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1999 Trail of Tears State Park Visitor Survey

Project Completion Report

Submitted to

**Missouri Department of Natural Resources
Division of State Parks**

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Executive Summary

The purpose of this study was to describe visitors' socio-demographic characteristics, patterns of use, and satisfaction with park facilities, programs and services at Trail of Tears State Park (TTSP).

An on-site exit survey of adult visitors to TTSP was conducted July, August, and September 1999. One hundred forty-four (144) surveys were collected, with an overall response rate of 85%. Results of the survey have a margin of error of plus or minus 8%. The following information summarizes the results of the study.

Socio-demographic Characteristics

- TTSP visitors were comprised of more males (58%) than females (42%), and the average age of the adult visitor to TTSP was 41.
- Over two-fifths (44%) of the visitors reported a household income of between \$25,000 and \$50,000, and over one-third (39%) reported having completed grade school or high school as the highest level of education completed.
- The majority (91%) of visitors was Caucasian. Three percent (3%) of visitors reported being Native American, 3% were African American, and less than 1% (0.7%) were Hispanic.
- Four percent (4%) of the visitors reported having a disability.

- Seventy-five percent (75%) of the visitors were from Missouri and 7% were from Illinois.

Use-Patterns

- The majority (74%) of visitors drove less than a day's drive (less than 150 miles) to visit TTSP. Within Missouri, 70% of the visitors came from within 25 miles of the park, including visitors from Cape Girardeau and Jackson.
- Almost three-fourths (71%) of TTSP visitors had visited the park before. TTSP visitors had visited the park an average of 7 times in the past year.
- Almost three-fourths (72%) of the visitors indicated that TTSP was a primary destination during their visit.
- Seventy-nine percent (79%) of the visitors were day-users during their visit.
- Of those staying overnight during their visit, most (93%) stayed in the campground at TTSP. The average number of nights overnight visitors stayed was 2.9 nights.
- The majority of TTSP visitors visited the park with family and/or friends.
- The most frequent recreation activities in which visitors participated were swimming, walking, picnicking, viewing wildlife, studying nature, camping, visiting the visitor center, hiking, and fishing.

Satisfaction and Other Measures

- Ninety-nine percent (99%) of TTSP visitors were either satisfied or very satisfied overall.
- Of the seven park features, the campground was given the highest satisfaction rating and the boat launches were given the lowest satisfaction rating.
- Visitors gave higher performance ratings to the park being free of litter and trash and being safe.
- Visitors gave lower performance ratings to care of the natural resources, upkeep of park facilities, and having clean restrooms.
- Less than 30% (28%) of the visitors to TTSP felt some degree of crowding during their visit. Of those who felt crowded, the swimming beach was where most felt crowded.
- One-third (34%) of the visitors at TTSP did not give park safety an excellent rating.
- Of those visitors responding to the open-ended opportunity to express their safety concerns (24 visitors), 21% commented on the lack of lifeguards at the swimming beach.
- Although two-fifths (42%) of the visitors felt that nothing specific could increase their feeling of safety at TTSP, 15% did indicate that increased visibility of park staff would increase their feeling of safety.
- Visitors who felt the park was safe were more satisfied overall, gave higher satisfaction ratings to the seven park features, and gave higher performance ratings to all of the park attributes as well.
- Seventy-one percent (71%) of visitors indicated that they would support setting aside at least 50% of all campsites in a reservation system.
- Three-fourths (75%) of the visitors reported they would support a “carry in and carry out” trash removal system.
- Twenty-two percent (22%) of visitors provided additional comments and suggestions, the majority (37%) of which were positive comments about the park and staff.

Acknowledgements

Conducting and successfully completing a study of this magnitude and complexity could not have been accomplished without the cooperation of many individuals. Over 2,000 visitors to Missouri State Parks participated in the 1999 Missouri State Parks Visitor Survey. Over 100 visitors to Trail of Tears State Park voluntarily agreed to provide the information upon which this report is based. It is clear from their input that these visitors care very much for the recreation resources in the Missouri State Park System. Their efforts will provide invaluable input into the planning process and providing for more effective and responsive management of these resources.

Many other individuals provided assistance during the 1999 Missouri State Parks Visitor Survey, without whom the study would not have been a success. The following expressions of gratitude are in acknowledgement of their contributions. Special acknowledgement goes to the staff at Trail of Tears State Park for their assistance during sampling as well as for their willingness to collect the questionnaires. They are: Lisa Asthmus, James Borowiak, Denise Dowling, Karel Edgar, and Tina Shamel. Many thanks also go to the students at the University of Missouri who assisted in computer data entry of the questionnaires. They are: Amy Mahon, and Chis Thoele.

Table of Contents

Executive Summary ii

Acknowledgements iv

Table of Contents v

List of Tables vii

List of Figures viii

Introduction 1

 Need for Recreation Research 1

 Study Purpose 1

 Study Area 2

 Scope of Study 2

Methodology 3

 Sampling Procedures 3

 Questionnaire 3

 Selection of Subjects 3

 Data Collection 3

 Data Analysis 4

Results 6

 Surveys Collected & Response Rates 6

 Sampling Error 6

 Socio-demographic Characteristics 7

 Age 7

 Gender 7

 Education 7

 Income 7

 Ethnic Origin 7

 Visitors with Disabilities 7

 Residence 7

 Use Patterns 8

 Trip Characteristics 8

 Visit Characteristics 8

 Recreation Activity Participation 9

 Satisfaction Measures 10

 Overall Satisfaction 10

 Satisfaction with Park Features 10

 Performance Rating 10

 Importance-Performance Measures 11

 Crowding 12

 Crowding and satisfaction 12

 Safety Concerns of Visitors 13

 Support of Reservation System 14

 Support of “Carry in/Carry out” Trash System 14

 Additional Visitor Comments 15

Discussion 16

 Management Implications 16

Satisfaction Implications.....16
Safety Implications16
Crowding Implications.....16
Performance Implications17
Implications for TTSP’s Interpretive Programs.....17
Implementation of Reservation System17
Implementation of “Carry In and Carry Out” Trash System18
Conclusion18
Research Recommendations18
Methodology Recommendations and Considerations for TTSP and Other Parks.....19
 Survey Signage19
 Survey Administration19
References.....20
Appendix A. Trail of Tears State Park Visitor Survey21
Appendix B. Survey Protocol24
Appendix C. Prize Entry Form26
Appendix D. Observation Survey28
Appendix E. Responses to Survey Questions30
Appendix F. List of Responses for Additional Comments (Q 24)37

List of Tables

Table 1. Surveys Collected by Time Slot6
Table 2. Surveys Collected by Exit.....6
Table 3. Mean Performance and Importance Scores for Park Attributes11
Table 4. Frequency and Percentage of Comments and Suggestions from
TTSP Visitors.....15

List of Figures

Figure 1. Ethnic Origin of TTSP Visitors7
Figure 2. Residence of TTSP Visitors by Zip Code8
Figure 3. Participation in Recreational Activities at TTSP.....9
Figure 4. Satisfaction with TTSP Features10
Figure 5. Importance-Performance Matrix of Park Attributes.....12
Figure 6. Comments from Visitors Not Rating TTSP Excellent on Safety13
Figure 7. Percentage of Safety Attributes Chosen by Visitors13
Figure 8. Comparison of Support of Reservation System Between Groups.....14
Figure 9. Support for “Carry In/Carry Out” Trash System Between Groups15
Figure 10. Safety Ratings of TTSP16
Figure 11. Satisfaction Ratings by Safety Concerns.....16
Figure 12. Overall Satisfaction is Lower for Those Who Felt Crowded17

Introduction

NEED FOR RECREATION RESEARCH

In 1939, 15 years after Missouri obtained its first state park, 70,000 visitors were recorded visiting Missouri's state parks (Masek, 1974). Today, the increase in demand for outdoor recreation experiences has given rise to over 16 million visitors who, each year, visit the 80 parks and historic sites in Missouri's state park system (Holst & Simms, 1996). Along with this increase in demand for outdoor recreation experiences are other highly significant changes in outdoor recreation. Some of these changes include a change in the nature of vacations with a trend toward shorter, more frequent excursions; an increasing diversity of participation patterns across groups; an increase in more passive activities appropriate for an aging population; an increased concern for the health of the environment; and a realization of the positive contributions the physical environment has on the quality of one's life (Driver, Dustin, Baltic, Elsner, & Peterson, 1996; Tarrant, Bright, Smith, & Cordell, 1999).

Societal factors responsible for these changes in the way Americans recreate in the outdoors include an aging population; a perceived decline in leisure time and a faster pace of life; geographically uneven population growth; increasing immigration; changes in family structures, particularly an increase in single-parent families; increasing levels of education; a growth in minority populations; and an increasing focus on quality "lifestyle management" (Driver et al., 1996;

Tarrant et al, 1999). These factors and their subsequent changes in outdoor recreation participation have important implications for recreation resource managers, who are now faced with recreation resource concerns that are "...people issues and not resource issues alone (McLellan & Siehl, 1988)." This growing social complexity combined with the changes it has created in outdoor recreation participation have given rise to the need for research exploring why and how people recreate in the outdoors as well as how these individuals evaluate the various aspects of their outdoor recreation experiences.

STUDY PURPOSE

Visitor satisfaction tends to be a primary goal of natural resource recreation managers (Peine, Jones, English, & Wallace, 1999) and has been defined as the principal measure of quality in outdoor recreation (Manning, 1986). Visitor satisfaction, however, can be difficult to define because individual visitors are unique. Each visitor may have different characteristics, cultural values, preferences, attitudes, and experiences that influence their perceptions of quality and satisfaction (Manning, 1986).

Because of these differences in visitors, a general "overall satisfaction" question alone could not adequately evaluate the quality of visitors' experiences when they visit Missouri's state parks and historic sites. For this reason, it is necessary to gather additional information about visitor satisfaction through questions regarding: a) visitors'

socio-demographic characteristics; b) visitors' satisfaction with programs, services and facilities; c) visitors' perceptions of safety; and d) visitors' perceptions of crowding. Thus, the purpose of this study is to gain information, through these and other questions, about the use patterns, socio-demographic characteristics, and satisfaction with park programs, facilities, and services, of visitors to ten of Missouri's state parks.

This report examines the results of the visitor survey conducted at Trail of Tears State Park (TTSP), one of the ten parks included in the 1999 Missouri State Parks Visitor Survey. Objectives specific to this report include:

1. Describing the use patterns of visitors to TTSP during the study period of July through September, 1999.
2. Describing the socio-demographic characteristics of visitors to TTSP.
3. Determining if there are differences in select groups' ratings of park attributes, satisfaction with park features, overall satisfaction, and perceptions of crowding.
4. Determining any differences in select characteristics of visitors who rated

park safety high and those who did not.

5. Gaining information about selected park-specific issues.

STUDY AREA

Located along the Mississippi River in Cape Girardeau County, Trail of Tears State Park contains many beautiful hardwood species typical of the Ozarks but also contains a type of forest more characteristic of the forests found in the Appalachian Mountains. This forest diversity, along with its location along the Mississippi River, makes Trail of Tears a prime recreational area with its campground, boating and fishing accesses to the river and Lake Boutin, swimming beach, picnic areas, trails, and overlooks. The park also offers a visitor center with exhibits interpreting the rich natural and cultural history of the park, particularly exhibits displaying the history of the infamous Trail of Tears march by the Cherokee Indians.

SCOPE OF STUDY

The population of the visitor study at TTSP consisted of visitors who were 18 years of age or older (adults), and who visited the park during the study period July through September 1999.

Methodology

SAMPLING PROCEDURES

A 95% confidence interval was chosen with a plus or minus 5% margin of error. Based upon 1998 visitation data for July, August, and September, it was estimated that approximately 78,000 visitors would visit TTSP during the period between July 1 and September 30, 1999 (DNR, 1998). Therefore, with a 95% confidence interval and a plus or minus 5% margin of error, a sample size of 400 visitors was required (Folz, 1996). A random sample of adult visitors (18 years of age and older) who visited TTSP during the study period were the respondents for this study.

To ensure that visitors leaving TTSP during various times of the day would have equal opportunity for being surveyed, three time slots were chosen for surveying. The three time slots were as follows: Time Slot 1 = 8:00 a.m. - 12:00 p.m., Time Slot 2 = 12:00 p.m. - 4:00 p.m., and Time Slot 3 = 4:00 p.m. - 8 p.m. A time slot was randomly chosen and assigned to the first of the scheduled survey dates. Thereafter, time slots were assigned in ranking order based upon the first time slot. One time slot was surveyed during each survey day.

QUESTIONNAIRE

The questionnaire used in this study was based on the questionnaire developed by Fink (1997) for the Meramec State Park Visitor Survey. A copy of the questionnaire for this study is provided in Appendix A.

SELECTION OF SUBJECTS

The survey of visitors at TTSP was administered on-site, to eliminate the non-response bias of a mail-back survey. An exit survey of visitors leaving the park was conducted through a systematic sampling of every third vehicle leaving the park. Because TTSP has two exits, a north and a south exit, both exits were surveyed. To ensure that visitors at both exits would have an equal opportunity for being surveyed, surveying alternated between both exits. Only one exit was surveyed during each time slot. All adults (18 years of age and older) from every third vehicle exiting at these exits were asked to participate in the survey.

DATA COLLECTION

The surveyor wore state park identification and was stationed at the assigned exit. At the survey station, a "Visitor Survey" sign was used to inform visitors of the survey. During the selected time slot, the surveyor stopped every third vehicle and asked every visitor who was 18 years of age and older to voluntarily complete the questionnaire, unless he or she had previously filled one out.



Survey Station at South Exit

To increase participation rates, respondents were given the opportunity to enter their name and address into a drawing for a prize package and were assured that their responses to the survey questions were anonymous and would not be attached to their prize entry form. Willing participants were then given a pencil and a clipboard with the questionnaire and prize entry form attached. Once respondents were finished, the surveyor collected the completed forms, clipboards, and pencils. Survey protocol is given in Appendix B and a copy of the prize entry form is provided in Appendix C.

An observation survey was also conducted to obtain additional information about: date, day, time slot, and weather conditions of the survey day; the number of adults and children in each vehicle; and the number of individuals asked to fill out the questionnaire, whether they were respondents, non-respondents, or had already participated in the survey. This number was used to calculate response rate, by dividing the number of surveys collected by the number of adult visitors asked to complete a questionnaire. A copy of the observation survey form is provided in Appendix D.

DATA ANALYSIS

The data obtained for the TTSP study was analyzed with the Statistical Packages for the Social Sciences (SPSS) (SPSS, 1996).

Frequency distributions and percentages of responses to the survey questions and the observation data were determined. The responses to the open-ended questions were listed as well as grouped into categories for frequency and

percentage calculations. The number of surveys completed by weekday versus weekend, by time slot, and by recreation area was also determined.

Comparisons using independent sample t-tests for each group were also made to determine any statistically significant differences ($p < .05$) in the following selected groups' satisfaction with park features (question 7), ratings of park attributes (question 8), overall satisfaction (question 14), and perceptions of crowding (question 15). The selected groups include:

1. First time visitors versus repeat visitors (question 1).
2. Campers versus non-campers (question 4). Non-campers include both day-users and the overnight visitors who did not stay overnight in the campground at TTSP.
3. Weekend visitors versus weekday visitors. Weekend visitors were surveyed on Saturday and Sunday, weekday visitors were surveyed Monday through Friday.

Other comparisons were made using independent sample t-tests to determine any statistically significant differences in visitors who rated the park as excellent on being safe versus visitors who rated the park as good, fair, or poor on being safe, for the following categories:

1. First time versus repeat visitors.
2. Campers versus non-campers.
3. Weekend versus weekday visitors.

Differences between visitors who rated the park as excellent on being safe

versus those who did not were also compared on the following questions: differences in socio-demographic characteristics, perceptions of crowding, measures of satisfaction with park features, measures of performance of park attributes, and overall satisfaction. Chi-square tests were conducted comparing responses between select groups regarding support for a reservation system and a “carry in and carry out” trash system.

The selected groups include:

1. First time versus repeat visitors.
2. Campers versus non-campers.
3. Weekend versus weekday visitors.

Additional comparisons included:

1. Multiple linear regression analyses to determine which of the satisfaction variables and which of the performance variables most accounted for variation in overall satisfaction.
2. An independent sample t-test comparing overall satisfaction between visitors who felt some degree of crowding and those who were not at all crowded during their visit.

Results

This section describes the results of the Trail of Tears State Park Visitor Survey. For the percentages of responses to each survey question, see Appendix E. The number of individuals responding to each question is represented as "n=".

SURVEYS COLLECTED & RESPONSE RATES

A total of 144 surveys were collected at TTSP during the time period of July, August, and September 1999. Tables 1 and 2 show surveys collected by time slot and by exit, respectively. Of the 144 surveys collected, 121 (84%) were collected on weekends (Saturday and Sunday) and 23 (16%) were collected on weekdays (Monday through Friday). The overall response rate was 84.7%.

SAMPLING ERROR

With a sample size of 144 and a confidence interval of 95%, the margin of error increases from plus or minus 5% to plus or minus 8%. For this study, there is a 95% certainty that the true results of the study fall within plus or minus 8% of the findings. For example, from the results that 41.8% of the visitors to TTSP during the study period were female, it can be stated that between 33.8% and 49.8% of the TTSP visitors were female.

Table 1. Surveys Collected by Time Slot

Time Slot	Frequency	Percent
1. 8 a.m. - 12 p.m.	13	9.0%
2. 12 p.m. - 4 p.m.	71	49.3%
3. 4 p.m. - 8 p.m.	<u>60</u>	<u>41.7%</u>
Total	144	100.0%

Table 2. Surveys Collected by Exit

Exit	Frequency	Percent
North exit	63	43.8%
South exit	<u>81</u>	<u>56.3%</u>
	144	100.0%

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Age

The average age of adult visitors to TTSP was 40.5. When grouped into four age categories, 44.4% of the adult visitors were between the ages of 18-34, 36.8% were between the ages of 35-54, 9.8% were between the ages of 55-64, and 9% were 65 or over.

Gender

Visitors to TTSP were more male than female. Male visitors comprised 58.2% of all visitors, while female visitors comprised 41.8% of all visitors.

Education

Over one-third (38.5%) of visitors to TTSP indicated they had completed grade school or high school as the highest level of education completed. Another third (35.6%) indicated having completed vocational school or some college, while one-fourth (25.9%) indicated having completed a four-year college degree or post-graduate education.

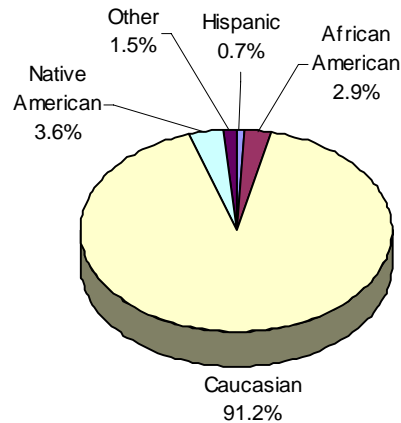
Income

Over two-fifths (44.1%) of the visitors to TTSP reported they had an annual household income of between \$25,000 and \$50,000. About one-fourth (24.4%) of the visitors had an annual household income of less than \$25,000. Less than one-fourth (23.6%) had an income of between \$50,000 and \$75,000 and less than 10% (7.9%) had an income of over \$75,000.

Ethnic Origin

Figure 1 indicates the ethnic origin of TTSP visitors. The vast majority (91.2%) of visitors was Caucasian. Almost four percent (3.6%) of the visitors reported being of Native American descent. About 3% (2.9%) of the visitors were African American, less than one percent (0.7%) were Hispanic, and there were no Asian visitors.

Figure 1. Ethnic Origin of TTSP visitors.



Visitors with Disabilities

Four percent (3.7%) of the visitors to TTSP reported having some type of disability that substantially limited one or more life activities or that required special accommodations. Most of the disabilities reported were mobility-impairing disabilities.

Residence

Three-fourths (75.2%) of TTSP visitors were from Missouri, while one-fourth (24.8%) of the visitors were from out of state including Illinois (7%) and Florida (3.1%). Over half (58.1%) of the visitors lived within 50 miles of the park.

Figure 2. Residence of TTSP Visitors by Zip Code

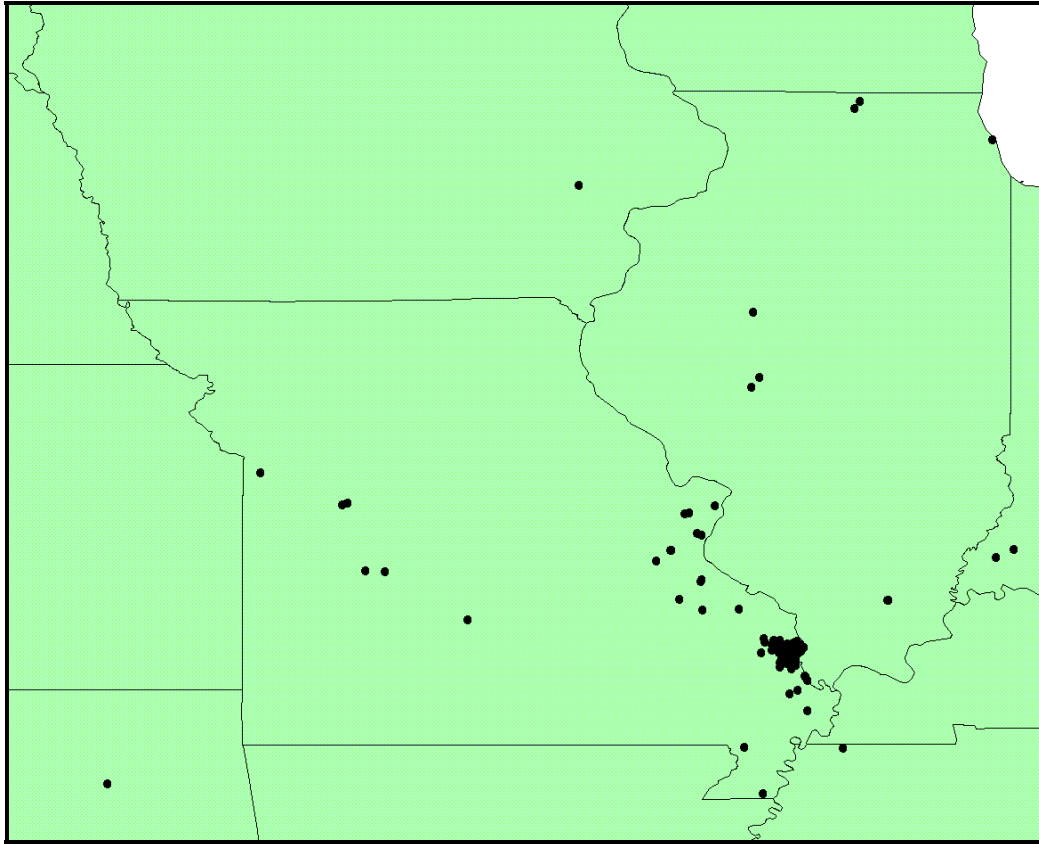


Figure 2 shows the residence of visitors by zip code.

USE PATTERNS

Trip Characteristics

The majority (74.4%) of visitors to TTSP traveled less than a day’s drive to visit the park (a day’s drive is defined as 150 miles or less, not exceeding 300 miles round trip). Within Missouri, 70.1% of the visitors came from within 25 miles of TTSP, including visitors from Cape Girardeau and Jackson.

Over half (54.9%) of the visitors either drove cars, vans, jeeps, or SUVs. One-third (33.6%) drove pickup trucks. Almost four percent (3.5%) of visitors drove RVs, and less than three percent

(2.7%) drove motorcycles. About four percent (3.5%) of the vehicles towed some type of trailer. The average number of axles per vehicle was 2.03, the average number of adults per vehicle was 1.7, and the average number of children per vehicle was 2.2.

Visit Characteristics

Seventy-one percent (70.9%) of the visitors to TTSP were repeat visitors, with 29.1% of the visitors being first time visitors. The average number of times all visitors reported visiting TTSP within the past year was 7.2 times.

TTSP visitors were also asked if the park was a primary destination during their visit. For almost three-fourths (72.3%) of the visitors, TTSP was a primary

destination while only 27.7% of visitors reported that TTSP was not a primary destination during their visit.

Almost 80% (78.8%) of the visitors to TTSP during the study period indicated that they were day-users, while 21.2% indicating that they were staying overnight. Of those visitors staying overnight during their visit, the majority (92.9%) stayed in the campground at TTSP. Of those camping in the campground at TTSP, 58.3% reported camping in a tent and 41.7% reported staying in a RV, trailer, or van conversion.

Of those reporting overnight stays, 45% stayed one night, 20% stayed two nights, 25% stayed three to four nights, and 10% stayed more than four nights. The average stay for overnight visitors was 2.9 nights. The median number of nights was two nights, indicating that half of the overnight visitors stayed less than two nights and half of the overnight visitors stayed more than two nights. The highest percentage of visitors stayed one night.

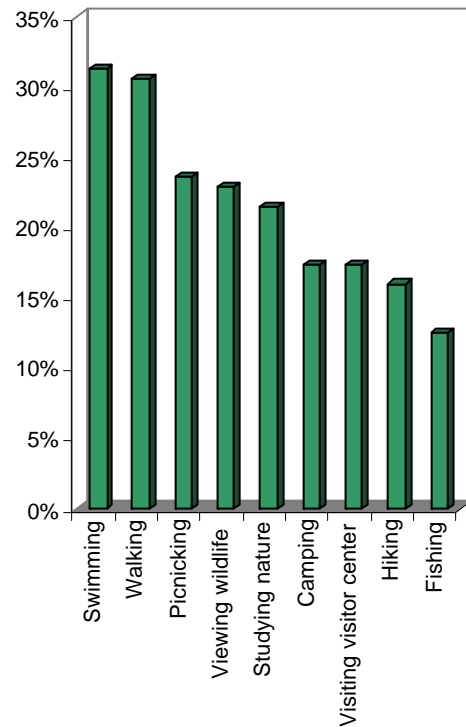
Half (51.5%) of the visitors to TTSP visited the park with family. Fourteen percent (13.6%) visited with family and friends, while 16.7% visited with friends, and 15.9% visited the park alone. Less than two percent (1.5%) of visitors indicated visiting the park with a club or organized group.

RECREATION ACTIVITY PARTICIPATION

Respondents to the survey were asked what activities they participated in during their visit to TTSP. Figure 3 shows the percentage of visitor participation in the nine highest

activities. Swimming was the highest reported (31.3%), walking was the second (30.6%), and picnicking was third (23.6%). Viewing wildlife (22.9%), studying nature (21.5%), camping (17.4%), visiting the visitor center (17.4%), hiking (16%), and fishing (12.5%) were next.

Figure 3. Participation in Recreational Activities at TTSP



TTSP visitors reported engaging in other activities, including attending a special event (3.5%), boating in the lake (2.8%), attending an interpretive program (2.8%), boating in the river (2.1%), backpacking (1.4%), and horseback riding (1.4%). Seventeen percent (17.4%) of visitors reported engaging in an "other" activity, including driving through and sightseeing, bicycling, and visiting the scenic overlooks.

SATISFACTION MEASURES

Overall Satisfaction

When asked about their overall satisfaction with their visit, less than one percent (0.7%) of the visitors reported being very dissatisfied with their visit. Almost all (99.3%) of TTSP visitors were either satisfied or very satisfied with their visit. Visitors’ mean score for overall satisfaction was 3.68, based on a 4.0 scale with 4 being very satisfied and 1 being very dissatisfied.

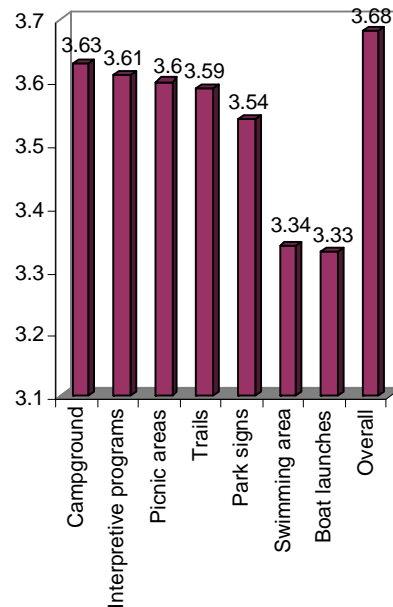
No significant difference ($p < .05$) was found in overall satisfaction between first time and repeat visitors, with mean overall satisfaction scores of 3.69 and 3.67 respectively. Nor was there any significant difference in overall satisfaction between campers and non-campers, with mean overall satisfaction scores of 3.84 and 3.66 respectively. No significant difference in overall satisfaction was found between weekend and weekday visitors as well, with mean overall satisfaction scores of 3.65 and 3.85 respectively. A multiple linear regression analysis ($r^2 = .29$) of the seven park features showed that all the variables combined to account for only about 30% of the variation in the overall satisfaction rating.

Satisfaction with Park Features

Respondents were also asked to express how satisfied they were with seven park features. Figure 4 shows the mean scores for the seven features and also for visitors’ overall satisfaction. The satisfaction score for the campground (3.63) was the highest, with the other scores ranging from 3.61 (interpretive programs) to the lowest of 3.33 (boat launches).

No significant differences were found in mean satisfaction ratings of park features between first time and repeat visitors and between weekend and weekday visitors. Campers, however, were significantly ($p < .01$) more satisfied (3.85) with the campground than non-campers (3.54). Campers were also significantly ($p < .05$) more satisfied with the park signs (3.72) and picnic areas (3.84) than non-campers (3.45 and 3.53 respectively).

Figure 4. Satisfaction with TTSP Features



PERFORMANCE RATING

Visitors were asked to rate the park’s performance of eight select park attributes (question 8): being free of litter and trash, having clean restrooms, upkeep of park facilities, having helpful and friendly staff, access for persons with disabilities, care of natural resources, providing interpretive information, and being safe.

Performance scores were based on a 4.0 scale, with 4 being excellent and 1 being poor. A multiple linear regression analysis ($r^2=.51$) of the eight park features showed that all the variables combined to account for about half of the variation in overall satisfaction.

No significant differences were found between first time and repeat visitors or between weekend and weekday visitors and their performance ratings of the eight park attributes. Campers, however, had a significantly higher ($p<.05$) performance rating regarding upkeep of park facilities (3.80) as well as a significantly higher performance rating regarding park safety (3.88) than had non-campers (3.50 and 3.57 respectively).

IMPORTANCE-PERFORMANCE MEASURES

The Importance-Performance (I-P) Analysis approach was used to analyze questions 8 and 13. Mean scores were calculated for the responses of the two questions regarding visitors’ ratings of the performance and importance of the

eight select park attributes. Table 3 lists the scores of these attributes, which were based on a 4.0 scale of 4 being excellent and 1 being poor, and 4 being very important and 1 being very unimportant. Figure 5 shows the Importance-Performance (I-P) Matrix. The mean scores were plotted on the I-P Matrix to illustrate the relative performance and importance rating of the attributes by park visitors.

The I-P Matrix is divided into four quadrants to provide a guide to aid in possible management decisions. For example, the upper right quadrant is labeled “high importance, high performance” and indicates the attributes in which visitors feel the park is doing a good job. The upper left quadrant indicates that management may need to focus on these attributes, because they are important to visitors but were given a lower performance rating. The lower left and right quadrants are less of a concern for managers, because they exhibit attributes that are not as important to visitors.

Table 3. Mean Performance and Importance Scores for Park Attributes

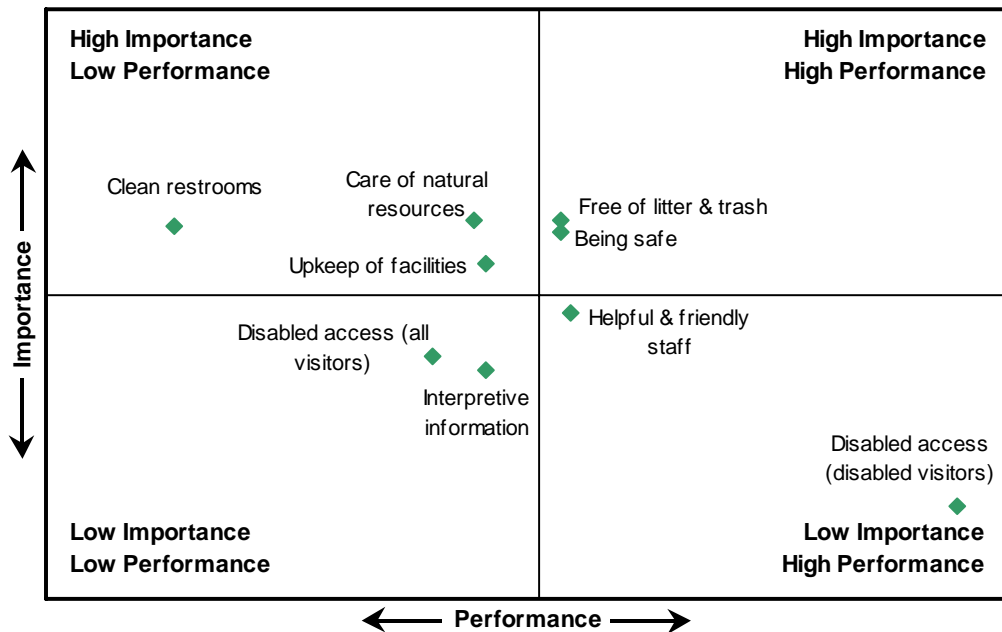
Attribute	Mean Performance Score*	Mean Importance Score*
A. Being free of litter/trash	3.63	3.86
B. Having clean restrooms	3.27	3.85
C. Upkeep of park facilities	3.56	3.79
D. Having helpful & friendly staff	3.64	3.71
E ₁ . Access for persons with disabilities	3.51	3.64
E ₂ . Access for persons with disabilities	4.0	3.40
F. Care of natural resources	3.55	3.86
G. Providing interpretive information	3.56	3.62
H. Being safe	3.63	3.84

E₁ = All visitors

E₂ = Disabled visitors only

* 1 = Poor performance or low importance rating, 4 = excellent performance or high importance rating

Figure 5. Importance-Performance Matrix of Park Attributes



TTSP was given high performance and importance ratings for being free of litter and being safe. The characteristics that visitors felt were important but rated TTSP low on performance were upkeep of park facilities, care of the natural resources, and having clean restrooms.

CROWDING

Visitors to TTSP were asked how crowded they felt during their visit. The following nine-point scale was used to determine visitors’ perceptions of crowding:

- 1 Not at all Crowded
- 2
- 3 Slightly Crowded
- 4
- 5
- 6 Moderately Crowded
- 7
- 8
- 9 Extremely Crowded

Visitors’ overall mean response to this question was 1.9. Over seventy percent (71.6%) of the visitors to TTSP did not feel at all crowded (selected 1 on the scale) during their visit. The rest (28.4%) felt some degree of crowding

(selected 2-9 on the scale) during their visit.

Visitors who indicated they felt crowded during their visit were also asked to specify where they felt crowded (question 16). Nineteen visitors (50% of those visitors who indicated some degree of crowding) responded to this open-ended question. For a list of their responses, see question 16 in Appendix E. Of those who answered the open-ended question, most felt crowded at the swimming beach. No significant differences in perceptions of crowding were found between first time and repeat visitors, between campers and non-campers, or between weekend and weekday visitors.

Crowding and satisfaction

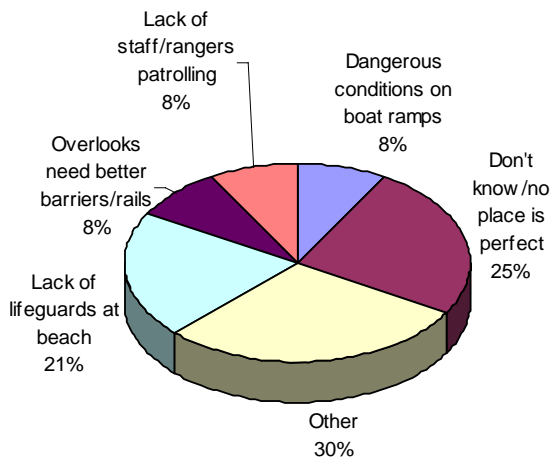
A significant difference (p<.05) was found in visitors’ mean overall satisfaction with their visit and whether they felt some degree of crowding or

not. Visitors who did not feel crowded had a mean overall satisfaction score of 3.75, while visitors who felt some degree of crowding had a mean overall satisfaction score of 3.53.

SAFETY CONCERNS OF VISITORS

One-third (33.8%) of the visitors to TTSP did not rate the park as excellent for safety. Of those, 24 visitors (52.2% of those not giving safety an excellent rating) noted what influenced their rating. Their comments were grouped into categories and are shown in Figure 6. Appendix E, question 9, provides a list of the comments.

Figure 6. Comments from Visitors Not Rating TTSP Excellent on Safety



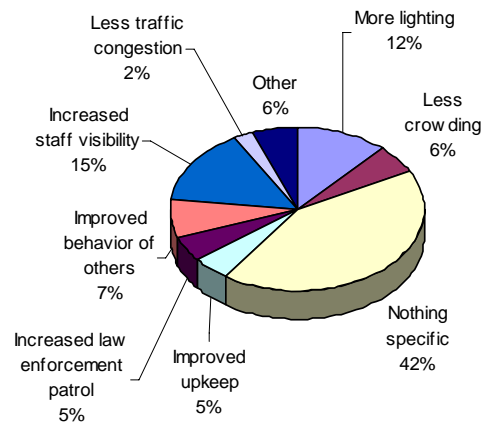
Visitors were also given a list of nine attributes and were asked to indicate which of the nine would most increase their feeling of safety at TTSP. Although instructed to select only one attribute, many visitors selected more than one; thus, 121 responses were given by 102 visitors. Figure 7 shows the percentage of responses given by

visitors. Most (42%) felt that nothing specific would increase their feeling of safety, but 15% felt that increased visibility of park staff would increase safety.

Visitors who felt that more lighting in the park would most increase their feeling of safety were asked to indicate where they felt more lighting was necessary. Seven of those visitors who felt more lighting would increase safety answered this open-ended question. The majority felt that more lighting in the campground would most increase their feeling of safety.

There were no significant differences in the rating of safety by first time visitors versus repeat visitors or by weekend versus weekday visitors. Campers, however, had a significantly higher ($p < .05$) safety rating (3.88) than non-campers (3.57). There were no significant differences in safety ratings by any of the socio-demographic characteristics.

Figure 7. Percentage of Safety Attributes Chosen by Visitors



To determine if there were differences in perceptions of crowding, satisfaction with park features, and overall satisfaction, responses were divided into two groups based on how they rated TTSP on being safe. Group 1 included those who rated the park excellent, and Group 2 included those who rated the park as good, fair, or poor.

There were no differences in perceptions of crowding between the two groups, but Group 1 had a significantly ($p < .05$) higher mean overall satisfaction score (3.82) than Group 2 (3.39). Group 1 also had significantly ($p < .01$) higher satisfaction ratings for all of the satisfaction features than Group 2, as well as significantly higher ($p < .001$) performance ratings for all of the park attributes.

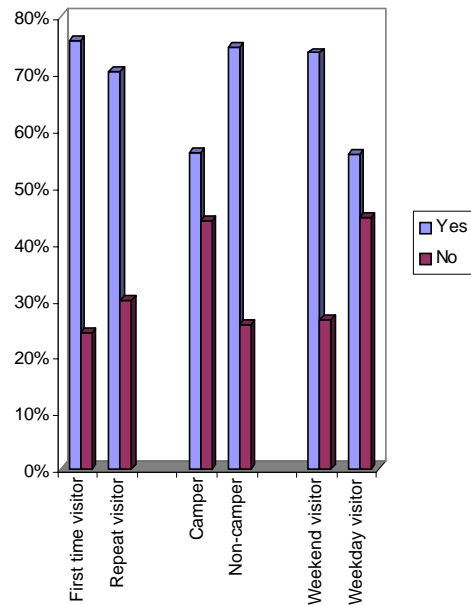
SUPPORT OF RESERVATION SYSTEM

Visitors were asked to indicate whether they would support setting aside at least 50% of all campsites and charging a reservation fee not to exceed \$7.00. Almost three-fourths (71.1%) of the visitors indicated that they would support such a system, while 28.9% indicated that they would not.

There were no differences between first time and repeat visitors and the percentage of each that would or would not support a reservation system. Both were more likely to support (75.8% and 70.2% respectively) than oppose the proposed system. Nor was there a significant difference between campers and non-campers and the percentage of each that would or would not support the reservation system, although campers were only slightly more likely to support (56%) a reservation system whereas non-campers were much more likely to

support (74.5%) it. No difference was found between weekend and weekday visitors and the percentage of each that would or would not support a reservation system. Both were more likely to support the proposed system, although weekday visitors were only slightly more likely to support (55.6%) a reservation system whereas weekend visitors were much more likely to support (73.6%) it. Further analysis of weekend versus weekday campers revealed that weekend campers were more likely to support (63.2%) a reservation system, while weekday campers were more likely to oppose (66.7%) such a system. Figure 8 shows the percentage of support between each group.

Figure 8. Comparison of Support of Reservation System Between Groups

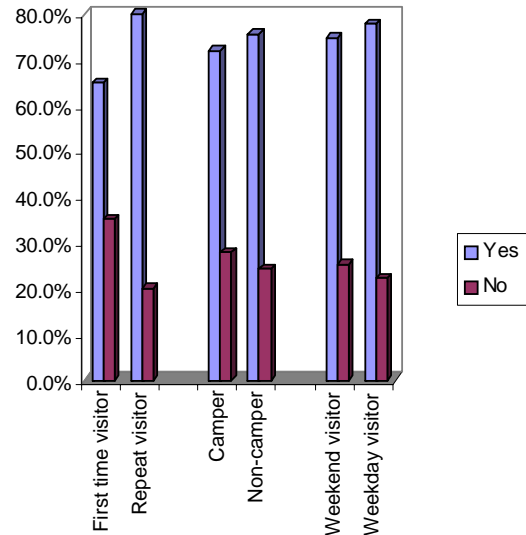


SUPPORT OF “CARRY IN/CARRY OUT” TRASH SYSTEM

TTSP visitors were also asked to indicate whether they would be willing

for the park to establish a “carry in and carry out” trash removal system, thereby promoting recycling and reducing the burden of handling trash in the park. Visitors were more likely to support (75.2%) the carry in/carry out trash system than oppose it (24.8%). No significant differences were found between the percentages of first time and repeat visitors, campers and non-campers, and weekend and weekday visitors and whether each would support or oppose this type of trash system. All were more likely to support the proposed trash system than oppose it. Figure 9 shows the percentage of support or opposition between each group.

Figure 9. Support for “Carry In/Carry Out” Trash System Between Groups



ADDITIONAL VISITOR COMMENTS

Respondents to the survey were also given the opportunity to write any additional comments or suggestions on how DNR could make their experience at TTSP a better one (question 24). Twenty-two percent (21.5%) of the total survey participants responded to this question, with 35 responses given by 31 respondents. The comments and suggestions were listed and grouped by similarities into six categories for frequency and percentage calculations. The list of comments and suggestions is found in Appendix F. Table 4 lists the

frequencies and percentages of the comments and suggestions by category.

The majority (37.1%) of comments were general positive comments, such as: “Beautiful park”, “Great place,” and “This is a very nice place to stay”. The rest of the comments were categorized based on similar suggestions or comments, such as comments or suggestions about the restrooms or shower houses, comments about the campground, and other suggestions not falling into any other category.

Table 4. Frequency and Percentage of Comments and Suggestions from TTSP Visitors

Category	Frequency	Percent
1. General positive comments	13	37.1%
2. Comments/suggestions about restrooms/shower houses	4	11.4%
3. Comments/suggestions about campground	3	8.6%
4. Comments/suggestions about swimming beach	3	8.6%
5. Comments/suggestions about boat ramps	2	5.7%
6. Other	10	28.6%
Total	35	100%

Discussion

MANAGEMENT IMPLICATIONS

The results of this study provide relevant information concerning TTSP visitors. However, the results should be interpreted with caution. The surveys were collected only during the study period of July, August, and September 1999; therefore, visitors who visit during other seasons of the year are not represented in the study's sample. The results, however, are still very useful to park managers and planners, because much of the annual visitation occurs during this period.

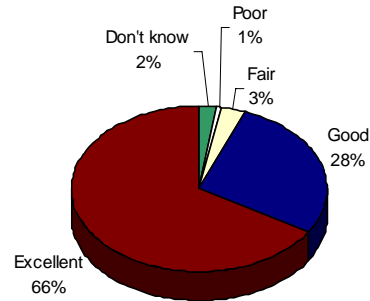
Satisfaction Implications

Over two-thirds (69.1%) of visitors reported that they were very satisfied with their park visit. Williams (1989) states that visitor satisfaction with previous visits is a key component of repeat visitation. The high percentage of repeat visitation (70.9%) combined with their positive comments provide evidence that TTSP visitors are indeed satisfied with their park experience.

Safety Implications

TTSP managers should be commended for providing an atmosphere in which visitors feel safe. The I-P Matrix showed park safety having a high performance and importance rating, and only one-third of visitors did not give park safety an excellent rating (Figure 10). However, visitors' perceptions of safety should still be a management concern as visitors' safety concerns influenced their overall satisfaction (Figure 11). Providing lifeguards at the

Figure 10. Safety Ratings of TTSP.

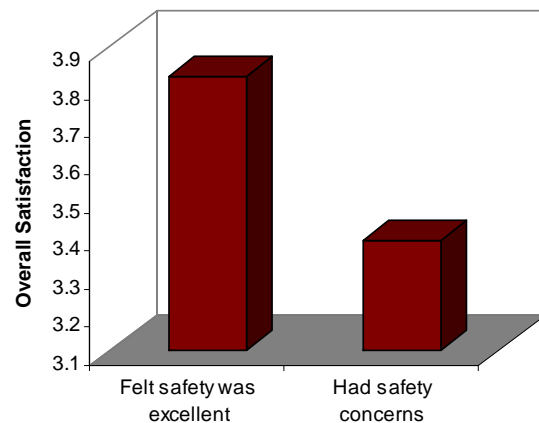


swimming beach, adding more lighting throughout the park, and increasing frequency of patrols by staff and park rangers were visitors' concerns and suggestions.

Crowding Implications

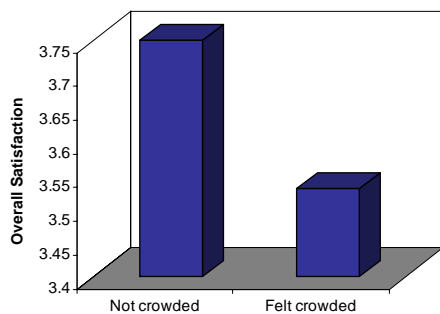
Crowding was not a significant issue at TTSP. Visitors' perceptions of crowding at TTSP were fairly low, with a mean crowded score of 1.9. Less than 30% (28.4%) of visitors reported feeling

Figure 11. Satisfaction Ratings by Safety Concerns



some degree of crowding. However, visitors' perceptions of crowding did influence their overall satisfaction at TTSP, indicating that visitors' perceptions of crowding should still be a management concern. Visitors who felt crowded had a significantly lower overall satisfaction than visitors who did not feel at all crowded (Figure 12).

Figure 12. Overall Satisfaction is Lower for Those Who Felt Crowded



Crowding is a perceptual construct not always explained by the number or density of other visitors. Expectations of visitor numbers, the behavior of other visitors, and visitors' perception of resource degradation all play a significant role in crowding perceptions (Armistead & Ramthun, 1995; Peine et al., 1999). Further study of visitors at TTSP could determine potential crowding issues and also if crowding perceptions at TTSP are due to the number of people or perhaps the behavior of those in the park.

Performance Implications

Visitors felt that upkeep of facilities, care of the natural resources, and having clean restrooms were very important but rated TTSP lower in performance in these areas. Restroom cleanliness is often given a lower rating by visitors to

state parks (Fredrickson & Moisey, 1999), and in this case could be a result of the large number of visitors experienced by TTSP during the peak season. Managers should be commended, however, on the high performance and importance ratings given to the park for being safe and free of litter and trash.

Implications for TTSP's Interpretive Programs

Another area of concern for managers is the low performance and importance ratings given by visitors regarding TTSP's interpretive programs. Less than 3% (2.8%) of visitors to TTSP reported attending an interpretive program (although 17% of visitors reported visiting the visitor center). When asked how satisfied they were with TTSP's interpretive programs, over half (53%) of the visitors said they didn't know. These results suggest that visitors may not be aware of the interpretive programs, and thus do not attend them.

Implementation of Reservation System

Although the majority (71%) of visitors to TTSP indicated that they would support a reservation system, an analysis of campers (the users most likely to be affected by such a system) revealed that campers were only slightly more likely to support (56%) the proposed system than oppose it (44%). Further analysis of campers was conducted comparing tent and RV campers and the percentage of each in support of or opposed to a reservation system. RV campers (those campers who might be expected to use the reservation system more) were more likely to oppose (70%) than support (30%) the proposed reservation system, while tent campers were more likely to

support (77%) than oppose (23%) a reservation system.

Implementation of “Carry In and Carry Out” Trash System

Three-fourths (75%) of visitors would support implementing a “carry in/carry out” trash removal system. Further analysis of the users who might be most affected by this type of trash removal system (picnickers and campers) revealed that a majority of both campers (72%) and picnickers (68%) supported the proposal.

Conclusion

TTSP managers should be commended in that TTSP visitors are very satisfied with TTSP, as evidenced by the high percentage of visitors who were repeat visitors, and also by their high satisfaction ratings, high performance ratings, and low crowding perceptions. The results of the present study suggest some important management and planning considerations for TTSP. Even though TTSP visitors rated their visits and the park features relatively high, felt fairly safe, and did not feel very crowded, continued attention to safety, facility upkeep and improvement, and care of the natural resources can positively effect these ratings.

Just as important, on-going monitoring of the effects of management changes will provide immediate feedback into the effectiveness of these changes. On-site surveys provide a cost effective and timely vehicle with which to measure management effectiveness and uncover potential problems.

RESEARCH RECOMMENDATIONS

The results of the present study serve as baseline visitor information of TTSP. The frequency and percentage calculations of survey responses provide useful information concerning socio-demographic characteristics, use patterns, and satisfaction of TTSP visitors. In addition, the “sub-analysis” of data is important in identifying implications for management of TTSP. (The sub-analysis in the present study included comparisons using Chi-square and ANOVA between selected groups, the Importance-Performance analysis, and multiple linear regression analysis.) Additional relevant information may be determined from further sub-analysis of existing data. Therefore, it is recommended additional sub-analysis be conducted to provide even greater insight to management of the park.

Data collection should be on a continuum (Peine et al., 1999), which is why additional visitor surveys at TTSP should also be conducted on a regular basis (e.g., every three, four, or five years). Future TTSP studies can identify changes and trends in socio-demographic characteristics, use patterns, and visitors’ satisfaction at TTSP.

The methodology used in this study serves as a standard survey procedure that the DSP can use in the future. Because consistency should be built into the design of the survey instrument, sampling strategy and analysis (Peine et al., 1999), other Missouri state parks and historic sites should be surveyed similarly to provide valid results for comparisons of visitor information between parks, or to measure change over time in other parks.

The present study was conducted only during the study period of July, August, and September 1999. Therefore, user studies at TTSP and other parks and historic sites might be conducted during other seasons for comparison between seasonal visitors.

METHODOLOGY RECOMMENDATIONS AND CONSIDERATIONS FOR TTSP AND OTHER PARKS

The on-site questionnaire and the methodology of this study were designed to be applicable to other Missouri state parks. Exit surveys provide the most robust sampling strategy to precisely define the visitor population (Peine et al., 1999); therefore, it is recommended that exit surveys be conducted at other state parks and historic sites if at all possible.

Survey Signage

It is recommended that adequate signage be utilized when collecting surveys on-site. A "Visitor Survey" sign was used in the present study to inform visitors exiting the park that a survey was being conducted. Having the sign for that purpose aided in the workability of the methodology, as many visitors slowed their vehicles and some stopped before being asked to do so.

Survey Administration

Achieving the highest possible response rate (within the financial constraints) should be a goal of any study. To achieve higher response rates, the following comments are provided.

The prize package drawing and the one-page questionnaire undoubtedly helped attain the high response in the present study. Continued use of the one-page questionnaire and the prize package drawing is suggested.

The most frequent reason that visitors declined to fill out a survey was because they did not have enough time. Most non-respondents were very pleasant and many provided positive comments about the park. Some even asked if they could take a survey and mail it back. One recommendation would be to have self-addressed, stamped envelopes available in future surveys to offer to non-respondents only after they do not volunteer to fill out the survey on-site. This technique may provide higher response rates, with minimal additional expense. One caution, however, is to always attempt to have visitors complete the survey on-site, and to only use the mail-back approach when it is certain visitors would otherwise be non-respondents.

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Appendix A. Trail of Tears State Park Visitor Survey



Trail of Tears State Park



The Missouri Department of Natural Resources and the University of Missouri are seeking your evaluation of Trail of Tears State Park. This survey is voluntary and completely anonymous. Your cooperation is important in helping us make decisions about managing this park. Thank you for your time.

1. Is this your first visit to Trail of Tears State Park? (Check only one box.)
 yes no If no, how many times have you visited this park in the past year? _____

2. Was Trail of Tears State Park a primary destination during your visit? (Check only one box.) yes no

3. During this visit to the park, are you staying overnight? (Check only one box.)
 yes If yes, how many nights are you staying at or near the park during this visit? _____
 no (If no, skip to question 5.)

4. If staying overnight, where are you staying? (Check only one box.)
 campground in Trail of Tears State Park
 tent RV/trailer/camper
 nearby lodging facilities
 nearby campground
 friends/relatives
 other (Please specify.) _____

5. With whom are you visiting the park? (Check only one box.)
 alone family and friends club or organized group
 family friends other (Please specify.) _____

6. Which recreational activities have you engaged in during this park visit? (Check all that apply.)
 picnicking studying nature attending interpretive program
 fishing viewing wildlife attending a special event
 camping boating in lake visiting the visitor center
 swimming boating in river other (Please specify.) _____
 hiking horseback riding _____
 walking backpacking _____

7. How satisfied are you with each of the following in Trail of Tears State Park? (Check one box for each feature.)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Don't Know
a. campground	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. park signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. picnic area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. swimming area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. boat launches	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. trails	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. interpretive programs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. How do you rate Trail of Tears State Park on each of the following? (Check one box for each feature.)

	Excellent	Good	Fair	Poor	Don't Know
a. being free of litter/trash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. having clean restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. upkeep of park facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. having a helpful & friendly staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. access for persons with disabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. care of natural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. providing interpretive information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. being safe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. If you did not rate this park as excellent on being safe, what influenced your rating?

10. Which of the following would most increase your feeling of being safe at Trail of Tears State Park? (Check only one box.)

- more lighting where? _____
- improved behavior of others
- less crowding
- increased visibility of park staff
- nothing specific
- less traffic congestion
- improved upkeep of facilities
- other (Please specify.) _____
- increased law enforcement patrol

11. Do you support setting aside at least 50% of all campsites in a reservation system in order to guarantee a site, and charging a reservation fee not to exceed \$7.00? (Check only one box.) yes no
12. Do you support establishing a "carry in and carry out" system as a means of promoting recycling and reducing the burden of handling trash in this park? (Check only one box.) yes no
13. When visiting any state park, how important are each of these items to you? (Check one box for each feature.)

	Very Important	Important	Unimportant	Very Unimportant	Don't Know
a. being free of litter/trash	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. having clean restrooms	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. upkeep of park facilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. having a helpful & friendly staff	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. access for persons with disabilities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. care of natural resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. providing interpretive information	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. being safe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Overall, how satisfied are you with this visit to Trail of Tears State Park? (Check only one box.)

Very Satisfied Satisfied Dissatisfied Very Dissatisfied

15. During this visit, how crowded did you feel? (Circle one number.)

1 2 3 4 5 6 7 8 9
 Not at all Slightly Moderately Extremely
 Crowded Crowded Crowded Crowded

16. If you felt crowded on this visit, where did you feel crowded?
- _____
- _____

17. What is your age? _____ 18. Gender? female male

19. What is the highest level of education you have completed? (Check only one box.)

grade school vocational school graduate of 4-year college
 high school some college post-graduate education

20. What is your ethnic origin? (Check only one box.)

Asian African American Native American/American Indian
 Hispanic Caucasian/White Other (Please specify.) _____

21. Do you have a disability that substantially limits one or more life activities or might require special accommodations?

yes no If yes, what disability or disabilities do you have?

22. What is your 5-digit zip code (or country of residence, if you live outside the U.S.)? _____

23. What is your annual household income?

less than \$25,000 \$50,001 - \$75,000
 \$25,000 - \$50,000 over \$75,000

24. Please write any additional comments about your park visit or suggestions on how the Missouri Department of Natural Resources can make your experience in Trail of Tears State Park a better one.

THANK YOU FOR YOUR HELP.
 YOU ARE ALWAYS WELCOME IN MISSOURI STATE PARKS.

Appendix B. Survey Protocol

Protocol for Trail of Tears State Park Visitor Survey

Hi, my name is _____, and I am conducting a survey of park visitors for Missouri state parks. The information that I am collecting will be useful for future management of Trail of Tears State Park.

The survey is one page, front and back side, and only takes about 3-5 minutes to complete. Anyone who is 18 or older may complete the survey, and by completing the survey, you have the opportunity to enter your name in a drawing for a prize package of \$100 worth of concession coupons. Your participation is voluntary, and your responses will be completely anonymous.

Your input is very important to the management of Trail of Tears State Park. Would you be willing to help by participating in the survey?

[If no,] Thank you for your time. Have a nice day.

[If yes,]

Here is a pencil and clipboard with the survey attached (for each respondent). Please complete the survey on both sides. When finished, return the survey(s), clipboard(s), pencils, and prize entry form(s) to me.

Thank you for taking time to complete the survey. Your help is greatly appreciated. Have a nice day.

Appendix C. Prize Entry Form

**WIN A PRIZE PACKAGE OF CONCESSION COUPONS
WORTH \$100**

**Enter a drawing to win \$100 worth of gift certificates!
These certificates are good for any concessions at any
state park or historic site. Concessions include cabin
rentals, canoe rentals, boat rentals, restaurant dining,
horseback riding, etc.**

**You may enter the drawing by simply filling out the
back of this entry form and returning it to the surveyor.
Your name, address, and telephone number will be used
only for this drawing; thus, your survey responses will be
anonymous. The drawing will be held November 1, 1999.
Winners will be notified by telephone or mail.
Redemption of gift certificates is based on dates of
availability through August 31, 2000.**

Name: _____

Address: _____

Phone #: () _____

Appendix D. Observation Survey

Date _____ Day of Week _____ Time Slot _____
 Weather _____ Temperature _____ Park/Site _____

	Survey #'s	# of Adults	# of Children	Vehicle Type	Additional Axles	Area
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						
11						
12						
13						
14						
15						
16						
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21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						
32						
33						
34						
35						

Time Slot Codes:

Time Slot 1 = 8:00 - 12:00 p.m.
 Time Slot 2 = 12:00 - 4:00 p.m.
 Time Slot 3 = 4:00 - 8:00 p.m.

Weather Codes (examples):

Hot & Sunny Windy
 Cold & Rainy Sunny
 Cloudy Humid

Appendix E. Responses to Survey Questions

Trail of Tears State Park Visitor Survey

1. Is this your first visit to Trail of Tears State Park? (n=141)

yes	29.1%
no	70.9%

If no, how many times have you visited this park in the past year? (n=88)

The responses from this open-ended question were grouped into the following 8 categories:

0	10.2%
1	11.4%
2	10.2%
3	14.8%
4-5	15.9%
6-10	21.5%
11-20	11.4%
21-50	4.6%

The average # of times repeat visitors visited the park in the past year was 7.2 times.

2. Was Trail of Tears State Park a primary destination during your visit? (n=141)

yes	72.3%
no	27.7%

3. During this visit to the park, are you staying overnight? (n=137)

yes	21.2%
no	78.8%

If yes, how many nights are you staying overnight at or near the park during this visit? (n=20)

The responses from this open-ended question were grouped into the following 6 categories:

1	45%
2	20%
3	5%
4	20%
5-10	5%
11+	5%

The average # of nights respondents visiting the park for more than one day stayed was 2.9.

4. If staying overnight, where are you staying? (n=28)

campground in Trail of Tears State Park	92.9%
tent	58.3%
RV	41.7%
nearby lodging facilities	3.6%

nearby campground	0.0%
friends/relatives	3.6%
other	0.0%

5. With whom are you visiting the park? (n=132)

alone	15.9%	family & friends	13.6%	club or organized group	1.5%
family	51.5%	friends	16.7%	other	0.8%

6. Which recreational activities have you engaged in during this park visit?

picnicking	23.6%	studying nature	21.5%	attending interpretive program	2.8%
fishing	12.5%	viewing wildlife	22.9%	attending special event	3.5%
camping	17.4%	boating in lake	2.8%	visiting visitor center	17.4%
swimming	31.3%	boating in river	2.1%	other	17.4%
hiking	16.0%	horseback riding	1.4%		
walking	30.6%	backpacking	1.4%		

In addition to percentages of responses, a mean score was calculated for each feature in questions 7, 8, 13, and 14. The score is based on a 4.0 scale with 4 = very satisfied, 3 = satisfied, 2 = dissatisfied, and 1 = very dissatisfied (Q. 7 & 14); 4 = excellent, 3 = good, 2 = fair, and 1 = poor (Q. 8); and 4 = very important, 3 = important, 2 = unimportant, and 1 = very unimportant (Q. 13). The mean score is listed in parenthesis following each feature.

7. How satisfied are you with each of the following in Trail of Tears State Park?

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Don't Know	
a. campground (3.63)	45.6%	26.4%	0.0%	0.0%	28.0%	n=125
b. park signs (3.54)	52.3%	43.8%	0.0%	0.0%	3.9%	n=128
c. picnic areas (3.60)	50.8%	34.2%	0.0%	0.0%	15.0%	n=120
d. swimming area (3.34)	30.6%	43.0%	2.5%	0.8%	23.1%	n=116
e. boat launches (3.33)	21.7%	22.6%	0.9%	2.6%	52.2%	n=115
f. trails (3.59)	44.4%	29.0%	0.8%	0.0%	25.8%	n=124
g. interpretive programs (3.61)	28.7%	18.3%	0.0%	0.0%	53.0%	n=115

8. How do you rate Trail of Tears State Park on each of the following?

	Excellent	Good	Fair	Poor	Don't Know	
a. being free of litter/trash (3.63)	68.3%	26.6%	4.3%	0.7%	0.0%	n=139
b. having clean restrooms (3.27)	41.8%	29.1%	7.5%	6.0%	15.7%	n=134
c. upkeep of park facilities (3.56)	58.4%	32.1%	5.1%	0.0%	4.4%	n=137
d. having a helpful/friendly staff (3.64)	59.0%	27.3%	0.0%	1.4%	12.2%	n=139
e. access for persons with disabilities (3.51)	33.3%	22.8%	3.3%	0.0%	40.7%	n=123
f. care of natural resources (3.55)	55.1%	38.2%	1.5%	0.7%	4.4%	n=136
g. providing interpretive information (3.56)	46.6%	24.8%	3.0%	0.8%	24.8%	n=133
h. being safe (3.63)	66.2%	27.9%	2.9%	0.7%	2.2%	n=136

9. If you did not rate this park as excellent on being safe, what influenced your rating?

24 visitors responded to this question. Their responses are as follows.

- Don't know/no reason/no place is perfect
- Don't know it very well.
- Don't know.

It's a natural area with hazards such as snakes, etc.
 There is always a risk to being in the wilderness.
 There is an inherent risk in being out in "wilderness." Each path/area can not be patrolled constantly. This is true for every park.
 Wasn't here long enough to tell.

Lack of lifeguards at swimming beach

Need a lifeguard.
 Need yellow center line on highway. Maybe a lifeguard.
 No lifeguard.
 No lifeguards posted on beach, but everyone looks out for everyone else.
 No qualified-licensed on beach patrol (lifeguards.)

Dangerous conditions on boat ramps

Boat ramp full of mud. Could cause boat and truck to slide into river.
 The boat ramp.

Lack of park staff/rangers patrolling

Entrance security/employee presence.
 It was the fact that I rarely see a park ranger around. However, nothing leads me to believe that the park is unsafe.

Overlooks need better barriers/rails

At the river overlook, my child went behind the fence faster than I could get to him before he got to the edge.
 No guard rail at first outlook.

Other

Drop offs from roads.
 It's just that there are a lot of different travelers going through the park.
 Kids can still wander off and get hurt.
 Need yellow center line on highway. Maybe a lifeguard.
 Often see glass on beach.
 Shoulders in places for drop off.
 Some speeder biking.

10. Which of the following would most increase your feeling of being safe at Trail of Tears State Park?

121 responses were given by 102 respondents.

	<u>Frequency</u>	<u>Percent</u>
1. More lighting	14	11.6%
2. Less crowding	7	5.8%
3. Nothing specific	51	42.1%
4. Improved upkeep of facilities	6	5.0%
5. Increased law enforcement patrol	6	5.0%
6. Improved behavior of others	9	7.4%
7. Increased visibility of park staff	18	14.9%
8. Less traffic congestion	3	2.5%
9. Other	<u>7</u>	<u>5.8%</u>
Total	121	100.0%

7 visitors (50% of those who indicated more lighting would most increase their feeling of safety) reported where they felt more lighting was necessary. Their answers are as follows:

- Camp area. Campground.
- Camp area. Camping area.
- Camp area. Main roads leading to restrooms.
- Campground.

7 visitors also indicated that an “other” attribute would most increase their feeling of safety. Their answers are as follows:

- Boat ramp cleaned. Maybe one lifeguard.
- Clean boat ramp periodically. The overlook needs a fence on each side.
- Enforce a no glass container rule. Wider roads.
- Equestrian camping.

11. Do you support setting aside at least 50% of all campsites in a reservation system in order to guarantee a site, and charging a reservation fee not to exceed \$7.00? (n=128)

- yes 71.1%
- no 28.9%

12. Do you support establishing a “carry in and carry out” system as a means of promoting recycling and reducing the burden of handling trash in this park? (n=133)

- yes 75.2%
- no 24.8%

13. When visiting any state park, how important are each of these items to you?

	Very Important	Important	Unimportant	Very Unimportant	Don't Know	
a. being free of litter/trash (3.86)	86.8%	12.5%	0.7%	0.0%	0.0%	n=136
b. having clean restrooms (3.85)	96.1%	13.1%	0.7%	0.0%	0.0%	n=137
c. upkeep of park facilities (3.79)	80.0%	19.3%	0.7%	0.0%	0.0%	n=135
d. having a helpful/friendly staff (3.71)	73.5%	22.8%	2.9%	0.0%	0.7%	n=136
e. access for disabled persons (3.64)	64.1%	24.4%	3.1%	0.8%	7.6%	n=131
f. care of natural resources (3.86)	85.2%	12.6%	0.7%	0.0%	1.5%	n=135
g. providing interpretive information (3.62)	64.9%	24.6%	6.0%	0.0%	4.5%	n=134
h. being safe (3.84)	85.4%	13.1%	1.5%	0.0%	0.0%	n=137

14. Overall, how satisfied are you with this visit to Trail of Tears State Park?

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	
(Mean score = 3.68)	69.1%	30.1%	0.0%	0.7%	n=136

15. During this visit, how crowded did you feel? (n=134)

On a scale of 1-9, with 1 = Not at all crowded and 9 = Extremely crowded, the mean response was 1.9.

16. If you felt crowded on this visit, where did you feel crowded?

The following 19 comments were given.

Swimming beach/area

- At beach.
- Beach area.
- Beach area.
- Beach.
- Camp and water.
- Swimming area and picnic.
- Swimming area.
- Swimming.
- Swimming.
- Under the shade trees by the beach we could smell others' cigarette smoke.

Campground

- Camp and water.
- Full hook up camping.
- I was in a tent with RVs.

Overlooks

- A lot of people at the overlook.
- Lake and overlook.
- River lookout.

Lake

- Lake and overlook.
- Lake when fishing.

Other

- Near the marina.

17. What is your age? (n=133)

Responses were divided into the following 4 categories:

18-34	44.4%	55-64	9.8%
35-54	36.8%	65+	9.0%

(Average age = 40.5)

18. Gender? (n=134)

Female	41.8%
Male	58.2%

19. What is the highest level of education you have completed? (n=135)

grade school	2.2%	vocational school	6.7%	graduate of 4-year college	16.3%
high school	36.3%	some college	28.9%	post-graduate education	9.6%

20. What is your ethnic origin? (n=137)

Asian	0.0%	African American	2.9%	Native American/American Indian	3.6%
Hispanic	0.7%	Caucasian/White	91.2%	Other	1.5%

21. Do you have a disability that substantially limits one or more life activities or might require special accommodations? (n=134)

yes 3.7%
no 96.3%

If yes, what disability or disabilities do you have? (n=3)

The following is a list of all responses to this open-ended question.

Disabled vet – legs.
Learning disability.
Walk slowly due to stroke.

22. What is your 5-digit zip code (or country of residence, if you live outside the U.S.)? (n=129)

The states with the highest percentages of respondents were:

Missouri (75.2%)
Illinois (7.0%)
Florida (3.1%)

23. What is your annual household income? (n=127)

less than \$25,000	24.4%	\$50,001 - \$75,000	23.6%
\$25,000 - \$50,000	44.1%	over \$75,000	7.9%

24. Please write any additional comments about your park visit or suggestions on how the Missouri Department of Natural Resources can make your experience in Trail of Tears State Park a better one.

31 of the 144 visitors (21.5%) responded to this question. A total of 35 responses were given, and were divided into 6 categories. Frequencies and percentages of responses in each category are listed.

	<u>Frequency</u>	<u>Percent</u>
1. General positive comments	13	37.1%
2. Comments/suggestions about restrooms/shower houses	4	11.4%
3. Comments/suggestions about campground	3	8.6%
4. Comments/suggestions about swimming beach	3	8.6%
5. Comments/suggestions about boat ramps	2	5.7%
6. Other	<u>10</u>	<u>28.6%</u>
Total	35	100%

Appendix F. List of Responses for Additional Comments (Q 24)

Responses to Question #24

Please write any additional comments about your park visit or suggestions on how the Missouri Department of Natural Resources can make your experience in Trail of Tears State Park a better one.

General positive comments

- Beautiful park.
- Cool place.
- Enjoyable.
- Enjoyed a tour through the park. It is very beautiful and well kept.
- Enjoyed our visit--hope sewer system is fixed soon.
- Good job--keep up the good work!!
- Great place!
- I've had a very nice stay, and wish you good luck in the future of the Trail of Tears State Park.
- Our visit was very relaxing.
- Thank you.
- This is a very nice place to stay.
- Very good.
- We live at Egypt Mills and enjoy coming often to walk, or fish in the river.

Comments/suggestions about restrooms/shower houses

- Better swimming area--better grading of sandy beach and an outdoor shower to clean off when done swimming--restroom across from the beach.
- Consider erosion control on beach. Improve restrooms.
- Swim area.
- The bathrooms by the lake smelled awful.

Comments/suggestions about campground

- I think the sites could or should be more tent friendly.
- It would be nice if alcohol was allowed at beach area. I can't imagine that anyone would get out of control down there. Please, whatever you do, don't put up lights in the campground; they tend to block out the stars.
- More electric sights and not so close together as some of them are.

Comments/suggestions about swimming beach

- Better swimming area--better grading of sandy beach and an outdoor shower to clean off when done swimming--restroom across from the beach.
- Consider erosion control on beach. Improve restrooms.
- Maybe a bigger swimming area/beach (where the moss isn't so much.)

Comments/suggestions about boat ramps

- Clean your river boat ramp.
- Please clean boat access to river. Too muddy.

Other

- Bicycle trails?
- Enjoyed our visit--hope sewer system is fixed soon.
- First aid stations, if there isn't one already.
- Glad for the no burn due to dry weather.
- Have someone to ALWAYS answer telephone, even an automated system.
- I would like to see more hiking, biking, rock climbing activities.
- I'm sorry the burn ordinance was in effect.
- It would be nice if alcohol was allowed at beach area. I can't imagine that anyone would get out of control down there. Please, whatever you do, don't put up lights in the campground; they tend to block out the stars.
- Keep park admission free.
- Several questions address safety. In my opinion, this park is as good as any I have visited. You cannot prevent every person from making a mistake in judgement. At some point, safety precautions become a hindrance to others' enjoyment.