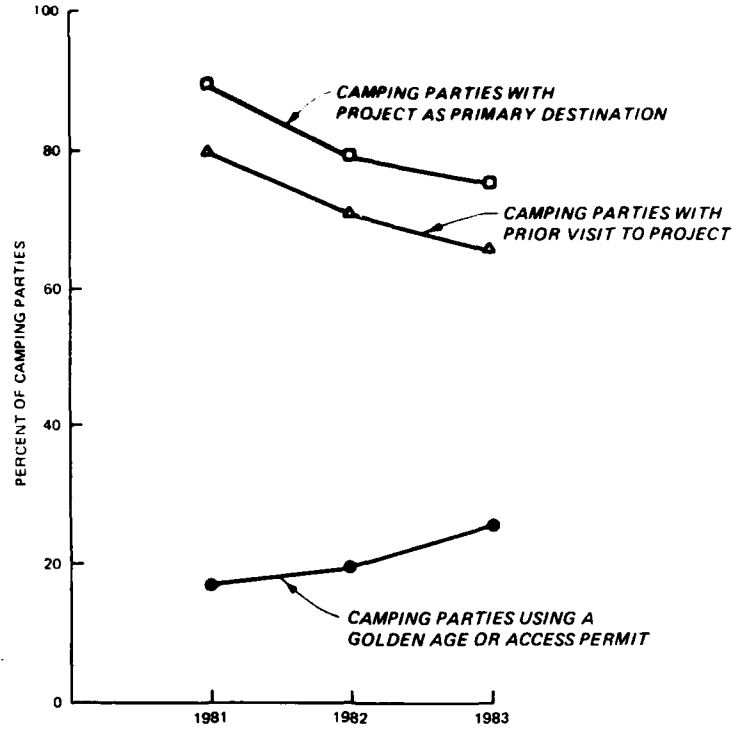


Figure 10. Use characteristics for entire CRS sample, 1981-1983

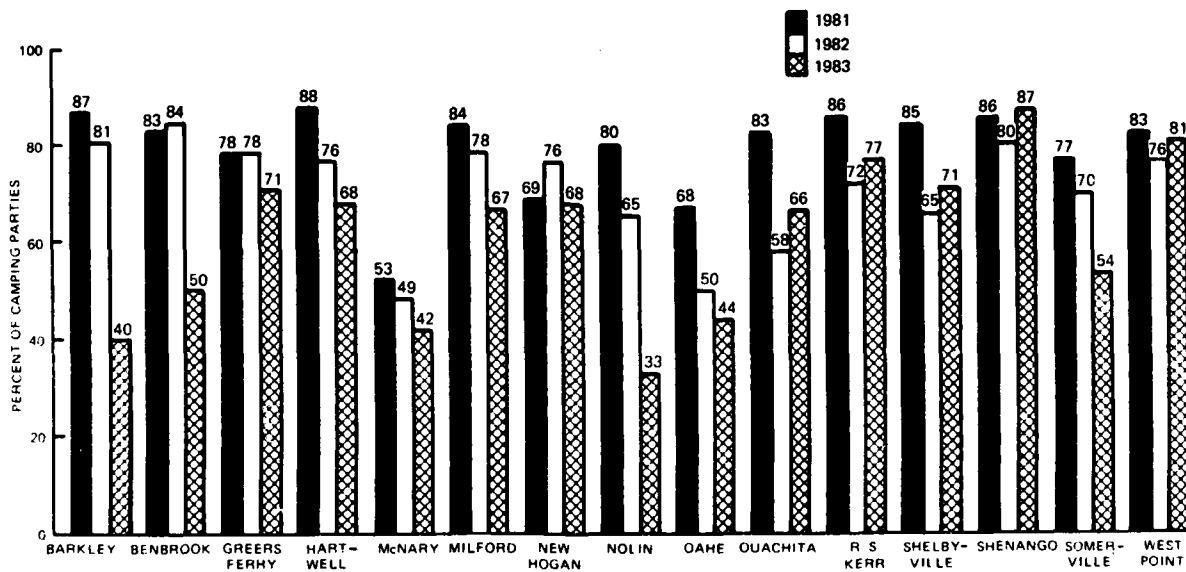


Figure 11. Percent of camping parties with prior visits to the project, 1981-1983. (The 1983 value for Nolin may be inaccurate-- see footnote on page C14)

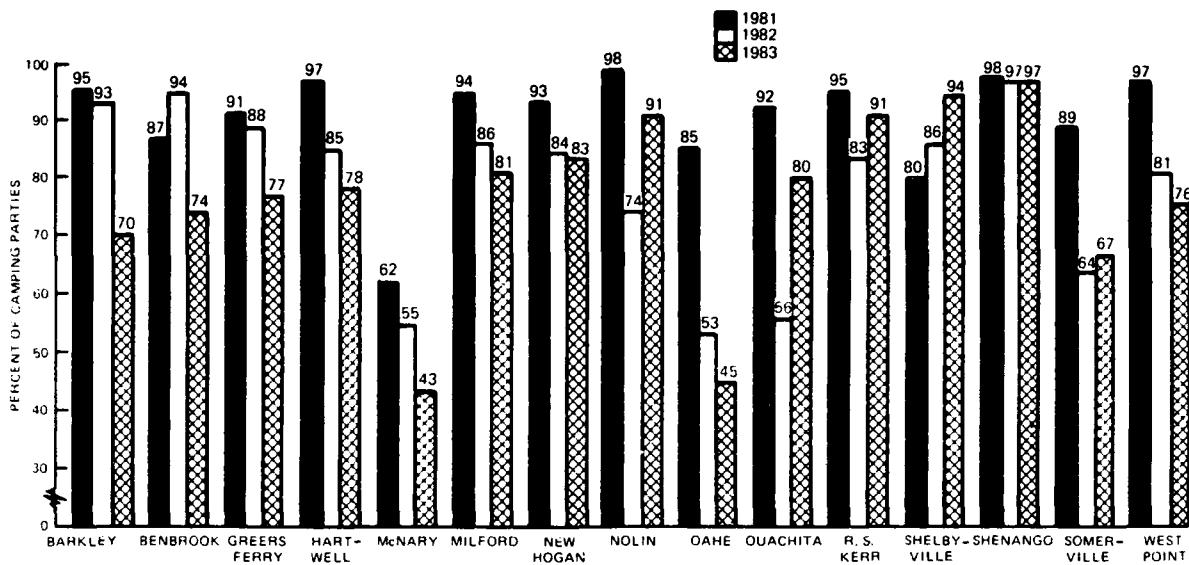


Figure 12. Percent of camping parties having the project as their primary destination, 1981-1983

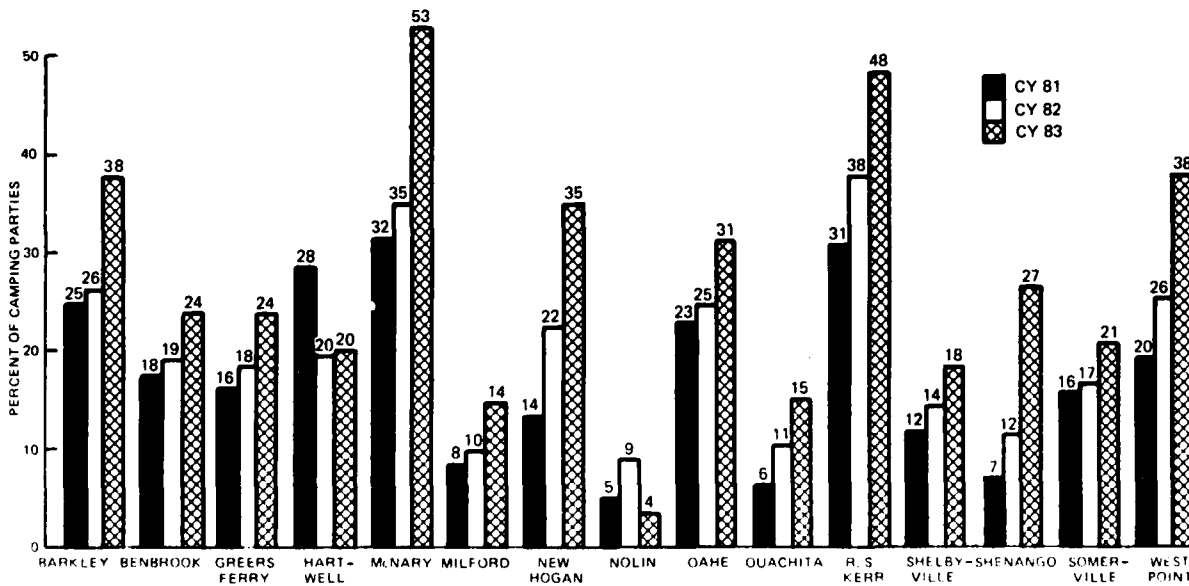


Figure 13. Percent of camping parties using Golden Age or Golden Access passports, 1981-1983

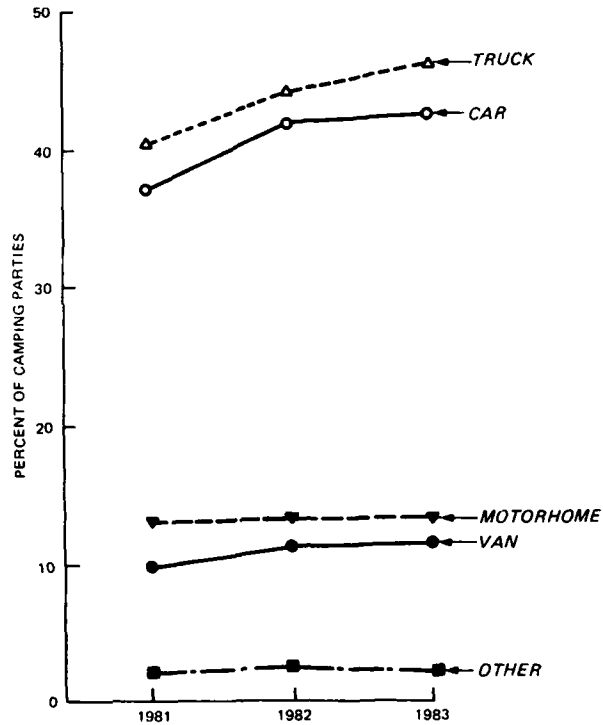


Figure 14. Vehicle distribution for entire CRS sample, 1981-1983

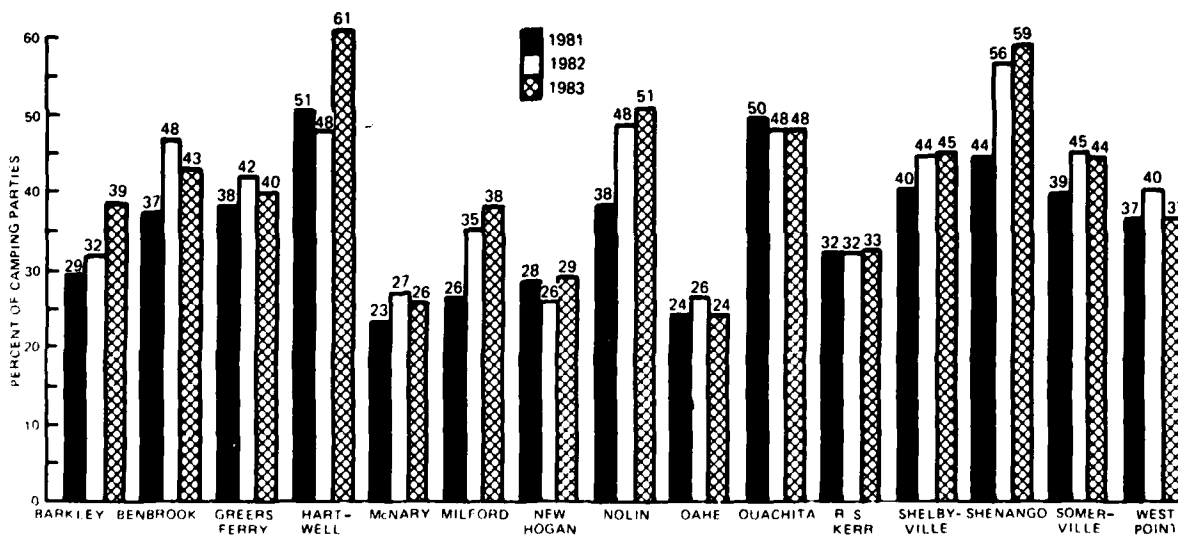


Figure 15. Percent of camping parties with cars, 1981-1983

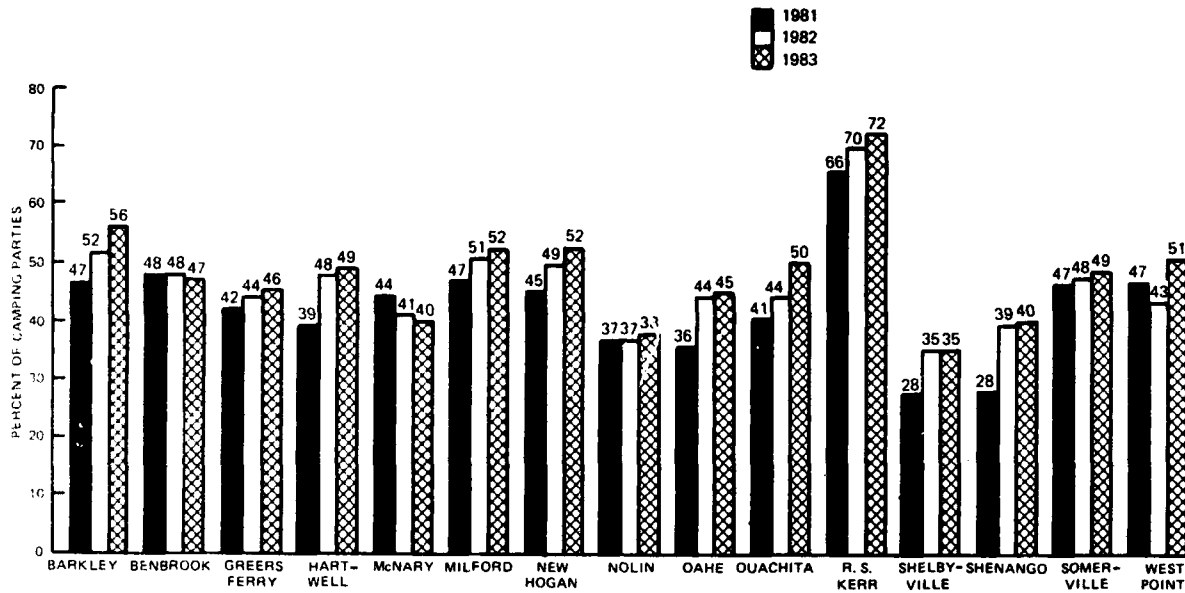


Figure 16. Percent of camping parties with trucks, 1981-1983

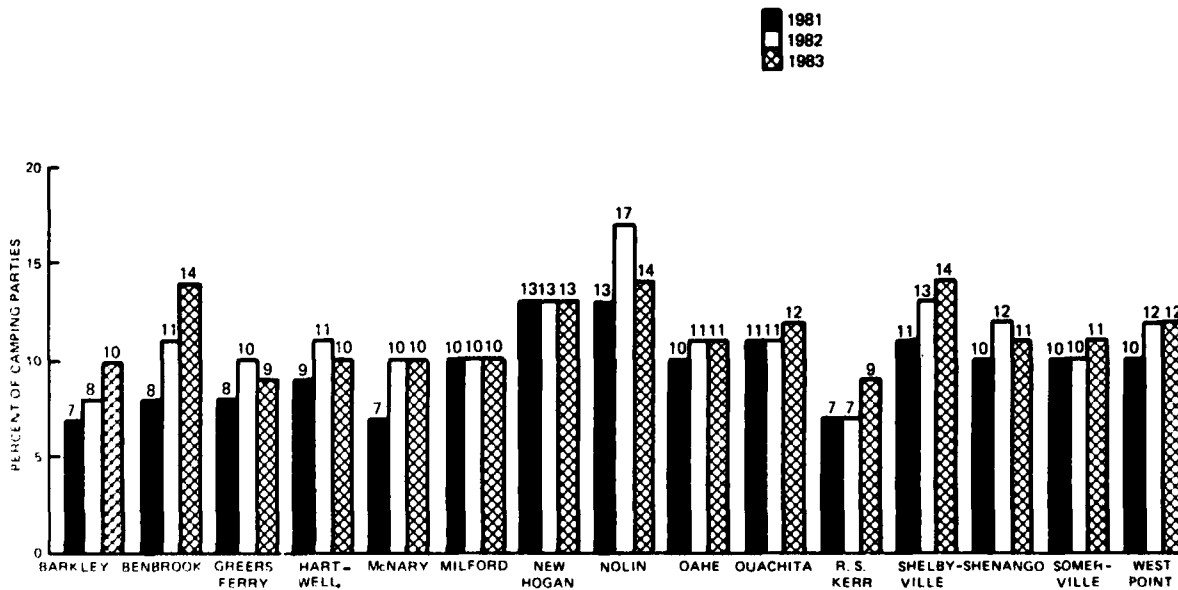


Figure 17. Percent of camping parties with vans, 1981-1983

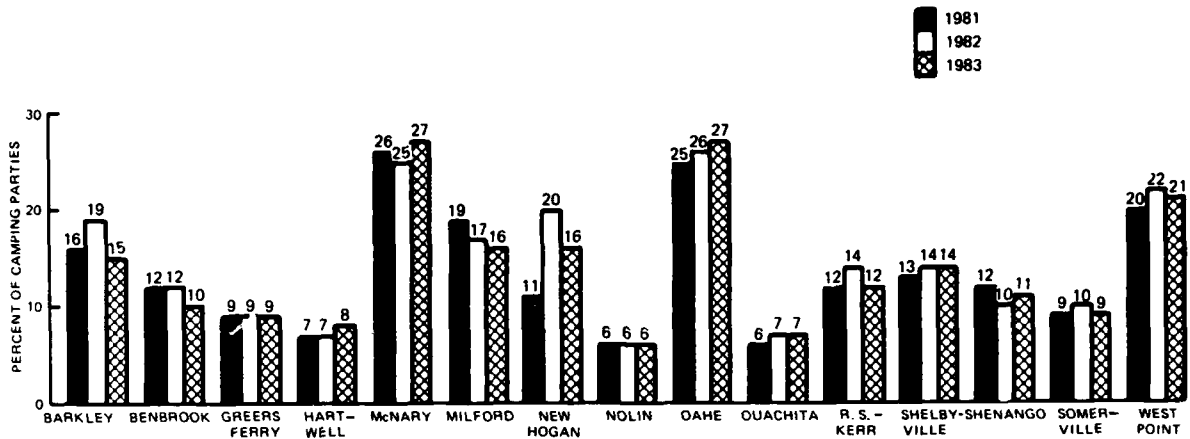


Figure 18. Percent of camping parties with motorhomes, 1981-1983

36. Nationwide, campers seem to be moving back toward a more simplified camping style. This observation is based on the fact that the percent of campers with tents and those with no special camping equipment rose from 1981 to 1983, while the percent of campers with travel trailers, pickup campers, and pop-up trailers dropped during the same period (Figure 19\*).

37. Camping equipment trends for the individual projects are illustrated in Figures 20 through 24. As indicated by the figures for the entire sample, most projects showed an increase in camping parties using tents. At the projects showing a decrease, the 1983 percentage was still higher than that recorded in 1981. For the other types of camping equipment (pop-up trailers, pickup campers, and travel trailers) only five projects showed an increase: Barkley (pop-up trailers and pickup campers), West Point (pickup campers), and Milford, Ouachita, and R. S. Kerr (travel trailers). Use of pickup campers at Nolin is interesting in that it rose substantially in 1982, then returned to its 1981 level in 1983.

38. It is difficult to predict any trends in the percentage of camping parties with no special camping equipment since this information does not exist for 1981. At four projects, though, there was a major increase in 1983. Since in two of these cases the 1982 value was only slightly above 0.0 percent, the change in percentages could be due to a difference in the way the camping equipment question was asked. CRS data for 1984 should provide more definitive trend information.

\* The actual values can be found in Appendix D.

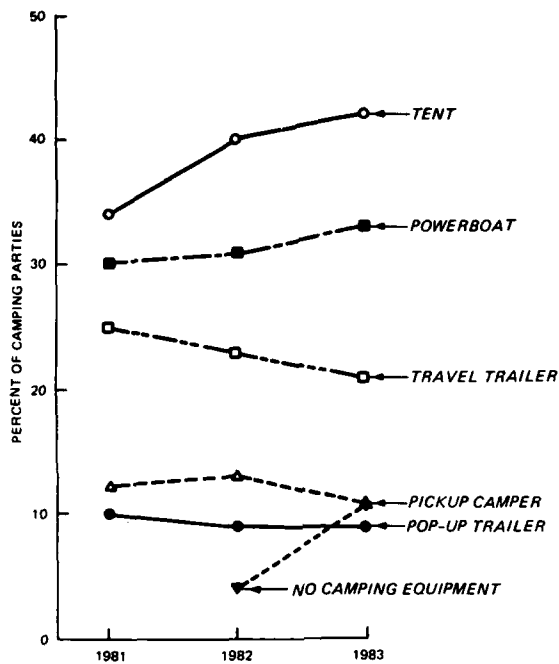


Figure 19. Distribution of camping equipment and powerboats, 1981-1983

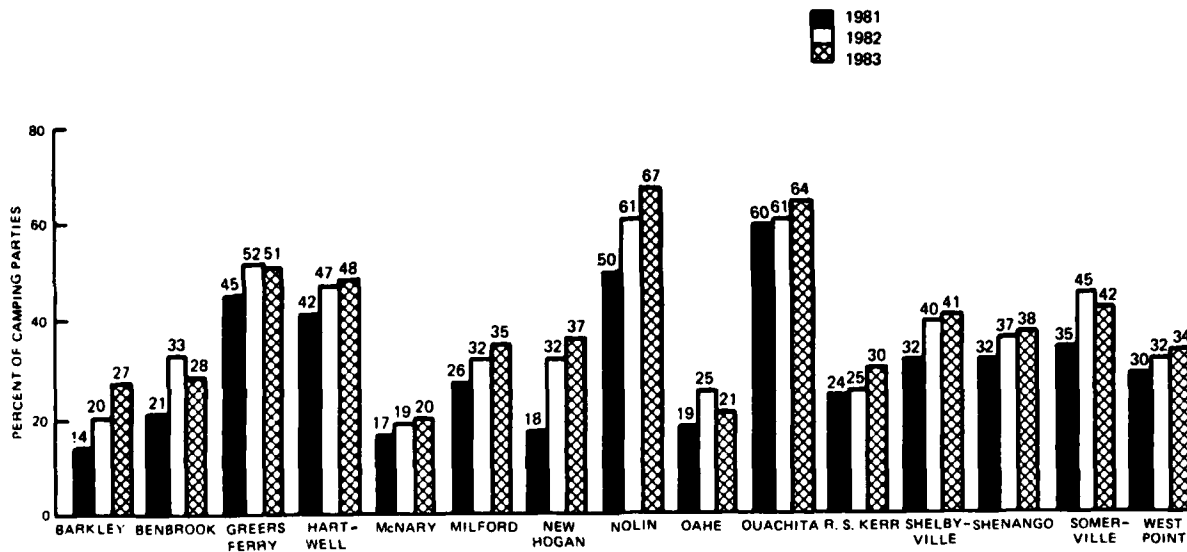


Figure 20. Percent of camping parties with tents, 1981-1983

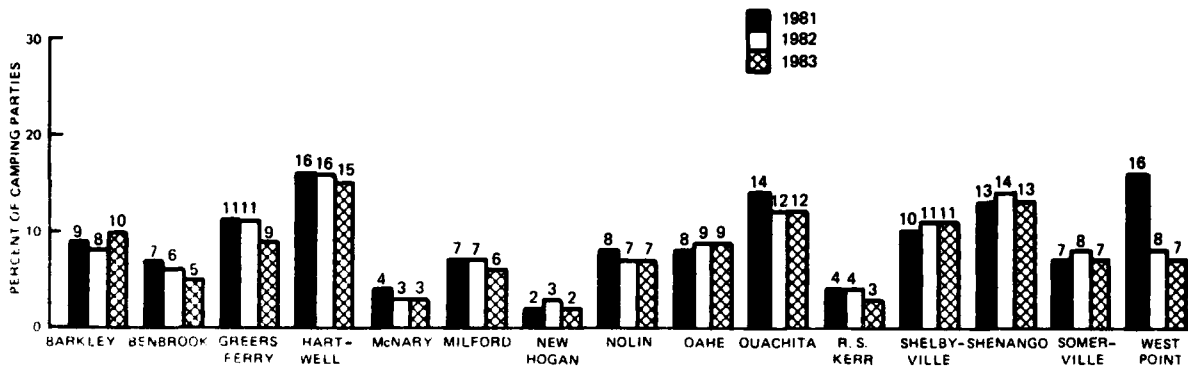


Figure 21. Percent of camping parties with pop-up trailers, 1981-1983

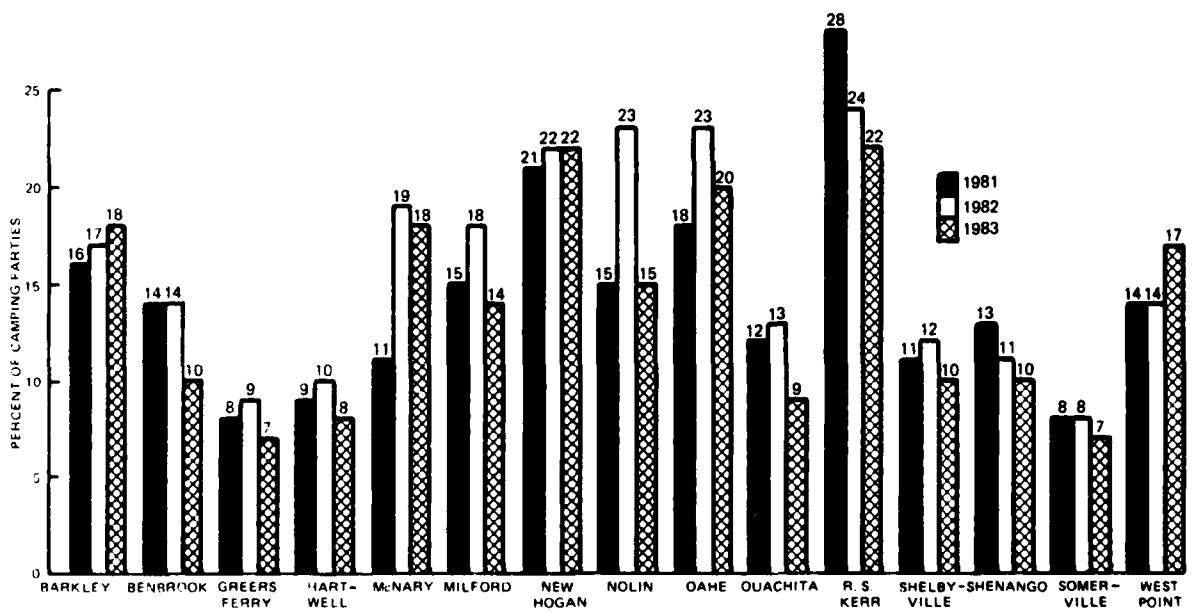


Figure 22. Percent of camping parties with pickup campers, 1981-1983



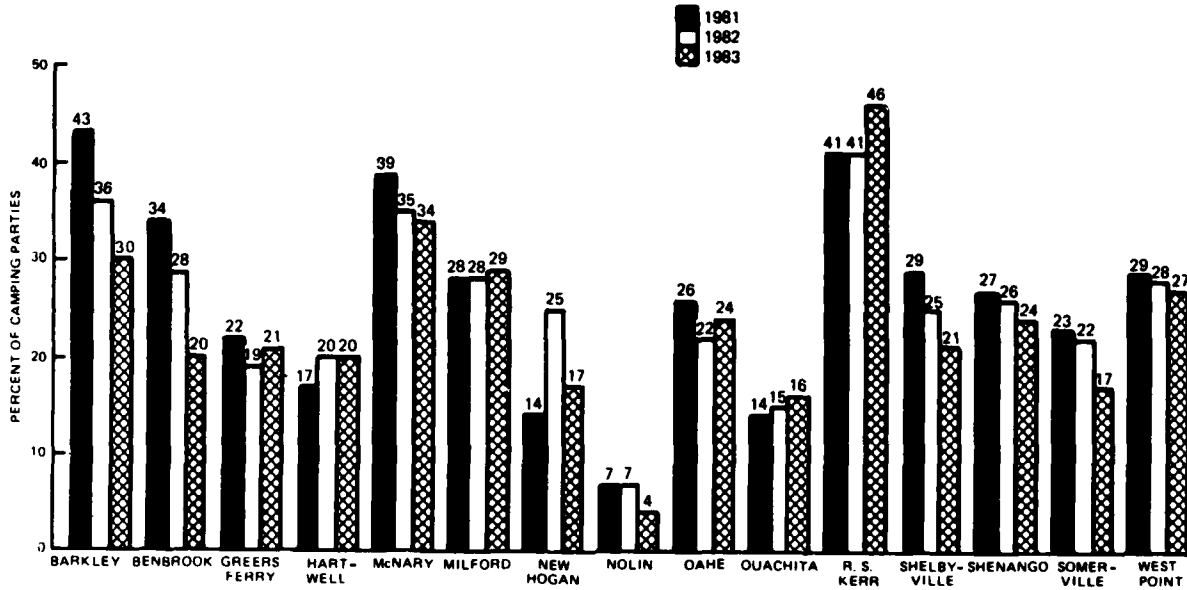


Figure 23. Percent of camping parties with travel trailers, 1981-1983

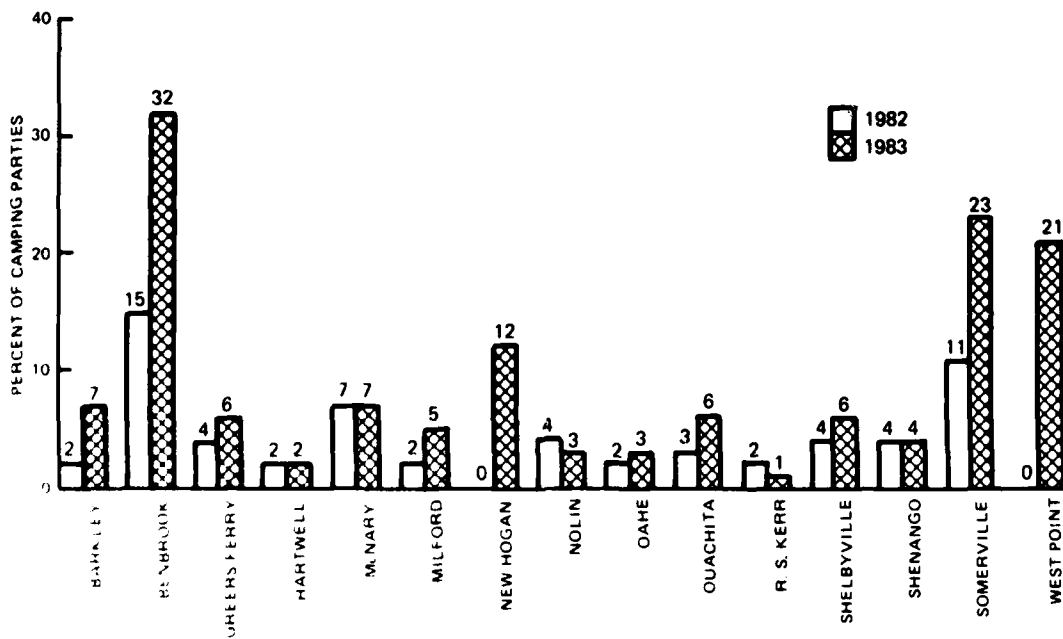


Figure 24. Percent of camping parties with no special camping equipment, 1982-1983

39. The only piece of recreation equipment used by campers to any great extent was powerboats. As illustrated in Figure 19, the percentage of campers with powerboats has increased somewhat since 1981. At each of the projects, the use of powerboats has either increased or remained relatively constant over the past 3 years (Figure 25). New Hogan and West Point are unusual in that the percent of powerboats showed a major decrease in 1982, then an even larger increase in 1983. It seems likely that some regional factor affected powerboat use at these lakes in 1982.

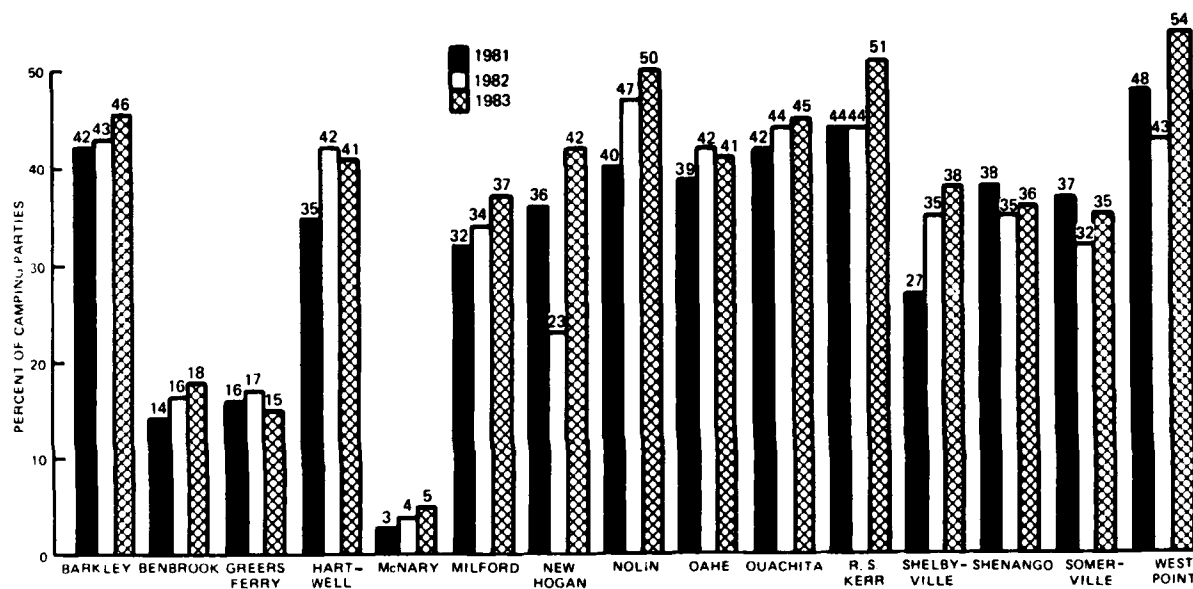


Figure 25. Percent of camping parties with powerboats, 1981-1983

### PART III: CONCLUSIONS AND RECOMMENDATIONS

40. The first of the two functions of the CRS has been accomplished. After 5 years of testing, a set of procedures has been developed for collecting and analyzing campground data with a minimum burden on project personnel and project visitors. Progress has also been made on the second function of the CRS--the accumulation of a data base which can be used to develop trend information for operation and planning purposes.

41. The CRS data collected to this point have been used by field personnel for a variety of purposes. Staff at Greers Ferry Lake and Louisville and Pittsburgh Districts have used the information to evaluate current and potential usage of electric hookups. Zip code data have been analyzed by Lake Oahe staff to determine county of origin for their visitors. These data have also been used to prepare marketing information for Little Rock District. Finally, staff at Lake Shelbyville referred to sales data in planning and preparing visitor information brochures.

42. Potential uses of the data base have been suggested in the previous CRS reports. Using the data to estimate the number of receipts sold on a daily, weekly, monthly, and seasonal basis was discussed in Curtis.\* The results of this analysis could be used in scheduling personnel. The data can also be utilized to examine the effect that fee increases have on visitation and occupancy rates. Assistance in planning can be provided as well. An analysis of user characteristics and their changes over time can indicate whether existing facilities are meeting user needs, whether additional or different facilities are needed, and where to locate these facilities. With enough historical data, it is also possible to evaluate the effects on recreation use of external factors such as fuel shortages and changing leisure patterns.

43. The analyses presented in this report are fairly straightforward. So far, most results represent totals, percentages, or means for all projects or a specific project or recreation area. Additional information may be obtained by analyzing portions of the CRS data. For example, the analysis of certain variables, such as equipment type and Golden Age/Access passports, by

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\* G. L. Curtis. 1983. "Summary of the 1982 Campground Receipt Study," Miscellaneous Paper R-83-2, US Army Engineer Waterways Experiment Station, Vicksburg, Miss.

month may reveal seasonal trends which could be important to managers. The CRS may be used in conjunction with other data bases as well. In another work effort of the Natural Resources Research Program, "Key Indicators of Recreation Use," the CRS data have been combined with resource characteristics in order to determine visitor preferences for campsites and recreation areas.

44. In the near future, two additional analyses are being planned. The first involves the comparison of the 1980 CRS data with that of subsequent years. Since 1980 was a limited sample, these comparisons were not made for this report. However, the 1981, 1982, and 1983 data bases can be made comparable by using only that data from recreation areas and weeks included in the 1980 study. Comparisons of the 4 years of data will strengthen trend analyses.

45. Also planned is an analysis of the number of people and sites occupied by day of the year. This will be done by recreation area and by campsite to reveal peak and low use patterns.

46. It is hoped that, as more data are collected, more use will be made of the CRS data. At this point two factors limit its use somewhat. First, the data represent only camping use. As such, they cannot be used to analyze or predict use patterns of other project visitors. However, data on other project users are now becoming available through the traffic stop visitor surveys being conducted Corps-wide. The second limiting factor is the sheer volume of data being collected through the CRS. The solution to this problem may also be imminent. The technology currently exists for collecting the data electronically, via a microcomputer or terminal. The data could then be transferred to a remote computer for analysis. This would eliminate costly and time-consuming keypunch requirements.

47. Overall, it appears as though the CRS is both efficient and effective. Although the data have received somewhat limited use in the past, they offer great potential.

APPENDIX A: EXAMPLES OF THE RECREATION ANALYSIS PROGRAM REPORTS

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 RECREATION ANALYSIS PROGRAM  
 AREA REPORT

FROM 5/ 1/83 TO 9/27/83

PROJECT NO. 940 REC AREA NO. 134

VEHICLE	GROUP TOTAL		VEHICLE TOTAL		CAMPING EQUIPMENT		GROUP TOTAL		EQUIP. TOTAL		RECREATIONAL EQUIPMENT		GROUP TOTAL		EQUIP. TOTAL	
	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.	NO.	PCT.
CAR	254	39.9	254	36.5	TENT	334	52.5	334	50.2	POHBOAT	302	47.5	302	47.5	302	47.5
TRUCK	327	51.4	327	47.1	POP-UP TRAILER	38	6.0	38	5.7	SAILBOAT	0	0.	0	0.	0	0.
VAN	59	9.3	59	8.5	PICKUP CAMPER	140	22.0	140	21.1	OTHER WATERCRAFT	0	0.	0	0.	0	0.
MOTORHOME	35	5.5	35	5.0	TRAVEL TRAILER	47	7.4	47	7.1	BICYCLE	4	0.6	4	0.6	4	0.6
MOTORCYCLE	11	1.7	11	1.6	MOTORHOME	35	5.5	35	5.3	MOTORCYCLE	4	0.6	4	0.6	4	0.6
OTHER	9	1.4	9	1.3	NONE	71	11.2	71	10.7	ORV	2	0.3	2	0.3	2	0.3
MISSING	0				MISSING	0		0		OTHER	316	49.7	316	49.7	316	49.7

USER CHARACTERISTICS

CAMPING PERMITS		755	NIGHTS PAID		1187	PRIOR VISITS		NO.	PCT.
CAMPING GROUPS		636	LENGTH OF STAY/GROUP.AVG.		1.87	PRIMARY DESTINATION		43	6.8
CAMPING PARTICIPANTS		2072	TOTAL REC DAYS OF USE		4033			440	69.2
PERSONS/GROUP.AVG.		3.26							
NO. GOLDEN PASSPORTS		24	PERMIT TYPES						
TOTAL FEES PAID	\$	4091.30	NO. OF GROUP CAMP PERMITS		0	NO. OF GROUPS		16	2.6
RENEWALS		119	GROUP CAMP REC DAYS		0	NIGHTS PAID		38	3.2

NOTE 1: ( 1 PERMITS SHOW ZERO FEE)  
 ( 0 PERMITS SHOW ZERO PERSONS IN PARTY)  
 ( 0 PERMITS SHOW ZERO NIGHTS PAID)  
 ( 0 PERMITS SHOW BOTH ZERO PERSONS, NIGHTS PAID)

NOTE 2: FOR VEHICLE AND CAMPING AND RECREATIONAL EQUIPMENT CATEGORIES THE GROUP TOTAL IS THE NUMBER OF GROUPS THAT HAD ONE OR MORE OF THE SPECIFIED ITEMS. THE VEHICLE OR EQUIPMENT TOTALS ARE THE TOTAL NUMBER OF THE SPECIFIED ITEMS RECORDED. FOR EXAMPLE, A GROUP WITH TWO CARS WOULD BE COUNTED ONCE UNDER THE GROUP TOTAL AND TWICE UNDER THE VEHICLE TOTAL FOR CARS. THE GROUP PERCENT IS NUMBER OF GROUPS THAT HAD ONE OR MORE OF THE SPECIFIED ITEMS DIVIDED BY THE TOTAL NUMBER OF GROUPS; THE COLUMN TOTAL MAY EXCEED 100 PERCENT SINCE GROUPS MAY HAVE MORE THAN ONE TYPE OF VEHICLE OR EQUIPMENT. VEHICLE AND EQUIPMENT PERCENTS ARE THE TOTAL FOR EACH ITEM DIVIDED BY THE COLUMN TOTAL AND SHOULD EQUAL 100 PERCENT (EXCEPT FOR ROUNDING). THE AVERAGE (AVG.) COLUMN UNDER RECREATIONAL EQUIPMENT IS THE TOTAL NUMBER OF EACH ITEM RECORDED DIVIDED BY THE NUMBER OF GROUPS THAT HAD ONE OR MORE OF THAT ITEM WITH THEM.

SITE SPECIFIC DATA REPORT

PROJECT NO. 940 REC AREA NO. 134

SITE NO.	TOT NIGHTS OCCUPIED	TOT NIGHTS ELEC USED	NO. OF GROUPS	AVG NO. IN GROUP	TOT REC DAYS	TENT (PCT)	FOP-UP (PCT)	PICK-UP (PCT)	TRAVEL TRAILER (PCT)	MOTORHOME (PCT)	NONE (PCT)
0000	27	18	10	2.5	75	10.0	10.0	0.	60.0	20.0	10.0
0001	30	1	24	3.1	92	91.7	0.	4.2	0.	0.	8.3
0002	13	0	9	2.9	38	100.0	0.	0.	0.	0.	0.
0003	30	0	16	2.6	80	100.0	0.	12.5	0.	0.	0.
0004	29	0	15	3.4	95	66.7	0.	0.	0.	0.	13.3
0005	31	0	19	3.8	110	103.0	0.	0.	0.	0.	0.
0006	22	0	14	6.1	122	85.7	0.	14.3	0.	0.	14.3
0007	51	0	26	3.9	189	100.0	0.	0.	0.	0.	0.
0008	72	1	43	2.6	200	55.8	2.3	30.2	9.3	0.	9.3
0009	112	0	45	3.9	535	28.9	13.3	33.3	11.1	11.1	11.1
0010	113	2	58	3.1	365	31.0	24.1	36.2	3.4	6.9	6.9
0011	101	3	59	2.6	282	33.9	3.4	44.1	8.5	0.	11.9
0012	149	2	54	3.6	522	31.5	3.7	27.8	22.2	3.7	16.7
0013	55	1	52	3.4	336	36.5	19.2	32.7	7.7	0.	11.5
0014	45	1	30	3.5	165	90.0	0.	10.0	0.	0.	6.7
0015	7	0	5	2.8	22	100.0	0.	0.	0.	0.	0.
0016	54	0	25	3.0	189	56.0	0.	0.	0.	0.	4.0
0017	13	0	7	3.7	44	100.0	0.	0.	0.	0.	0.
0018	52	3	30	3.8	192	90.0	0.	3.3	3.3	0.	6.7
0019	12	0	6	3.3	40	100.0	0.	0.	0.	0.	0.
0020	80	2	49	2.8	219	14.3	0.	32.7	14.3	22.4	16.3
0021	22	0	20	2.4	53	0.	0.	20.0	0.	30.0	50.0
0022	11	3	9	2.2	24	0.	22.2	44.4	0.	11.1	22.2
0023	6	0	4	2.0	20	0.	0.	0.	0.	50.0	50.0
0024	9	1	7	4.0	34	28.6	0.	0.	14.3	28.6	28.6

FRCH 5/ 1/83 TO 9/27/83

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APPENDIX B: LISTING OF PROJECTS AND RECREATION  
AREAS PARTICIPATING IN THE CRS



<u>Project/Recreation Area</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
<b>Barkley (Nashville District)</b>				
Eureka				X
Canal	X	X	X	X
Hurricane Creek		X	X	X
Devils Elbow			X	X
<b>Benbrook (Fort Worth District)</b>				
Holiday Park, South	X	X	X	X
Mustang Park		X	X	X
<b>Greers Ferry (Little Rock District)</b>				
Dam Site		X	X	X
Old Highway 25		X	X	X
Heber Springs		X	X	X
Cove Creek		X	X	X
Shiloh		X	X	X
Narrows		X	X	X
Devils Fork		X	X	X
Sugar Loaf	X	X	X	X
Van Buren		X	X	X
Choctaw		X	X	X
John F. Kennedy	X	X	X	X
<b>Hartwell (Savannah District)</b>				
Watsadlers		X	X	X
River Georgia		X	X	X
Crescent		X	X	X
Island Point		X		
Springfield	X	X	X	X
Gum Branch		X		
Transient Group Camp		X	X	X
Weldon Island		X		
Glen Ferry Park		X	X	X
Milltown		X	X	X
Chandlers Ferry		X	X	X
Paynes Creek		X	X	X
Asbury		X	X	X
Oconee Point	X	X	X	X
Twin Lakes		X	X	X
Coneross	X	X	X	X
<b>McNary (Walla Walla District)</b>				
Hood Park	X	X	X	X
<b>Milford (Kansas City District)</b>				
Curtis Creek		X	X	X
Farnum Creek		X	X	X
Rolling Hills	X	X	X	X
School Creek		X	X	X
Timber Creek		X	X	X

<u>Project/Recreation Area</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
New Hogan (Sacramento District)				
Acorn Campground		X	X	X
Nolin (Louisville District)				
Dog Creek				X
Wax	X	X	X	X
Moutardier		X	X	X
Oahe (Omaha District)				
Downstream South		X	X	X
Downstream North	X	X	X	X
Indian Creek		X	X	X
Indian Memorial		X	X	X
Ouachita (Vicksburg District)				
Stephens Park		X		X
Little Fir				X
Denby Point	X	X	X	X
Tompkins Bend		X	X	X
Joplin		X	X	X
Crystal Springs		X	X	X
Brady Mountain	X	X	X	X
Cedar Fourche				X
R. S. Kerr (Tulsa District)				
Applegate Cove		X	X	X
Short Mountain Cove		X	X	X
Cowlington Point	X	X	X	X
Gore Landing		X	X	X
Sallisaw Creek		X	X	X
Keota Landing		X		
Shelbyville (St. Louis District)				
Opossum Creek				X
Coon Creek		X	X	X
Lone Point		X	X	X
Lithia Springs		X	X	X
Forrest W. "Bo" Wood	X	X	X	X
Whitley Creek		X	X	X
Shenango (Pittsburg District)				
Shenango Recreation Area	X	X	X	X
Somerville (Fort Worth District)				
Big Creek Park		X	X	X
Rocky Creek Park		X	X	X
Yegua Creek Park	X	X	X	X
Overlook Park			X	X
West Point (Mobile District)				
R. Shaefer Heard		X	X	X

<u>Project/Recreation Area</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Bird Creek Access		X		
Brush Creek Access		X	X	X
Autry Park		X		
Holiday Park		X	X	X
State Line Park		X	X	X
Amity Park	X	X	X	X

APPENDIX C: 1983 CRS DATA SUMMARIES FOR INDIVIDUAL  
RECREATION AREAS

Table C1  
Lake Barkley User Characteristics

<u>Characteristic</u>	<u>Eureka</u>	<u>Canal</u>	<u>Hurricane Creek</u>	<u>Devils Elbow</u>	<u>Project Totals</u>
Recreation days	4,079	23,990	13,807	4,033	45,909
Mean length of stay, nights	2.77	4.36	3.24	1.87	3.46
Mean number in group	3.39	3.16	3.21	3.26	3.21
Percent prior visits*	66.8	56.9	24.3	6.8	39.8
Percent primary destination*	63.4	56.9	88.1	69.2	69.5
Percent golden passports*	17.5	60.6	29.3	3.8	37.6
Number of camping permits	599	3,477	1,709	755	6,540
Number camping groups	434	1,811	1,382	636	4,263

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\* Percent of camping parties.

Table C2  
Lake Barkley Vehicle and Equipment Type  
 (Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Eureka</u>	<u>Canal</u>	<u>Hurricane Creek</u>	<u>Devils Elbow</u>	<u>Project Totals</u>
<b>Vehicle</b>					
Car	46.5	43.3	29.5	39.3	38.6
Truck	62.0	52.3	61.5	51.4	56.2
Van	10.6	9.2	10.4	9.3	9.7
Motorhome	6.5	20.0	16.1	5.5	15.2
Other	1.2	0.5	0.3	3.1	0.9
<b>Camping equipment</b>					
Tent	44.0	15.7	24.2	52.5	26.8
Pop-up trailer	12.5	10.9	8.8	6.0	9.6
Pickup camper	21.9	8.9	26.6	22.0	17.9
Travel trailer	18.9	41.6	27.5	7.4	29.6
No camping equipment	9.9	4.5	7.2	11.2	6.9
<b>Recreational equipment</b>					
Powerboat	40.8	34.9	62.7	47.5	46.4
Sailboat	0.5	0.2	0.2	0.0	0.2
Other boat	0.0	0.0	0.0	0.0	0.0
Bicycle	3.0	2.2	4.6	0.6	2.8
Motorcycle	2.3	1.4	0.4	0.6	1.0
Off-road vehicle (ORV)	0.7	0.6	0.1	0.3	0.4
Other	2.3	0.7	0.7	49.7	8.2
<b>Vehicle distribution</b>					
Average number of vehicles per party	1.6	1.8	1.5	1.2	1.6
Percent of groups towing a pop-up or travel trailer	30.6	52.5	36.3	13.4	39.2

Table C3  
Lake Benbrook User Characteristics

<u>Characteristic</u>	<u>South Holiday</u>	<u>Mustang</u>	<u>Project Totals</u>
Recreation days	20,010	23,030	43,040
Mean length of stay, nights	2.86	1.78	2.23
Mean number in group	3.29	4.08	3.75
Percent prior visits*	57.0	45.9	50.5
Percent primary destination*	42.8	97.0	74.4
Percent golden passports*	35.6	13.5	24.5
Number of camping permits	3,394	4,117	7,411
Number of camping groups	2,417	3,391	5,808

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\* Percent of camping parties.

Table C4  
Lake Benbrook Vehicle and Equipment Type  
 (Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>South Holiday</u>	<u>Mustang</u>	<u>Project Totals</u>
<b>Vehicle</b>			
Car	44.4	42.7	43.4
Truck	48.9	45.5	46.9
Van	15.4	12.3	13.6
Motorhome	12.7	7.3	9.6
Other	1.3	2.2	1.8
<b>Camping equipment</b>			
Tent	24.3	29.9	27.6
Pop-up trailer	4.6	4.9	4.8
Pickup camper	10.6	8.8	9.5
Travel trailer	32.3	11.0	19.8
No camping equipment	19.5	40.2	31.6
<b>Recreational equipment</b>			
Powerboat	19.8	17.6	18.5
Sailboat	0.4	0.8	0.6
Other boat	0.0	0.0	0.0
Bicycle	1.0	1.4	1.3
Motorcycle	4.4	1.5	2.7
ORV	2.6	1.0	1.7
Other	0.7	0.5	0.6
<b>Vehicle distribution</b>			
Average number of vehicles per party	1.6	1.3	1.4
Percent towing a pop-up or travel trailer	36.1	15.7	24.2



Table C5  
Greers Ferry Lake User Characteristics

Characteristic	Old										Project Totals	
	Dam Site	Hwy 25	Heber Springs	Cove Creek	Shiloh	Narrows	Devils Fork	Sugar Leaf	Van Buren	Choctaw		J.F.K.
Recreation days	48,281	17,436	19,253	5,025	10,759	11,771	7,420	11,740	2,306	16,915	20,417	171,323
Mean length of stay, nights	1.95	2.17	2.24	1.99	2.36	3.02	2.06	2.35	2.07	2.42	3.00	2.29
Mean number in group	3.68	3.84	3.48	3.73	3.63	2.96	3.54	3.51	3.50	3.33	2.83	3.48
Percent prior visits*	72.5	92.2	78.9	87.0	84.9	77.0	80.0	76.4	33.8	74.5	26.2	71.3
Percent primary destination*	75.9	99.4	91.0	93.4	91.9	86.1	78.9	84.6	35.3	85.9	23.2	76.8
Percent golden passports*	15.2	6.9	9.3	11.3	13.7	49.9	9.2	14.6	9.8	36.3	71.8	23.9
Number of camping permits	8,249	2,766	3,057	824	1,691	1,892	1,296	1,751	381	2,876	3,720	28,503
Number of camping groups	6,783	2,105	2,429	654	1,254	1,364	1,071	1,425	371	2,134	2,560	22,042

\* Percent of camping parties.

Table C6

Greers Ferry Lake Vehicle and Equipment Type  
(Percent of Camping Parties)

Vehicle and Equipment Type	Dam Site	Old Hwy 25	Heber Springs	Cove Creek	Shiloh	Narrows	Devils Fork	Sugar Loaf	Van Buren	Choctaw	J.F.K.	Project Totals
<b>Vehicle</b>												
Car	49.9	44.5	43.3	48.0	36.6	26.4	34.1	40.0	44.5	27.7	26.4	40.1
Truck	39.3	50.0	44.4	51.8	48.6	48.5	55.8	48.3	36.9	54.5	50.3	46.4
Van	7.4	8.3	10.5	10.4	10.4	10.6	9.2	10.1	11.4	7.3	10.0	8.9
Motorhome	6.5	3.3	6.5	2.4	6.6	21.3	3.3	8.7	10.4	13.5	18.4	9.1
Other	2.3	1.0	0.7	0.9	1.9	9.2	1.2	2.0	0.6	1.1	1.0	2.0
<b>Camping equipment</b>												
Tent	60.4	58.8	59.3	69.3	51.9	19.1	69.8	52.4	63.6	34.1	24.9	51.0
Pop-up trailer	7.2	10.3	11.2	8.0	11.7	6.9	9.6	13.5	5.4	8.2	12.3	9.4
Pickup camper	6.6	5.7	5.3	9.1	6.1	5.7	8.8	4.2	8.2	9.0	7.6	6.7
Travel trailer	17.7	15.5	14.5	6.0	21.4	42.4	6.2	18.5	5.4	32.1	36.6	21.4
No camping equipment	5.7	8.0	5.3	8.3	5.4	5.6	4.4	5.6	7.9	6.0	2.1	5.5
<b>Recreational equipment</b>												
Powerboat	3.5	9.2	24.7	42.0	21.9	28.4	39.0	25.6	10.7	14.2	2.1	15.1
Sailboat	0.1	0.2	1.1	0.3	0.3	0.1	0.0	0.5	0.0	0.0	0.0	0.2
Other boat	0.2	0.3	0.2	0.2	0.2	0.1	0.6	0.8	1.3	0.0	0.2	0.3
Bicycle	0.5	0.1	4.8	3.7	5.7	3.9	0.5	10.9	1.3	2.0	1.1	2.4
Motorcycle	0.5	0.2	1.4	0.6	0.9	1.6	0.4	1.8	0.3	0.6	0.4	0.7
ORV	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.3	0.0	0.1	0.0
Other	0.0	0.1	0.9	0.3	0.2	1.8	0.4	2.2	0.9	0.2	0.0	0.4
<b>Vehicle distribution</b>												
Average number vehicles per party	1.3	1.4	1.3	1.4	1.4	1.7	1.2	1.4	1.2	1.4	1.5	1.4
Percent towing a pop-up or travel trailer	23.8	25.7	24.9	13.8	32.9	49.0	15.2	31.9	10.7	39.5	45.7	29.9

Table C7  
Hartwell Lake User Characteristics

Characteristic	Transient Group Camp										Project Totals		
	Watsadlers	River Ga.	Crescent	Springfield	Glen Ferry Park	Milil town	Chandlers Ferry*	Paynes Creek	Asbury	Oconee Point		Twin Lakes	Cone-ross Park*
Recreation days	14,098	126	4,152	6,671	171	282	4,523	681	6,314	13,557	24,462	336	81,506
Mean length of stay, nights	3.55	1.15	2.65	2.68	2.19	2.74	2.53	2.33	2.64	2.65	3.27	3.17	2.94
Mean number in group	3.24	4.32	4.16	3.74	4.38	4.61	3.66	4.42	3.89	4.08	3.84	4.91	3.78
Percent prior visits**	75.7	53.8	84.8	78.6	57.1	43.5	92.5	27.3	80.1	43.9	66.0	43.5	68.1
Percent primary destination**	93.3	80.8	93.9	92.7	61.9	100.0	96.8	71.2	90.0	48.9	63.5	95.7	77.9
Percent golden passports**	56.3	0.0	12.7	8.4	9.5	4.3	8.1	4.5	8.2	10.4	20.0	0.0	20.2
Number of camping permits	2,118	28	554	939	33	39	636	84	902	1,725	2,801	33	10,741
Number of camping groups	1,230	26	394	644	21	23	496	66	582	1,239	1,902	23	7,301

\* Campgrounds used during peak use periods only.

\*\* Percent of camping parties.

Table C8  
Hartwell Lake Vehicle and Equipment Type  
(Percent of Camping Parties)

Vehicle and Equipment Type	Watsadlers	River Ga.	Crescent	Springfield	Tran-sient Camp Group	Glen Ferry Park	Mill-town	Chand-lers Ferry	Paynes Creek	Asbury	Oconee Point	Twin Lakes	Cone-ross Park	Project Totals
Vehicle														
Car	60.4	76.9	66.8	66.5	60.0	72.7	59.6	66.7	52.4	62.2	63.3	61.2	77.3	61.4
Truck	50.0	34.6	38.6	44.0	50.0	40.9	57.3	42.4	52.6	46.3	52.8	46.6	54.5	48.6
Motorhome	14.1	3.8	9.6	4.5	5.0	0.0	3.9	4.5	8.3	5.8	3.3	8.8	0.0	7.7
Other	3.7	0.0	2.1	0.5	10.0	0.0	2.4	3.0	1.0	0.9	2.5	3.0	0.0	2.4
Camping equipment														
Tent	31.2	87.0	59.1	59.8	60.0	90.9	57.4	79.4	50.1	63.3	51.7	42.5	65.2	48.5
Pop-up trailer	13.6	4.3	16.9	16.4	25.0	4.5	15.7	3.2	14.1	9.3	18.6	15.0	17.4	14.9
Pickup camper	6.0	0.0	7.6	4.6	10.0	4.5	8.3	7.9	8.5	12.5	8.4	8.6	0.0	7.9
Travel trailer	29.1	4.3	8.1	13.9	5.0	0.0	13.6	3.2	18.9	11.8	17.5	27.6	13.0	20.4
No camping equipment	6.4	4.3	5.2	2.0	0.0	0.0	1.7	4.8	1.5	3.0	1.5	0.3	4.3	2.5
Recreational equipment														
Powerboat	30.0	0.0	21.1	41.5	28.6	43.5	50.4	37.9	51.6	48.1	50.0	37.6	56.5	40.7
Sailboat	0.8	0.0	2.0	2.5	0.0	4.3	5.2	0.0	0.2	0.7	0.3	0.2	0.0	1.0
Other boat	1.0	0.0	1.0	0.5	0.0	0.0	0.8	0.0	2.3	0.9	0.2	0.3	0.0	0.7
Bicycle	12.6	0.0	11.2	10.2	0.0	0.0	5.6	9.1	8.2	3.4	16.6	4.2	21.7	9.1
Motorcycle	1.6	0.0	1.3	0.9	0.0	0.0	0.8	0.0	0.2	0.9	1.2	0.4	4.3	0.9
ORV	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Vehicle distribution														
Average number of vehicles per party	2.0	1.5	1.5	1.6	1.5	1.5	1.7	1.6	1.6	1.6	1.8	1.7	2.1	1.7
Percent towing a pop-up or travel trailer	42.2	6.9	24.4	29.8	27.3	8.0	27.7	8.3	31.3	19.9	32.6	39.9	30.4	33.5

Table C9  
McNary Lock and Dam User Characteristics

<u>Characteristic</u>	<u>Hood Park</u>
Recreation days	13,379
Mean length of stay, nights	1.82
Mean number in group	2.84
Percent prior visits*	41.7
Percent primary destination*	42.8
Percent golden passports*	52.9
Number of camping permits	3,318
Number of camping groups	2,635

\* Percent of camping parties.

Table C10  
McNary Lock and Dam Vehicle and Equipment Type  
(Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Hood Park</u>
<b>Vehicle</b>	
Car	25.8
Truck	40.4
Van	10.2
Motorhome	27.0
Other	2.8
<b>Camping equipment</b>	
Tent	20.2
Pop-up trailer	3.4
Pickup camper	17.2
Travel trailer	33.6
No camping equipment	7.3
<b>Recreational equipment</b>	
Powerboat	4.6
Sailboat	0.0
Other boat	0.2
Bicycle	2.2
Motorcycle	0.6
ORV	0.2
Other	0.2
<b>Vehicle distribution</b>	
Average number of vehicles per party	1.4
Percent towing a pop-up or travel trailer	35.9

Table C11  
Milford Lake User Characteristics

<u>Characteristic</u>	<u>Curtis Creek</u>	<u>Farnum Creek</u>	<u>Rolling Hills</u>	<u>School Creek</u>	<u>Timber Creek</u>	<u>Project Totals</u>
Recreation days	7,357	5,944	6,992	2,048	5,572	27,913
Mean length of stay, nights	2.29	2.13	2.32	1.84	2.13	2.20
Mean number in group	3.52	4.35	3.47	3.73	3.60	3.67
Percent prior visits*	62.6	63.4	49.1	81.3	91.8	67.3
Percent primary destination*	77.8	96.6	56.8	97.7	98.1	81.4
Percent golden passports*	14.1	8.3	21.3	8.0	13.1	14.5
Number of camping permits	1,137	597	1,074	339	915	4,062
Number of camping groups	932	494	869	299	733	3,327

\* Percent of camping parties.

Table C12  
Milford Lake Vehicle and Equipment Type  
 (Percent of Camping Parties)

Vehicle and Equipment Type	Curtis Creek	Farnum Creek	Rolling Hills	School Creek	Timber Creek	Project Totals
<b>Vehicle</b>						
Car	34.8	48.8	38.7	29.8	36.4	37.8
Truck	55.3	48.8	42.7	61.9	56.6	52.0
Van	10.6	9.6	7.9	12.4	8.8	9.5
Motorhome	16.5	10.0	26.9	12.7	6.0	15.5
Other	1.4	0.8	1.9	0.7	2.3	1.6
<b>Camping equipment</b>						
Tent	26.0	45.1	27.6	41.6	43.7	34.6
Pop-up trailer	5.6	6.4	6.2	5.4	7.6	6.3
Pickup camper	14.1	16.8	9.7	18.8	13.2	13.6
Travel trailer	34.7	23.4	27.6	27.2	28.8	29.2
No camping equipment	7.7	3.7	4.2	4.0	3.0	4.8
<b>Recreational equipment</b>						
Powerboat	45.4	35.6	32.5	48.2	30.2	37.4
Sailboat	1.1	1.0	1.5	1.3	1.0	1.2
Other boat	2.4	0.4	0.2	3.7	2.0	1.6
Bicycle	1.0	0.4	0.8	1.3	2.5	1.2
Motorcycle	2.4	1.4	0.7	8.4	3.0	2.5
ORV	0.2	0.6	0.5	0.2	0.1	0.5
Other	0.1	0.2	0.3	1.3	0.3	0.3
<b>Vehicle distribution</b>						
Average number of vehicles per party	1.6	1.8	1.5	1.5	1.5	1.6
Percent towing a pop-up or travel trailer	38.7	29.1	33.1	32.4	36.0	34.7

Table C13

New Hogan Lake User Characteristics

<u>Characteristic</u>	<u>Acorn</u>
Recreation days	49,952
Mean length of stay, nights	3.05
Mean number in group	3.15
Percent prior visits*	68.2
Percent primary destination*	83.1
Percent golden passports*	35.0
Number of camping permits	7,090
Number of camping groups	5,184

\* Percent of camping parties.

Table C14

New Hogan Lake Vehicle and Equipment Type  
(Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Acorn</u>
Vehicle	
Car	28.9
Truck	51.5
Van	13.0
Motorhome	15.7
Other	1.4
Camping equipment	
Tent	37.2
Pop-up trailer	1.8
Pickup camper	21.7
Travel trailer	17.1
No camping equipment	11.6
Recreational equipment	
Powerboat	42.1
Sailboat	0.6
Other boat	1.4
Bicycle	1.0
Motorcycle	0.9
ORV	0.1
Other	0.4
Vehicle distribution	
Average number of vehicles per party	1.3
Percent towing a pop-up or travel trailer	18.7



Table C15  
Nolin River Lake User Characteristics

<u>Characteristic</u>	<u>Dog Creek</u>	<u>Wax</u>	<u>Moutardier</u>	<u>Project Totals</u>
Recreation days	2,314	4,004	6,763	13,081
Mean length of stay, nights	1.71	1.96	1.65	1.74
Mean number in group	3.61	3.79	3.45	3.56
Percent prior visits*	73.8	74.3	1.2**	32.8**
Percent primary destination*	81.1	98.9	90.0	90.7
Percent golden passports*	7.8	8.6	0.2	3.7
Number of camping permits	439	654	1,321	2,414
Number of camping groups	370	538	1,184	2,092

\* Percent of camping parties.

\*\* Comparable percentages for Moutardier in 1981 and 1982 were 81.2 percent and 67.7 percent, respectively. Since the percentage for 1983 is so much lower, it is likely that there was an error in coding this data element.

Table C16  
Nolin River Lake Vehicle and Equipment Type  
 (Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Dog Creek</u>	<u>Wax</u>	<u>Moutardier</u>	<u>Project Totals</u>
<b>Vehicle</b>				
Car	46.5	43.0	57.0	51.0
Truck	48.4	43.6	31.2	38.0
Van	14.4	13.8	13.9	14.0
Motorhome	7.3	7.3	4.9	6.0
Other	0.6	2.6	0.9	1.3
<b>Camping equipment</b>				
Tent	58.0	67.4	70.6	67.4
Pop-up trailer	3.1	6.3	8.1	6.7
Pickup camper	19.2	12.8	14.4	14.9
Travel trailer	2.3	3.7	4.8	4.0
No camping equipment	11.3	3.3	0.1	3.0
<b>Recreational equipment</b>				
Powerboat	51.4	57.6	46.6	50.3
Sailboat	0.3	0.6	0.4	0.4
Other boat	2.4	0.6	0.0	0.6
Bicycle	0.0	0.2	0.0	0.0
Motorcycle	0.0	0.2	0.0	0.0
ORV	0.0	0.0	0.0	0.0
Other	0.8	0.4	0.3	0.4
<b>Vehicle distribution</b>				
Average number of vehicles per party	1.2	1.2	1.0	1.1
Percent towing a pop-up or travel trailer	9.7	9.1	11.3	9.7

Table C17  
Lake Oahe User Characteristics

<u>Characteristic</u>	<u>Downstream South</u>	<u>Downstream North</u>	<u>Indian Creek</u>	<u>Indian Memorial</u>	<u>Project Totals</u>
Recreation days	4,504	15,305	13,202	10,843	43,854
Mean length of stay, nights	1.66	2.02	2.52	2.52	2.21
Mean number in group	3.25	3.17	3.15	3.06	3.15
Percent prior visits*	41.5	36.5	49.4	53.8	44.2
Percent primary destination*	39.5	24.1	50.9	76.9	44.6
Percent golden passport*	25.2	34.8	27.8	33.3	31.4
Number of camping permits	1,151	3,297	2,285	1,939	8,672
Number of camping groups	886	2,511	1,663	1,405	6,465

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\* Percent of camping parties.

Table C18  
Lake Oahe Vehicle and Equipment Type  
(Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Downstream South</u>	<u>Downstream North</u>	<u>Indian Creek</u>	<u>Indian Memorial</u>	<u>Project Totals</u>
<b>Vehicle</b>					
Car	32.7	26.9	19.8	18.9	24.1
Truck	41.7	42.5	48.5	46.1	44.7
Van	10.9	10.4	10.5	11.0	10.6
Motorhome	20.4	25.9	28.4	30.8	26.9
Other	3.2	1.9	2.8	3.1	2.6
<b>Camping equipment</b>					
Tent	31.4	22.2	19.2	16.3	21.4
Pop-up trailer	11.4	11.8	6.6	3.8	8.7
Pickup camper	15.7	15.2	27.5	20.7	19.6
Travel trailer	22.6	23.8	22.4	26.3	23.8
No camping equipment	1.9	4.0	2.8	2.0	3.0
<b>Recreational equipment</b>					
Powerboat	20.8	23.4	56.0	52.7	40.6
Sailboat	0.0	0.2	0.4	0.7	0.4
Other boat	0.5	0.7	0.3	0.5	0.6
Bicycle	1.6	1.4	2.9	1.8	2.0
Motorcycle	1.1	1.1	1.6	1.0	1.3
ORV	0.1	0.0	0.1	0.0	0.0
Other	0.3	0.7	1.3	0.3	0.8
<b>Vehicle distribution</b>					
Average number of vehicles per party	1.4	1.4	1.4	1.4	1.4
Percent towing a pop-up or travel trailer	31.0	33.7	27.2	26.9	30.2

Table C19

## Lake Ousachita User Characteristics

Characteristic	Stephens Park	Little Fir	Denby Point	Tompkins Bend	Joplin	Crystal Springs	Brady Mountain	Project Totals*
Recreation days	1,511	2,705	9,468	13,444	15,013	13,785	23,098	79,050
Mean length of stay, nights	2.07	4.68	3.14	3.41	2.79	2.75	3.00	3.01
Mean number in group	3.23	2.91	4.08	3.81	4.15	3.95	3.98	3.93
Percent prior visits**	32.2	88.7	58.3	89.5	81.3	52.1	56.1	65.9
Percent primary destination**	53.9	93.1	82.2	95.0	86.2	77.2	71.2	80.3
Percent golden passports**	23.5	54.2	22.1	19.3	7.9	9.7	12.9	15.0
Number of camping permits	277	296	1,014	1,444	1,575	1,628	2,642	8,878
Number of camping groups	230	203	734	1,047	1,281	1,237	1,904	6,638

\* Includes two permits with the wrong recreation area code.

\*\* Percent of camping parties.

Table C20

Lake Ouachita Vehicle and Equipment Type  
(Percent of Camping Parties)

Vehicle and Equipment Type	Stephens Park	Little Fir	Denby Point	Tompkins Bend	Joplin	Crystal Springs	Brady Mountain	Project Totals*
<b>Vehicle</b>								
Car	36.7	16.9	47.6	41.0	48.3	54.8	50.0	47.5
Truck	37.6	65.6	53.3	53.0	51.9	50.2	46.6	50.2
Van	18.1	9.0	11.6	12.0	11.0	12.9	12.6	12.2
Motorhome	24.3	9.2	7.5	5.8	5.8	4.5	7.0	19.0
Other	2.1	3.2	2.1	3.3	2.0	3.9	1.4	2.1
<b>Camping equipment</b>								
Tent	42.8	18.8	63.1	52.1	69.6	71.7	70.9	64.3
Pop-up trailer	16.3	10.2	11.3	12.9	11.4	11.6	13.3	12.3
Pickup camper	7.2	14.7	8.8	18.1	10.2	6.0	5.3	9.2
Travel trailer	18.8	40.6	17.1	25.8	11.0	11.9	11.6	15.6
No camping equipment	0.0	1.0	0.3	1.2	30.1	0.4	1.4	6.5
<b>Recreational equipment</b>								
Powerboat	13.0	91.6	50.4	60.1	45.0	41.9	34.1	44.6
Sailboat	2.2	0.0	0.7	0.6	0.7	0.2	1.5	0.8
Other boat	1.3	1.5	2.0	0.3	0.2	0.8	2.3	1.2
Bicycle	1.3	0.0	7.8	1.8	0.2	2.3	0.8	1.9
Motorcycle	0.0	0.5	0.8	0.3	0.2	1.9	1.1	0.9
ORV	0.9	0.0	1.1	0.2	0.0	0.1	0.0	0.2
Other	0.4	2.0	1.1	0.6	0.3	0.2	0.0	0.4
<b>Vehicle distribution</b>								
Average number of vehicles per party	1.4	1.6	1.5	1.5	1.3	1.5	1.4	2.0
Percent towing a pop-up or travel trailer	31.7	48.8	26.8	36.6	20.5	20.9	22.8	50.0

\* Includes two permits with the wrong recreation area code.

Table C21  
R. S. Kerr Lock and Dam User Characteristics

<u>Characteristic</u>	<u>Apple- gate Cove</u>	<u>Short Moun- tain Cove</u>	<u>Cowling- ton Point</u>	<u>Gore Landing</u>	<u>Salli- saw Creek</u>	<u>Project Totals</u>
Recreation days	5,380	1,748	3,750	1,562	964	13,404
Mean length of stay, nights	3.25	1.76	2.48	2.18	1.85	2.54
Mean number in group	3.34	4.54	4.11	3.14	4.37	3.77
Percent prior visits*	74.7	76.5	79.9	80.9	69.0	76.9
Percent primary destination*	86.9	95.1	91.9	94.5	89.4	90.8
Percent golden passports*	68.6	21.7	45.5	47.4	19.5	48.4
Number of camping permits	777	267	601	313	157	2,115
Number of camping groups	526	226	393	236	113	1,494

\* Percent of camping parties.

Table C22

R. S. Kerr Lock and Dam Vehicle and Equipment Type  
(Percent of Camping Parties)

Vehicle and Equipment Type	Apple- gate Cove	Short Moun- tain Cove	Cowling- ton Point	Gore Landing	Salli- saw Creek	Project Totals
<b>Vehicle</b>						
Car	30.5	39.4	35.0	24.2	37.0	32.6
Truck	69.8	76.5	76.5	64.3	63.7	71.5
Van	9.5	9.5	6.3	10.6	17.6	9.4
Motorhome	14.2	5.4	12.5	13.5	12.0	12.1
Other	2.0	0.9	1.8	1.0	2.8	1.7
<b>Camping equipment</b>						
Tent	18.0	46.8	28.4	34.4	43.9	29.6
Pop-up trailer	2.2	2.8	2.6	7.4	5.1	3.4
Pickup camper	15.2	26.6	19.2	32.6	30.6	21.8
Travel trailer	59.7	36.7	50.5	23.3	26.5	45.8
No camping equipment	0.6	1.8	0.8	1.4	1.0	1.0
<b>Recreational equipment</b>						
Powerboat	39.2	42.0	48.9	83.9	61.1	50.9
Sailboat	0.0	0.4	0.5	0.4	2.7	0.5
Other boat	0.8	0.4	0.3	0.0	0.9	0.5
Bicycle	1.0	4.0	3.8	0.0	0.0	1.9
Motorcycle	0.4	0.9	1.3	0.0	0.9	0.7
ORV	0.0	0.4	0.3	0.0	0.0	0.1
Other	4.2	11.1	8.7	1.7	0.0	5.7
<b>Vehicle distribution</b>						
Average number of vehicles per party	1.9	1.7	1.9	1.3	1.6	1.8
Percent towing a pop-up or travel trailer	58.0	38.1	51.4	27.5	27.4	46.1



Table C23

Lake Shelbyville User Characteristics

Characteristic	Opossum Creek	Coon Creek	Lone Point	Lithia Springs	Forrest W. "Bo" Wood	Whitley Creek	Project Totals*
Recreation days	6,341	52,668	3,557	43,618	27,488	6,628	140,687
Mean length of stay, nights	2.57	2.94	2.02	2.87	3.47	2.51	2.95
Mean number in group	3.55	3.61	3.95	3.44	3.05	3.67	3.48
Percent prior visits**	85.3	71.7	59.6	65.7	75.8	73.6	70.8
Percent primary destination**	87.5	96.2	95.4	91.1	96.3	85.5	93.5
Percent golden pass- ports**	7.1	13.6	3.0	16.6	39.3	6.9	18.5
Number of camping permits	840	6,431	478	5,820	3,702	910	18,206
Number of camping groups	678	4,993	438	4,466	2,669	723	13,991

\* Includes 25 permits with the wrong recreation area code.

\*\* Percent of camping parties.

Table C24  
 Lake Shelbyville Vehicle and Equipment Type  
 (Percent of Camping Parties)

Vehicle and Equipment Type	Opossum Creek	Coon Creek	Lone Point	Lithia Springs	Forrest W. "Bo" Wood	Whitley Creek	Project Totals*
<b>Vehicle</b>							
Car	51.6	42.2	52.8	46.0	39.0	47.7	44.9
Truck	41.3	36.1	34.2	29.1	43.8	33.9	35.4
Van	12.1	12.9	17.0	14.0	13.6	17.0	13.7
Motorhome	4.2	11.9	4.7	15.4	19.8	6.1	13.6
Other	2.3	4.2	2.1	2.4	1.6	2.8	2.9
<b>Camping equipment</b>							
Tent	76.4	41.2	71.8	39.9	21.0	60.8	40.6
Pop-up trailer	4.1	13.9	5.3	12.2	8.0	11.3	11.3
Pickup camper	5.3	11.0	9.8	9.7	8.5	8.5	9.6
Travel trailer	6.0	19.1	4.3	18.3	37.1	9.6	20.7
No camping equipment	5.0	6.0	5.0	5.9	6.4	5.4	5.9
<b>Recreational equipment</b>							
Powerboat	35.0	42.7	51.4	26.6	44.9	44.0	37.9
Sailboat	0.3	0.3	1.6	0.2	0.4	1.5	0.4
Other boat	0.3	0.7	1.6	0.5	0.4	0.0	0.5
Bicycle	3.2	15.8	4.1	3.0	25.1	6.6	12.0
Motorcycle	0.9	1.4	1.6	0.9	1.3	0.1	1.2
ORV	0.1	0.0	0.5	0.1	0.3	0.0	0.1
Other	5.2	2.5	1.1	0.5	0.7	1.1	1.5
<b>Vehicle distribution</b>							
Average number of vehicles per party	1.3	1.5	1.7	1.4	1.7	1.3	1.5
Percent towing a pop-up or travel trailer	9.9	32.3	12.0	29.7	44.3	20.4	31.4

\* Includes 25 permits with the wrong recreation area code.

Table C25  
Shenango River Lake User Characteristics

<u>Characteristic</u>	<u>Shenango Recre- ational Area</u>
Recreation days	67,006
Mean length of stay, nights	3.58
Mean number in group	4.05
Percent prior visits*	86.9
Percent primary destination*	97.1
Percent golden passports*	26.7
Number of camping permits	6,974
Number of camping groups	4,433

\* Percent of camping parties.

Table C26  
Shenango River Lake Vehicle and Equipment Type  
(Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>Shenango Recreational Area</u>
<b>Vehicle</b>	
Car	58.7
Truck	39.7
Van	11.1
Motorhome	11.0
Other	3.3
<b>Camping equipment</b>	
Tent	38.2
Pop-up trailer	13.4
Pick-up camper	10.5
Travel trailer	23.9
No camping equipment	4.1
<b>Recreational equipment</b>	
Powerboat	36.2
Sailboat	0.1
Other boat	3.9
Bicycle	42.6
Motorcycle	0.5
ORV	0.2
Other	1.5
<b>Vehicle distribution</b>	
Average number of vehicles per party	1.7
Percent towing a pop-up or travel trailer	37.0

Table C27  
Somerville Lake User Characteristics

<u>Characteristic</u>	<u>Big Creek</u>	<u>Rocky Creek</u>	<u>Yegua Creek</u>	<u>Over- look</u>	<u>Project Totals</u>
Recreation days	7,865	58,796	42,671	15,830	125,162
Mean length of stay, nights	1.71	2.22	2.55	1.19	2.07
Mean number in group	3.56	4.61	3.88	4.45	4.26
Percent prior visits*	41.8	57.4	84.9	1.7	53.5
Percent primary destination*	41.5	83.7	93.2	2.8	67.0
Percent golden passports*	7.7	21.7	35.2	2.8	20.9
Number of camping permits	1,447	7,732	6,307	3,279	18,765
Number camping groups	1,353	6,571	4,962	3,184	16,070

\* Percent of camping parties.

Table C28  
Somerville Lake Vehicle and Equipment Type  
 (Percent of Camping Parties)

<u>Characteristic</u>	<u>Big Creek</u>	<u>Rocky Creek</u>	<u>Yegua Creek</u>	<u>Over- look</u>	<u>Project Totals</u>
<b>Vehicle</b>					
Car	44.7	40.8	38.9	60.5	44.5
Truck	48.7	55.0	50.4	36.8	49.4
Van	9.0	10.6	13.6	7.9	10.9
Motorhome	3.6	8.8	13.9	3.2	8.8
Other	2.0	0.4	1.7	1.4	1.1
<b>Camping equipment</b>					
Tent	59.4	52.5	33.9	25.3	41.8
Pop-up trailer	5.8	8.8	6.9	2.1	6.6
Pickup camper	4.8	6.8	8.2	5.5	6.8
Travel trailer	8.0	18.4	27.5	2.4	17.2
No camping equipment	19.5	8.6	17.2	62.7	23.0
<b>Recreational equipment</b>					
Powerboat	29.3	39.1	45.2	15.0	35.4
Sailboat	3.3	2.7	2.9	1.9	2.7
Other boat	0.0	0.0	0.0	0.0	0.0
Bicycle	1.3	0.4	2.0	1.4	1.7
Motorcycle	0.3	1.2	5.6	0.2	2.2
ORV	0.1	0.9	1.1	0.2	0.7
Other	1.6	0.9	0.8	0.4	0.8
<b>Vehicle distribution</b>					
Average number of vehicles per party	1.2	1.5	1.6	1.3	1.4
Percent towing a pop-up or travel trailer	13.3	22.6	31.2	3.8	20.7

Table C29  
West Point User Characteristics

<u>Characteristic</u>	<u>R. Shaefer Heard</u>	<u>Holiday Park</u>	<u>State Line Park</u>	<u>Amity Park</u>	<u>Project Totals*</u>
Recreation days	14,951	35,824	9,607	24,092	84,529
Mean length of stay, nights	3.05	2.78	2.38	3.40	2.94
Mean number in group	3.30	3.34	3.89	3.29	3.38
Percent prior visits**	79.9	93.9	49.3	72.9	80.7
Percent primary destination**	10.3	96.5	87.7	80.9	76.5
Percent golden passports**	38.1	35.6	12.6	52.5	37.8
Number of camping permits	1,825	4,964	1,252	3,097	11,146
Number of camping groups	1,516	3,921	1,037	2,316	8,798

\* Includes eight permits with the wrong recreation area code.

\*\* Percent of camping parties.

Table C30  
West Point Lake Vehicle and Equipment Type  
 (Percent of Camping Parties)

<u>Vehicle and Equipment Type</u>	<u>R. Shaefer Heard</u>	<u>Holiday Park</u>	<u>State Line Park</u>	<u>Amity Park</u>	<u>Project Totals*</u>
<b>Vehicle</b>					
Car	45.5	32.2	38.7	39.9	37.2
Truck	46.5	52.4	52.9	51.1	51.1
Van	9.0	13.8	11.9	10.0	11.8
Motorhome	17.8	23.1	12.3	23.7	21.1
Other	0.7	1.3	0.5	0.8	1.0
<b>Camping equipment</b>					
Tent	31.0	36.5	47.2	27.2	34.4
Pop-up trailer	6.5	6.1	7.6	8.8	7.0
Pickup camper	13.6	21.5	12.6	13.5	17.0
Travel trailer	35.2	20.9	23.8	32.0	26.6
No camping equipment	0.6	45.4	0.0	0.0	20.7
<b>Recreational equipment</b>					
Powerboat	45.6	62.0	49.7	48.2	51.1
Sailboat	0.6	0.2	0.2	0.5	0.3
Other boat	0.5	1.5	0.6	0.3	0.9
Bicycle	3.0	2.1	0.3	4.7	2.7
Motorcycle	0.7	0.8	0.5	0.9	0.8
ORV	0.0	0.2	0.0	0.4	0.2
Other	0.1	0.5	0.2	0.8	0.5
<b>Vehicle distribution</b>					
Average number of vehicles per party	1.5	1.5	1.4	1.6	1.5
Percent towing a pop-up or travel trailer	39.0	25.8	28.4	37.8	31.6

\* Includes eight permits with the wrong recreation area code.

APPENDIX D: COMPARISON OF 1981-1983 CRS DATA



Table D1  
Use Characteristics for Entire CRS 1981-1983  
(Percent of Camping Parties)

<u>Characteristic</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Prior visits to project	80.0	71.4	64.0
Project as primary destination	89.6	79.5	76.4
Golden Age or Access passport	16.7	18.7	25.1

Table D2  
Distribution of Vehicle Types for Entire CRS  
1981-1983 (Percent of Camping Parties)

<u>Vehicle Type</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Car	37.2	41.6	42.1
Truck	40.6	44.6	46.7
Van	9.5	10.9	11.1
Motorhome	12.7	13.3	12.6
Other*	1.7	2.2	1.9

\* Includes any mode of transportation not listed (motorcycle, bicycle, etc.).

Table D3  
Distribution of Camping Equipment and Powerboats for  
Entire CRS, 1981-1983 (Percent of Camping Parties)

<u>Equipment/Boat</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>
Tent	33.8	40.3	41.3
Pop-up trailer	9.9	9.4	8.8
Pickup camper	12.2	12.9	11.2
Travel trailer	25.4	23.4	21.6
No camping equipment	*	4.4	10.4
Powerboat	30.4	31.2	35.6

\* A "No Equipment" category was not included on the form.

**END**

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