



Missouri Department of Natural Resources
Division of State Parks
800-334-6946

2000 Deutschheim State Historic Site Visitor Survey

Project Completion Report

Submitted to

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

Prepared by

**Dawn K. Fredrickson
C. Randal Vessell Ph.D.**

**Department of Parks, Recreation, & Tourism
School of Natural Resources
University of Missouri-Columbia**

February 2001

Executive Summary

The purpose of this study was to describe visitors' socio-demographic characteristics, patterns of use, and satisfaction with site facilities, programs and services at Deutschheim State Historic Site (DSHS).

An on-site survey of adult visitors to DSHS was conducted July through December 2000. One hundred thirteen (113) surveys were collected, with an overall response rate of 100%. Results of the survey have a margin of error of plus or minus 9%. The following information summarizes the results of the study.

Socio-demographic Characteristics

- DSHS visitors were comprised of more females (62%) than males (38%), and the average age of the adult visitor to DSHS was 50.
- The largest percentage (46%) of visitors indicated a professional/technical occupation, while the second largest percentage (19%) of visitors indicated retirement status.
- The majority (41%) of visitors reported an annual household income of between \$25,000 and \$50,000.
- Most (44%) of the visitors were married with children grown.
- Almost half (46%) of DSHS visitors indicated having completed a four-year college degree or an advanced graduate degree.

- The majority (99%) of visitors were White.
- Most (61%) of the DSHS visitors were from Missouri, with the rest (39%) coming from out of state including Illinois (7%), Kansas (6%), and Iowa (5%).

Use-Patterns

- The majority (56%) of visitors drove more than a day's drive (a day's drive is defined as less than 150 miles one way) to visit DSHS.
- The majority (95%) of DSHS visitors were first time visitors.
- Eighty percent (80%) of the visitors indicated staying overnight during their visit to DSHS.
- Of those staying overnight, 62% reported staying in nearby bed and breakfast facilities. The average number of nights overnight visitors stayed was 1.6 nights.
- The majority of DSHS visitors visited the site with family and/or friends.
- The majority (60%) of visitors indicated that they found out about Deutschheim while visiting the Hermann area.

Satisfaction and Other Measures

- One hundred percent (100%) of DSHS visitors were either satisfied or very satisfied overall with their visit.
- Of the seven site features, the information provided by the tour guide was given the highest satisfaction rating and the museum shop was given the lowest satisfaction rating.
- Visitors gave higher performance ratings to the following site attributes: having helpful and friendly staff, being free of litter and trash, caring for the cultural resources, caring for the natural resources, upkeep of the facilities, and being safe.
- Visitors gave a lower performance rating to the site providing disabled accessibility.
- Only 7% of visitors to DSHS felt some degree of crowding during their visit.
- Only 28% of the visitors at DSHS did not give site safety an excellent rating.
- Eighty-two percent (82%) of all visitors felt that nothing specific could increase their feeling of safety at DSHS, while 12% of all visitors felt that less crowding would increase their feeling of safety.
- Visitors who felt the site was safe gave significantly higher satisfaction ratings to the seven site features as well as higher performance ratings to the seven site attributes.
- The majority of visitors reported that word of mouth from friends and relatives is their primary source of information about DSHS and other Missouri state parks and historic sites.
- Forty-five percent (45%) of visitors placed a value of \$3.00 per day on a recreational opportunity offered in a visit to DSHS, while another 45% placed a value of \$5.00 per day. The researchers believe that our initial attempt at attributing an economic value perspective did not prove beneficial.
- Nineteen percent (19%) of visitors provided additional comments and suggestions, the majority (86%) of which were general positive comments about the site 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 100 visitors to Deutschheim State Historic Site 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 2000 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 Deutschheim State Historic Site for their willingness to collect the survey data. They are: Steve Sitton, Cheryl Hoffman, Luke Scheele, and Michelle Ward. Much thanks also goes to Licheng Lin, who assisted in data entry.

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 Analysis 3

Results 5

 Surveys Collected & Response Rates 5

 Sampling Error 5

 Socio-demographic Characteristics 6

 Age 6

 Gender 6

 Education 6

 Occupation 6

 Household Composition 6

 Income 6

 Ethnic Origin 6

 Residence 6

 Use Patterns 7

 Trip Characteristics 7

 Visit Characteristics 7

 Deutschheim State Historic Site as a Recreational Destination 8

 Satisfaction Measures 8

 Overall Satisfaction 8

 Satisfaction with Site Features 8

 Performance Rating 9

 Importance-Performance Measures 9

 Crowding 11

 Crowding and Satisfaction 11

 Safety Concerns of Visitors 11

 Visitors' Sources of Information About Missouri State Parks and Historic Sites 12

 How Much Visitors Value Deutschheim State Historic Site 13

 Additional Visitor Comments 13

Discussion 14

 Management Implications 14

Satisfaction Implications.....	14
Safety Implications	14
Performance Implications	15
Conclusion	15
Research Recommendations	15
Methodology Recommendations and Considerations for DSHS and Other Parks.....	16
Survey Administration	16
References.....	17
Appendix A. Deutschheim State Historic Site Visitor Survey	18
Appendix B. Survey Protocol	21
Appendix C. Prize Entry Form	23
Appendix D. Observation Survey	25
Appendix E. Responses to Survey Questions	27
Appendix F. List of Responses for Safety Concerns (Q 9).....	33
Appendix G. List of Responses for Additional Comments (Q 26).....	35

List of Tables

Table 1. Surveys Collected by Day of Week.....5
Table 2. Surveys Collected by Tour Time5
Table 3. Mean Performance and Importance Scores for Site Attributes10
Table 4. Comments from Visitors Not Rating DSHS Excellent on Safety11
Table 5. Frequency and Percentage of Comments and Suggestions from
DSHS Visitors.....13

List of Figures

Figure 1. Residence of DSHS Visitors by Zip Code7
Figure 2. Satisfaction with DSHS Features9
Figure 3. Importance-Performance Matrix of Site Attributes.....10
Figure 4. Percentage of Safety Attributes Chosen by Visitors12
Figure 5. Safety Ratings of DSHS Visitors14

Introduction

NEED FOR RECREATION RESEARCH

With an estimated annual visitation of 18 million recreationists to Missouri's state parks and historic sites, research addressing such issues as recreation demand, visitor satisfaction, and resource degradation becomes an urgent necessity for natural resource recreation managers seeking to provide quality recreational experiences to their customers while at the same time protecting the natural environment. The task of providing quality visitor experiences and meeting recreation demand while maintaining an ecological equilibrium becomes even more difficult when combined with the complexities associated with measuring quality in outdoor experiences.

Quality in outdoor recreation has often been measured in terms of visitor satisfaction (Manning, 1999), making visitor satisfaction a primary goal of natural resource recreation managers (Peine, Jones, English, & Wallace, 1999). Visitor satisfaction, however, can be difficult to define because satisfaction is a multidimensional concept affected by a number of potential variables, some under the control of management but many not (Manning, 1999). Visitor satisfaction is also subject to the varying socio-demographic characteristics of the visitor, their cultural preferences and levels of experience, as well as their widely ranging attitudes and motivations (Manning, 1999). This study attempts to overcome the difficulty in defining visitor satisfaction by gathering 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.

STUDY PURPOSE

In 1973, a research paper entitled "Recreation Research – So What?" criticized recreation research for not addressing "real problems" and for not being applicable to practical situations (Brown, Dyer, & Whaley, 1973). Twenty years later, this criticism was echoed by Glen Alexander, chief of the Ohio Department of Natural Resources, when he wrote, "Customer surveys are a dime a dozen in the private sector and are beginning to get that way in the public sector (Alexander, 1993, p. 168)." Alexander's complaint was that survey data was being filed away and not being utilized, particularly by the front line management and operating people who could most benefit from such information.

A primary goal of this report is to provide practical and applicable customer data to those front line managers who most need this information during their daily operations. This report examines the results of the visitor survey conducted at Deutschheim State Historic Site (DSHS), one of the seven parks and historic sites included in the 2000 Missouri State Parks Visitor Survey. Objectives specific to this report include:

1. Describing the use patterns of visitors to DSHS during July through December 2000.

2. Describing the socio-demographic characteristics of visitors to DSHS.
3. Determining if there are differences in select groups' ratings of site attributes, satisfaction with site features, overall satisfaction, and perceptions of crowding.
4. Determining any differences in select characteristics of visitors who rated site safety high and those who did not.
5. Gaining information about selected site-specific issues.

STUDY AREA

Deutschheim State Historic Site, located in historic Hermann, Missouri, preserves and interprets Missouri's German

heritage. DSHS consists of four historic buildings: the Strehly House and Winery and the Pommer-Gentner House and its barn. Each building contains extensive collections of German culture, including period furnishings, tools, and other items associated with everyday German life. Visitors are guided through these buildings and two heritage gardens for a nominal admission fee of \$2.00.

SCOPE OF STUDY

The population of the visitor study at DSHS consisted of DSHS visitors who were 18 years of age or older (adults), and who visited DSHS during the study period of July through December 2000.

Methodology

SAMPLING PROCEDURES

A 95% confidence interval was chosen with a plus or minus 5% margin of error. Based upon 1999 visitation data for July through December at DSHS, it was estimated that approximately 3,000 visitors would visit DSHS during the period between July 1 and December 31, 2000 (DNR, 2000). Therefore, with a 95% confidence interval and a plus or minus 5% margin of error, a sample size of 353 visitors was required (Folz, 1996). A random sample of adult visitors (18 years of age and older) who visited DSHS during the study period were the respondents for this study. To ensure that visitors visiting DSHS during various times of the day would have equal opportunity for being surveyed, surveying was randomly conducted during each of the four tours conducted at the site: Tour 1 = 9:30 a.m., Tour 2 = 11:15 a.m., Tour 3 = 1:00 p.m., and Tour 4 = 2:30 p.m.

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 DSHS was administered on-site, to eliminate the non-response bias of a mail-back survey. At the end of the tour during a selected tour time, the surveyor asked every visitor who was 18 years of age and

older to voluntarily complete the questionnaire.

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, tour time, and weather conditions of the survey day; the number of adults and children in each group; 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 DSHS 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 month, by day of week, by weekday versus weekend, and by tour time 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 site features (question 7), ratings of site attributes (question 8), overall satisfaction (question 13), and perceptions of crowding (question 11). The selected groups include:

1. First time visitors versus repeat visitors (question 1).
2. 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 site as excellent on being safe versus visitors who rated the site as good, fair, or poor on being safe, for the following categories:

1. First time versus repeat visitors.
2. Weekend versus weekday visitors.

Differences between visitors who rated the site 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 site features, measures of performance of site attributes, and overall satisfaction.

Additional comparisons include:

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 Deutschheim State Historic Site 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 113 surveys were collected at DSHS during the time period of July through December 2000, with 33 collected in July (29.2%), 22 collected in August (19.5%), 33 collected in September (29.2%), 17 collected in October (15.0%), 2 collected in November (1.8%), and 6 collected in December (5.3%). Tables 1 and 2 show surveys collected by day of week and by

tour time, respectively. Of the 113 surveys collected, 61 (54.0%) were collected on weekends (Sunday and Saturday) and 52 (46.0%) were collected on weekdays (Monday through Friday). The overall response rate was 100.0%.

SAMPLING ERROR

With a sample size of 113 and a confidence interval of 95%, the margin of error is plus or minus 9%. For this study, there is a 95% certainty that the true results of the study fall within plus or minus 9% of the findings. For example, from the results that 62.1% of the visitors to DSHS during the study period were female, it can be stated that between 53.1% and 71.1% of the DSHS visitors were female.

Table 1. Surveys Collected by Day of Week

Day of Week	Frequency	Percent
Sunday	22	19.5%
Monday	18	15.9%
Tuesday	2	1.8%
Wednesday	4	3.5%
Thursday	15	13.3%
Friday	13	11.5%
Saturday	39	34.5%
Total	113	100.0%

Table 2. Surveys Collected by Tour Time

Time Slot	Frequency	Percent
1. 9:30 a.m.	26	23.0%
2. 11:15 a.m.	34	30.1%
3. 1:00 p.m.	26	23.0%
4. 2:30 p.m.	27	23.9%
Total	113	100.0%

SOCIO-DEMOGRAPHIC CHARACTERISTICS

Age

The average age of adult visitors to DSHS was 50. When grouped into four age categories, 17.3 % of the adult visitors were between the ages of 18-34, 44.2% were between the ages of 35-54, 27.0% were between the ages of 55-64, and 11.5% were 65 or over.

Gender

Visitors to DSHS were more female than male. Female visitors comprised 62.1% of all visitors, and male visitors comprised 37.9% of all visitors.

Education

Almost half (45.8%) of visitors to DSHS indicated they had completed a four-year college degree or an advanced graduate degree. Over one-third (36.5%) of visitors indicated having completed vocational school or some college, while 17.8% indicated having completed high school as their highest level of education.

Occupation

The majority (45.6%) of visitors to DSHS indicated a professional or technical occupation, while another large percentage (19.4%) of visitors to DSHS indicated retirement status. The rest (32.8%) indicated another type of occupation, including having a service-based occupation (11.7%), being a homemaker (8.7%), being self-employed (8.7%), having a manufacturing-based occupation (2.9%), or being employed in an “other” type of occupation (2.9%).

Household Composition

DSHS visitors were asked to describe their household composition. The majority (43.9%) of visitors were married with children grown. Twenty-two percent (21.5%) were married with children still living at home, 16.8% were married with no children, 10.3% were single with no children, and 4.7% were single with children. Three percent (2.8%) indicated having other types of household arrangements.

Income

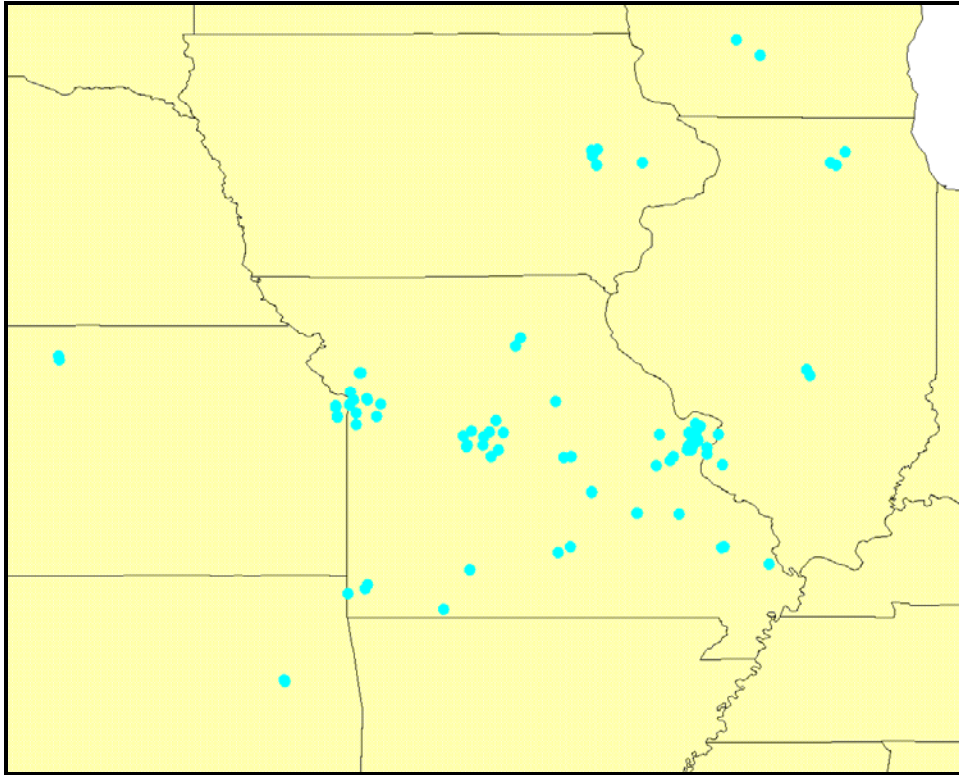
Forty-one percent (41.1%) of visitors to DSHS reported an annual household income of between \$25,000 and \$50,000. Twenty-seven percent (26.7%) indicated an annual household income of between \$50,000 and \$75,000. Over one-fifth (23.3%) of visitors indicated an annual household income of over \$75,000, while 8.9% of visitors indicated an income of less than \$25,000.

Ethnic Origin

Almost 100% (99.1%) of the visitors to DSHS indicated being White, while less than 1% (0.9%) indicated an “other” ethnic origin.

Residence

Most (60.7%) of the visitors to DSHS were from Missouri with the rest (39.3%) of visitors coming from other states, including Illinois (6.5%), Kansas (5.6%), and Iowa (4.7%). The majority (36.6%) of Missouri visitors were from non-metropolitan areas, but 33.8% were from the St. Louis Metropolitan Statistical Area (MSA) (the St. Louis MSA includes those visitors from Illinois that fall within St. Louis’ MSA).

Figure 1. Residence of DSHS Visitors by Zip Code

Twenty-three percent (22.5%) were from the Kansas City MSA (the Kansas City MSA includes those visitors from Kansas who fall within Kansas City's MSA). Figure 1 shows the residence of visitors by zip code.

USE PATTERNS

Trip Characteristics

Based on zip code data, the majority (56.1%) of visitors to DSHS traveled more than a day's drive to visit the site (a day's drive is defined as 150 miles or less, not exceeding 300 miles round trip). The rest (43.9%) traveled less than 150 miles. The average number of miles visitors traveled to DSHS was 266.6 miles while the median number of miles visitors traveled was 182, indicating that

half of the visitors traveled more than 182 miles and half traveled less than 182 miles.

Visit Characteristics

Ninety-five percent (94.6%) of the visitors to DSHS were first time visitors, with only 5.4% of the visitors being repeat visitors. The average number of times repeat visitors reported visiting DSHS within the past year was 1.2 times.

Eighty percent (79.5%) of the visitors to DSHS during the study period reported staying overnight during their visit, with one-fifth (20.5%) indicating they were not staying overnight. Of those staying overnight during their visit, the majority (62.1%) of the visitors indicated they

were staying in nearby bed and breakfast facilities, 18.4% indicated they were staying in other nearby lodging facilities, 14.9% indicated they were staying in a nearby campground, and 4.6% indicated staying with friends or relatives.

Of those reporting overnight stays, 43.9% stayed one night, 49.1% stayed two nights, and 7.0% stayed three nights. The average stay for overnight visitors was 1.6 nights. The median number of nights visitors stayed was two, indicating that half of the visitors stayed less than two nights and half stayed more than two nights.

Seventy-four percent (74.3%) of the visitors to DSHS visited the site with family. Nine percent (9.2%) visited with friends, while 6.4% visited with family and friends. Six percent (5.5%) of visitors visited the site alone, and 4.6% indicated visiting the site with a club or organized group. Visitors were also asked to report how many adults and children they brought with them in their personal vehicles. The average number of people visitors brought with them in their personal vehicles was 2.8 people.

DEUTSCHHEIM STATE HISTORIC SITE AS A RECREATIONAL DESTINATION

Respondents to the survey were asked to describe their visit to Deutschheim, whether it was their primary destination, one among many other destinations, or if they found out about the site after visiting other destinations in Hermann. Sixty percent (60.0%) of visitors agreed with the statement that they "...found out about Deutschheim State Historic Site while visiting the Hermann area." Over one-third (37.3%) of visitors indicated that Deutschheim was one destination among other destinations in the area, and

1.8% indicated that DSHS was their primary destination.

SATISFACTION MEASURES

Overall Satisfaction

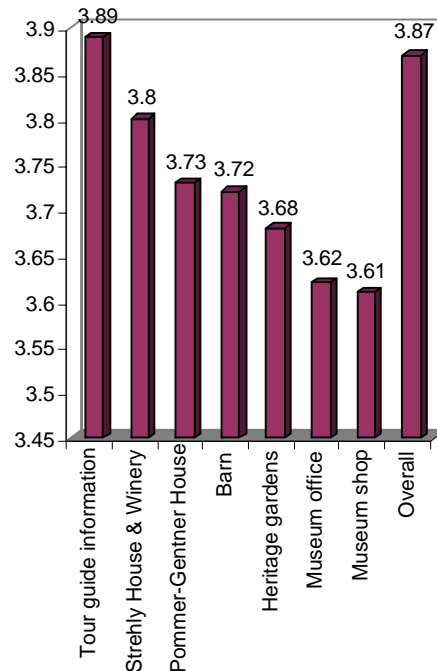
When asked about their overall satisfaction with their visit, no visitors reported being dissatisfied with their visit. One hundred percent of visitors were either satisfied (12.8%) or very satisfied (87.2%) with their visit. Visitors' mean score for overall satisfaction was 3.87, based on a 4.0 scale with 4 being very satisfied and 1 being very dissatisfied. No significant difference ($p < .05$) was found in overall satisfaction between weekend and weekday visitors. Because the sample size of repeat visitors was so small, a valid comparison of overall satisfaction between repeat and first time visitors could not be conducted.

Satisfaction with Site Features

Respondents were also asked to express how satisfied they were with seven site features. Figure 2 shows the site scores for the seven features and also for visitors' overall satisfaction. The satisfaction score for the information provided by the tour guide (3.89) was the highest, with the other scores ranging from 3.80 (Strehly House and Winery displays and exhibits) to the lowest of 3.61 (museum shop). A multiple linear regression analysis ($r^2 = .60$) of the seven site features showed that all the variables combined to account for about 60% of the overall satisfaction rating.

There were no differences in satisfaction ratings between weekend and weekday visitors. Because the sample size for repeat visitors was so small, valid

Figure 2. Satisfaction with DSHS Features



comparisons between repeat and first time visitors could not be conducted.

PERFORMANCE RATING

Visitors were asked to rate the site's performance of seven select site attributes: being free of litter and trash, upkeep of site facilities, having helpful and friendly staff, access for persons with disabilities, care of the natural resources, care of the cultural resources, and being safe. Performance scores were based on a 4.0 scale, with 4 being excellent and 1 being poor.

There were no differences between weekend and weekday visitors and their performance ratings. Because of the small sample size of repeat visitors, valid comparisons of performance ratings between first time and repeat visitors could not be conducted. A multiple linear regression analysis

($r^2=.45$) showed that the eight performance attributes combined to account for 45% of the variation in overall satisfaction.

IMPORTANCE-PERFORMANCE MEASURES

The Importance-Performance (I-P) Analysis approach was used to analyze questions 8 and 14. Mean scores were calculated for the responses of the two questions regarding visitors' ratings of the performance and importance of the seven select site 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 3 shows the Importance-Performance (I-P) Matrix. The crosshairs were set at the overall mean (3.68) of the performance scores and the overall mean (3.69) of the importance

Table 3. Mean Performance and Importance Scores for Site Attributes

Attribute	Mean Performance Score*	Mean Importance Score*
A. Being free of litter/trash	3.92	3.81
B. Upkeep of site facilities	3.74	3.77
C. Having helpful & friendly staff	3.95	3.83
D. Access for persons with disabilities	2.84	3.17
E. Care of natural resources	3.80	3.77
F. Care of cultural resources	3.83	3.81
G. Being safe	3.71	3.70

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

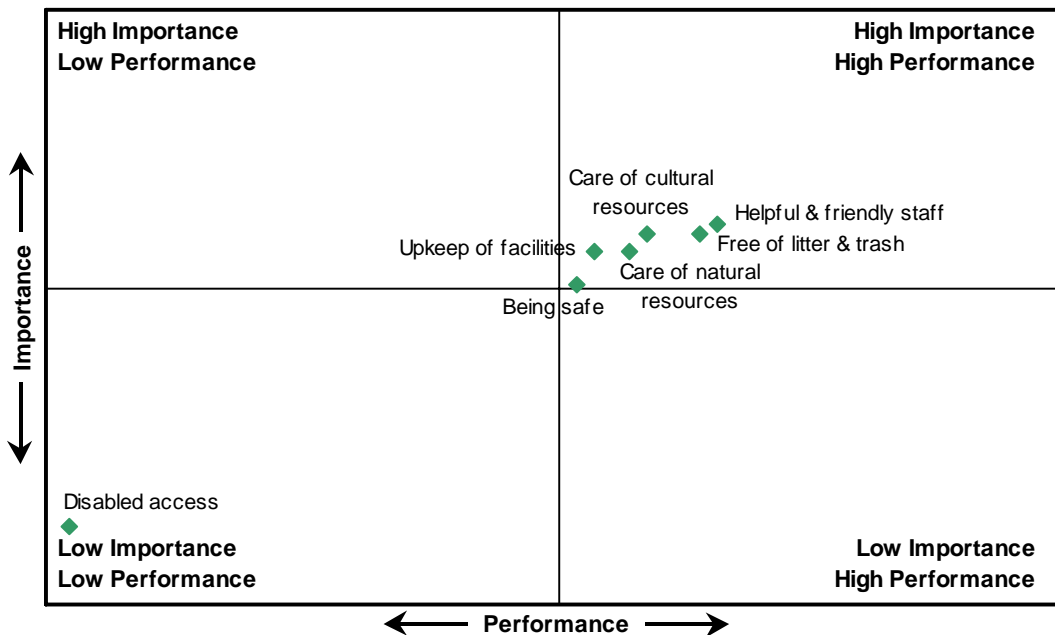
scores. The mean scores were plotted on the I-P Matrix to illustrate the relative performance and importance rating of the attributes by site visitors.

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 site 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.

DSHS was given high importance and performance ratings for having helpful and friendly staff, being free of litter and trash, caring for the cultural resources,

Figure 3. Importance-Performance Matrix of Site Attributes



caring for the natural resources, maintaining the facilities, and being safe. There were no characteristics that visitors felt were important but were low in performance. Disabled accessibility was the only characteristic given a lower performance rating, but visitors also gave this characteristic a low importance rating.

CROWDING

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

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

Visitors’ overall mean response to this question was 1.1. Ninety-three percent (92.8%) of the visitors to DSHS did not feel at all crowded (selected 1 on the scale) during their visit. The rest (7.2%) 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 12). No visitors answered this open-ended question. No significant differences in perceptions of crowding were found between weekend and weekday visitors.

Crowding and Satisfaction

There was no significant difference (p<.05) 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 3.88, and visitors who felt some degree of crowding had a mean overall satisfaction score of 3.75.

SAFETY CONCERNS OF VISITORS

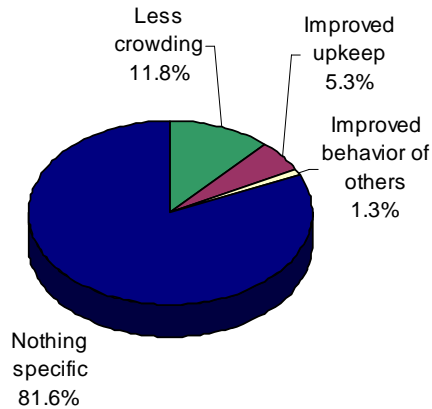
Only 31 (27.7%) visitors to DSHS did not rate the site as excellent for safety. Of those, 74.2% noted what influenced their rating. Their comments were grouped into categories and are listed in Table 4. Appendix F provides a list of the safety comments.

Visitors were also given a list of five attributes and were asked to indicate which of the five would most increase their feeling of safety at DSHS. Although instructed to select only one attribute, some visitors selected more than one; consequently, 76 responses were given by 74 visitors. Figure 4 shows the percentage of responses given by visitors. Most (81.6%) felt that nothing specific would increase their feeling of safety, but 11.8% felt that less crowding would most increase their feeling of safety.

Table 4. Comments from Visitors Not Rating DSHS Excellent on Safety

Category	Frequency	Percentage
1. Steep stairs/the number of steps	10	43.5%
2. Uneven flooring	4	14.4%
3. No reason	3	13.0%
4. Poor lighting	2	8.7%
5. Uneven sidewalks	2	8.7%
6. Other	2	8.7%
Total	23	100.0%

Figure 4. Percentage of Safety Attributes Chosen by Visitors



There were no significant difference in the rating of safety by weekend versus weekday visitors. There were no differences in safety ratings by socio-demographic characteristics. To determine if there were differences in perceptions of crowding, satisfaction with site features, and overall satisfaction, responses were divided into two groups based on how they rated DSHS on being safe. Group 1 included those who rated the site excellent, and Group 2 included those who rated the site as good, fair, or poor.

There were no significant differences ($p < .05$) in overall satisfaction or perceptions of crowding between Group 1 and Group 2. Group 1, however, had significantly ($p < .05$) higher satisfaction ratings for the seven site features, as well as significantly ($p < .05$) higher performance ratings for the seven site attributes.

VISITORS' SOURCES OF INFORMATION ABOUT MISSOURI STATE PARKS AND HISTORIC SITES

DSHS visitors were also asked to indicate how much information they receive from nine information sources regarding Deutschheim or other Missouri state parks and historic sites. Word of mouth from friends or relatives was the most frequently cited source of information, with 84.8% of the visitors responding to this question reporting they receive some or lots of information through this medium. The second most frequent source of information from which visitors receive information about Deutschheim or other Missouri state parks and historic sites is from brochures, pamphlets or other printed material. Eighty-two percent (82.1%) of visitors answering this question indicated receiving some or lots of information from this source. Visitors were also given the opportunity to indicate any other sources from which they receive information about Deutschheim or other Missouri state parks and historic sites. These other sources included information received at other visitor centers and tourism offices.

Visitors were also asked how often they use the Internet when planning a trip or vacation. Almost half (49.4%) of visitors indicated frequently using the Internet when planning a trip or vacation. Twenty percent (19.5%) of visitors always use the Internet, 13.8% rarely use it, and 17.2% never use it when planning a trip or vacation.

**HOW MUCH VISITORS VALUE
DEUTSCHHEIM STATE HISTORIC SITE**

For the first time, the researchers have attempted to investigate the value that visitors attribute to a site visit. Literature has stated that the value a visitor places on a recreational opportunity is often difficult to measure with confidence and accuracy (Bergstrom & Loomis, 1999; Manning, 1999). The researchers believe that our initial attempt at attributing a value perspective did not prove beneficial due to visitors interpreting the question to mean how much they would be willing to pay a day to visit DSHS rather than how valuable the site is to them.

Visitors were asked to place a value on the overall recreation opportunity offered in a visit to DSHS (question 17), and were given four choices: \$3.00 a day, \$5.00 a day, \$7.00 a day, or any other value. Forty-five percent (44.9%) of visitors responding to this question indicated a value of \$3.00 a day, while another 44.9% indicated \$5.00 a day, 7.1% indicated \$7.00 a day, and 3.1%

indicated some other value. Only two visitors indicated another value, both of whom reported a value of \$10.00 a day.

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 DSHS a better one (question 26). Nineteen percent (18.6%) of the total survey participants responded to this question with 21 comments. The comments and suggestions were listed and grouped by similarities into 3 categories for frequency and percentage calculations. The list of comments and suggestions is found in Appendix G. Table 5 lists the frequencies and percentages of the comments and suggestions by category. The majority (85.7%) of comments were general positive comments about the site and staff, such as: “Excellent presentation”, “Incredibly informed tour guide”, and “Very good job”.

Table 5. Frequency and Percentage of Comments and Suggestions from DSHS Visitors

Category	Frequency	Percent
1. General positive comments	18	85.7%
2. Comments regarding question 17	2	9.5%
3. Other	1	4.8%
Total	21	100.0%

Discussion

MANAGEMENT IMPLICATIONS

The results of this study provide relevant information concerning DSHS visitors. However, the results should be interpreted with caution. The surveys were collected only during the study period of July through December 2000; 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 site managers and planners, because much of the annual visitation occurs during this period.

Satisfaction Implications

Eighty-seven percent (87.2%) of DSHS visitors reported that they were very satisfied with their visit to the site. The high percentage of very satisfied visitors combined with their positive comments provide evidence that DSHS visitors are indeed satisfied with their site experience. The overall satisfaction score also provides a benchmark in which to compare overall satisfaction of DSHS visitors over a period of time.

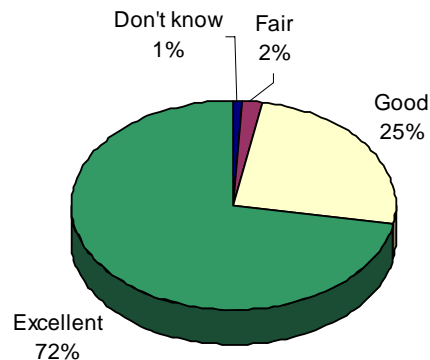
One cautionary note, however. It has been suggested that uniformly high levels of overall satisfaction can be of limited usefulness to recreation managers in understanding relationships between recreation opportunities and experiences, particularly because most visitors choose recreation opportunities in keeping with their tastes and preferences (Manning, 1999). In other words, visitors to DSHS may be visiting DSHS because it is the type of site they prefer, offering amenities and services

that correspond with their taste in recreational opportunities, consequently contributing to high overall satisfaction ratings. For this reason, the following comments are provided in order to furnish further insight into visitor satisfaction with services, facilities, and opportunities provided at DSHS.

Safety Implications

DSHS managers should be commended for providing a site in which visitors feel relatively safe. Only 27.7% of visitors did not give an excellent rating regarding safety, and the majority of those not giving an excellent rating gave a good rating instead (Figure 5). Safety was also given a "high importance, high performance" rating on the I-P Matrix. In fact, the majority (81.6%) of DSHS visitors indicated that nothing specific would increase their feeling of safety at DSHS. There were some visitors who did express safety concerns; however, examination of their safety comments

Figure 5. Safety Ratings of DSHS Visitors



indicates that most visitors' safety concerns are largely out of management control due to the nature of the historic site itself (i.e., the stairs, uneven flooring and sidewalks, etc.).

Performance Implications

DSHS managers should also be commended for the high performance and importance ratings given to site attributes. The only characteristic given a low performance rating by visitors was disabled accessibility. Again, however, managing for disabled accessibility is somewhat difficult due to the nature of the historic site.

Conclusion

DSHS visitors are very satisfied with DSHS, as evidenced by their high satisfaction ratings. DSHS visitors also gave high performance ratings to six of the seven site attributes, felt relatively safe, and did not feel very crowded. However, the results of the present study are baseline data only. Continued monitoring can validate the positive results of this study. On-site surveys provide a cost effective and timely vehicle with which to monitor management effectiveness and uncover potential problems.

RESEARCH RECOMMENDATIONS

The results of the present study serve as baseline visitor information of DSHS. The frequency and percentage calculations of survey responses provide useful information concerning socio-demographic characteristics, use patterns, and satisfaction of DSHS visitors. In addition, the "sub-analysis" of data is important in identifying implications for management of DSHS.

(The sub-analysis in the present study included comparisons using Chi-square and ANOVA between selected groups, multiple linear regression, and the Importance-Performance 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 site.

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

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 through December 2000. Therefore, user studies at DSHS and other parks and historic sites might be conducted during other seasons for comparison between seasonal visitors.

**METHODOLOGY RECOMMENDATIONS
AND CONSIDERATIONS FOR DSHS AND
OTHER PARKS**

The on-site questionnaire and the methodology of this study were designed to be applicable to other Missouri state parks and historic sites. 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 Administration

The prize package drawing and the one-page questionnaire undoubtedly helped

attain the high response rate in the present study. Continued use of the one-page questionnaire and the prize package drawing is suggested. Another recommendation would be to have self-addressed, stamped envelopes available in future surveys to offer to visitors 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.

References

- Alexander, G.D. (1993). Increasing customer satisfaction while cutting budgets. Proceedings of the 1993 Northeastern Recreation Research Symposium, Saratoga Springs, New York, 167-173.
- Armistead, J., & Ramthun, R. (1995). Influences on perceived crowding and satisfaction on the Blue Ridge Parkway. In Proceedings of the 1995 Northeastern Recreation Research Symposium (Forest Service General Technical Report NE-128, pp. 93-95). Saratoga Springs, NY: Department of Agriculture, Forest Service, Northeastern Forest Experiment Station.
- Bergstrom, J.C. & Loomis, J.B. (1999). Economic Dimensions of Ecosystem Management. In H.K. Cordell & J.C. Bergstrom (Eds.), Integrating social sciences with ecosystem management: Human dimensions in assessment, policy, and management (pp. 181-193). Champaign, IL: Sagamore Publishing.
- Brown, P.J., Dyer, A., & Whaley, R.S. (1973). Recreation research – so what. Journal of Leisure Research, 12 (3), 229-241.
- Fink, D.A. (1997). Meramec State Park user survey. Unpublished master's research project, University of Missouri, Columbia.
- Folz, D.H. (1996). Survey research for public administration. Thousand Oaks, CA: Sage Publications.
- Manning, R.E. (1999). Studies in outdoor recreation: Search and research for satisfaction. Corvallis, OR: Oregon State University Press.
- Missouri Department of Natural Resources (DNR) (2000). Missouri state parks attendance data. [Online]. Available: <http://www.mostateparks.com/attendance/>.
- Peine, J.D., Jones, R.E., English, M.R., & Wallace, S.E. (1999). Contributions of sociology to ecosystem management. In H.K. Cordell & J.C. Bergstrom (Eds.), Integrating social sciences with ecosystem management: Human dimensions in assessment, policy, and management (pp. 74-99). Champaign, IL: Sagamore Publishing.
- Statistical Package for the Social Sciences (SPSS) (1996). Version 6.1 [Computer software]. Chicago: SPSS.

Appendix A. Deutschheim State Historic Site Visitor Survey



Deutschheim State Historic Site



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

1. **Is this your first visit to Deutschheim State Historic Site?** (Check only one box.)

yes

no **If no, about how many times have you visited the site in the past?** _____

2. **During this visit to Deutschheim State Historic Site, are you staying overnight nearby?**

yes **If yes, how many nights are you staying?** _____

no (If no, skip to question 4.)

3. **If staying overnight, where are you staying?** (Check only one box.)

nearby lodging facilities friends/relatives
 nearby bed & breakfast other (Please specify.)
 nearby campground _____

4. **Who did you come to Deutschheim State Historic Site with during this visit?** (Check only one box.)

I came alone family & friends club or organized group
 family friends other (Please specify.)

5. **Please indicate the number of people you brought with you in your personal vehicle today.** adults _____ children _____

6. **Which best describes your visit to Deutschheim State Historic Site?** (Check only one box.)

Deutschheim State Historic Site was the primary purpose of my visit
 Deutschheim State Historic Site is one among other destinations in the area

I found out about Deutschheim State Historic Site while visiting the Hermann area

other (Please specify.) _____

7. **How satisfied are you with each of the following at Deutschheim State Historic Site?** (Check one box for each feature.)

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Don't Know
a. Strehly House & Winery displays & exhibits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. Barn displays & exhibits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. Heritage Gardens	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. Pommer-Gentner House displays & exhibits	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. Museum office	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. Museum shop	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. Information provided by tour guide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

8. **How do you rate Deutschheim State Historic Site 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="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. upkeep of site facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. having helpful & friendly staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. access for persons with disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. caring for the natural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. caring for the cultural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. being safe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. **If you did not rate the site as excellent on being safe, what influenced your rating?** _____

10. **Which of the following would most increase your feeling of being safe at Deutschheim State Historic Site?** (Check only one box.)

less crowding nothing specific
 improved upkeep of facilities other (Please specify.)
 improved behavior of others _____

11. **During this visit to Deutschheim State Historic Site, how crowded did you feel?** (Circle one number.)

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

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



PLEASE TURN SURVEY OVER.



13. Overall, how satisfied are you with this visit to Deutschheim State Historic Site? (Check only one box.)

Very Satisfied Satisfied Dissatisfied Very Dissatisfied

14. When visiting any state park or historic site, how important is each of these items to you? (Check only one box for each feature.)

	Very Important	Important	Unimportant	Very Unimportant	Don't Know
a. being free of litter & trash	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. upkeep of site facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. having helpful & friendly staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. access for persons with disabilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. care of natural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. care of cultural resources	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. being safe	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. How do you typically receive information about Deutschheim State Historic Site or other Missouri state parks and historic sites? Please indicate how much information you receive from the following sources:

	None	Some	Lots	Don't Know
a. Internet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. magazines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. newspapers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. direct mail	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. brochures, pamphlets, or other printed material	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. radio	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. television	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. word of mouth, relatives, friends, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. other (Please specify.) _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. If you have access to the Internet, how often do you use the Internet when planning a trip or vacation? (Check only one box.)

never frequently
 rarely always

17. What is the value of Missouri state parks and historic sites? We are often asked this question. As you know, Missouri state parks and historic sites are funded through a one-tenth cent Parks and Soils sales tax approved by the voters. We are interested in what you think. What value would you place on the overall recreation opportunity offered in a visit to this site?

\$3 per day \$5 per day \$7 per day other \$ _____

18. What is your age? _____ 19. Gender? female male

20. 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 advanced graduate degree

21. What is your primary occupation? (Check only one box.)

homemaker professional/technical
 self-employed retired
 service-based employee student
 manufacturing-based employee other (Please specify.) _____

22. What is your household composition? (Check only one box.)

single with no children married with children living at home
 single with children married with children grown
 married with no children other (Please specify.) _____

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

African American Asian White
 American Indian Hispanic other (Please specify.) _____

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

25. What is your annual household income? (Check only one box.)

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

26. Please write any additional comments about your site visit or suggestions on how the Missouri Department of Natural Resources can make your experience at Deutschheim State Historic Site a better one.

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

Appendix B. Survey Protocol

Protocol for Deutschheim State Historic Site 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 Deutschheim State Historic Site.

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 Deutschheim State Historic Site. 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 concession 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; your survey responses will be anonymous. The drawing will be held January 2, 2001. Winners will be notified by telephone or by mail. Redemption of gift certificates is based on dates of availability through August 31, 2001.

Name: _____

Address: _____

Phone #: () _____

Would you be interested in receiving a subscription to *Missouri Resources* magazine, a quarterly magazine free to Missouri residents? yes no

Appendix D. Observation Survey

Date _____ Day of Week _____ Tour _____
 Weather _____ Temperature _____ Surveyor _____

	Survey #	# of Adults	# of Children
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			

Appendix E. Responses to Survey Questions

Deutschheim State Historic Site Visitor Survey

1. Is this your first visit to Deutschheim State Historic Site? (n=112)

yes	94.6%
no	5.4%

If no, about how many times have you visited the site in the past year? (n=6)
The responses from this open-ended question were grouped into the following 2 categories:

1	83.3%
2	16.7%

The average # of times repeat visitors visited the site in the past year was 1.2 times.

2. During this visit to Deutschheim State Historic Site, are you staying overnight nearby? (n=112)

yes	79.5%
no	20.5%

If yes, how many nights are you staying? (n=57)

The responses from this open-ended question were grouped into the following 3 categories:

1	43.9%
2	49.1%
3	7.0%

The average number of nights respondents stayed overnight was 1.6 nights.

3. If staying overnight, where are you staying? (n=87)

nearby lodging facilities	18.4%
nearby bed and breakfast	62.1%
nearby campground	14.9%
friends/relatives	4.6%
other	0.0%

4. Who did you come to Deutschheim State Historic Site with during this visit? (n=109)

alone	5.5%	family & friends	6.4%	club or organized group	4.6%
family	74.3%	friends	9.2%	other	0.0%

5. Please indicate the number of people you brought with you in your personal vehicle. (n=107)

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

adults: 1	8.4%	children: 1	75.0%
2	72.0%	2	25.0%
3	2.8%		
4	9.3%		
5+	7.4%		

The average number of people visitors brought with them was 2.8.

6. Which best describes your visit to Deutschheim State Historic Site? (n=110)

Deutschheim State Historic Site was the primary purpose of my visit	1.8%
Deutschheim State Historic Site is one among other destinations in the area	37.3%
I found out about Deutschheim State Historic Site while visiting the Hermann area	60.0%
other	0.9%

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 & 13); 4 = excellent, 3 = good, 2 = fair, and 1 = poor (Q. 8); and 4 = very important, 3 = important, 2 = unimportant, and 1 = very unimportant (Q. 14). The mean score is listed in parenthesis following each feature.

7. How satisfied are you with each of the following in Deutschheim State Historic Site?

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	Don't Know	
a. Strehly House & Winery displays & exhibits (3.80)	79.8%	20.2%	0.0%	0.0%	0.0%	n=109
b. Barn displays & exhibits (3.72)	70.0%	27.3%	0.0%	0.0%	2.7%	n=110
c. Heritage Gardens (3.68)	65.7%	31.4%	0.0%	0.0%	2.9%	n=102
d. Pommer-Gentner House displays & exhibits (3.73)	73.1%	26.9%	0.0%	0.0%	0.0%	n=108
e. Museum office (3.62)	62.6%	35.5%	0.9%	0.0%	0.9%	n=107
f. Museum shop (3.61)	60.6%	38.5%	0.0%	0.0%	0.9%	n=109
g. Information provided by tour guide (3.89)	89.0%	11.0%	0.0%	0.0%	0.0%	n=109

8. How do you rate Deutschheim State Historic Site on each of the following?

	Excellent	Good	Fair	Poor	Don't Know	
a. being free of litter/trash (3.92)	92.0%	8.0%	0.0%	0.0%	0.0%	n=112
b. upkeep of site facilities (3.74)	74.5%	23.6%	0.9%	0.0%	0.0%	n=110
c. having a helpful/friendly staff (3.95)	93.7%	5.4%	0.9%	0.0%	0.0%	n=111
d. access for persons with disabilities (2.84)	28.9%	11.3%	12.4%	13.4%	34.0%	n=97
e. care for the natural resources (3.80)	77.1%	17.4%	0.9%	0.0%	4.6%	n=109
f. care for the cultural resources (3.83)	82.9%	17.1%	0.0%	0.0%	0.0%	n=111
g. being safe (3.71)	72.3%	25.0%	1.8%	0.0%	0.9%	n=112

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

23 visitors (74.2% of those who did not rate the site as excellent on being safe) responded to this question. The 23 responses were divided into 6 categories. Frequencies and percentages of responses in each category are listed.

	<u>Frequency</u>	<u>Percent</u>
1. Steep stairs/number of steps	10	43.5%
2. Uneven floors	4	17.4%
3. No reason	3	13.0%
4. Poor lighting	2	8.7%
5. Uneven sidewalks	2	8.7%
6. Other	<u>2</u>	<u>8.7%</u>
Total	23	100.0%

10. Which of the following would most increase your feeling of being safe at Deutschheim State Historic Site?

76 responses were given by 74 visitors.

	<u>Frequency</u>	<u>Percent</u>
1. Less crowding	9	11.8%
2. Improved upkeep of facilities	4	5.3%
3. Improved behavior of others	1	1.3%
4. Nothing specific	62	81.6%
5. Other	<u>0</u>	<u>0.0%</u>
Total	76	100.0%

11. During this visit, how crowded did you feel? (n=111)

On a scale of 1-9, with 1 = Not at all crowded and 9 = Extremely crowded, the mean response was 1.1.

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

There were no visitors who answered this open-ended question.

13. Overall, how satisfied are you with this visit to Deutschheim State Historic Site?

	Very Satisfied	Satisfied	Dissatisfied	Very Dissatisfied	
(Mean score = 3.87)	87.2%	12.8%	0.0%	0.0%	n=109

14. When visiting any state park or historic site, how important is each of these items to you?

	Very Important	Important	Unimportant	Very Unimportant	Don't Know	
a. being free of litter/trash (3.81)	81.3%	18.7%	0.0%	0.0%	0.0%	n=107
b. upkeep of site facilities (3.77)	77.4%	22.6%	0.0%	0.0%	0.0%	n=106
c. having a helpful/friendly staff (3.83)	82.4%	17.1%	0.0%	0.0%	0.0%	n=105
d. access for disabled persons (3.17)	31.4%	38.2%	14.7%	1.0%	14.7%	n=102
e. care for the natural resources (3.77)	76.9%	23.1%	0.0%	0.0%	0.0%	n=104
f. care for the cultural resources (3.81)	81.3%	18.7%	0.0%	0.0%	0.0%	n=107
g. being safe (3.70)	68.2%	29.9%	0.0%	0.0%	1.9%	n=107

15. How do you typically receive information about Deutschheim State Historic Site or other Missouri state parks and historic sites? Please indicate how much information you receive from the following sources:

	None	Some	Lots	Don't know	
a. Internet	40.2%	39.1%	15.2%	5.4%	n=92
b. magazines	24.7%	57.6%	11.8%	5.9%	n=85
c. newspapers	41.7%	40.5%	13.1%	4.8%	n=84
d. direct mail	66.3%	24.1%	2.4%	7.2%	n=83
e. brochures, pamphlets, or other printed material	14.7%	45.3%	36.8%	3.2%	n=95
f. radio	70.0%	21.3%	2.5%	6.3%	n=80
g. television	58.0%	34.6%	2.5%	4.9%	n=81
h. word of mouth, relatives, friends, etc.	12.0%	48.9%	35.9%	3.3%	n=92
i. other (<i>Please specify.</i>)	0.0%	66.7%	33.3%	0.0%	n=3

4 respondents indicated an other source from which they receive information about Deutschheim or other Missouri state parks and historic sites, and their responses are as follows:

AAA Club.
Bed & breakfast.

Tourism office.
Visitor center.

16. If you have access to the Internet, how often do you use the Internet when planning a trip or vacation? (n=87)

never	17.2%	frequently	49.4%
rarely	13.8%	always	19.5%

17. What is the value of Missouri state parks and historic sites? We are often asked this question. As you know, Missouri state parks and historic sites are funded through a one-tenth cent Parks and Soils sales tax approved by the voters. We are interested in what you think. What value would you place on the overall recreation opportunity offered in a visit to this site? (n=98)

\$3 per day	44.9%	\$7 per day	7.1%
\$5 per day	44.9%	other	3.1%

2 visitors indicated an other value on the overall recreation opportunity offered at DSHS, both of whom gave a value of \$10.00 a day.

18. What is your age? (n=104)

Responses were divided into the following 4 categories:

18-34	17.3%
35-54	44.2%
55-64	27.0%
65-85	11.5%

(Average age = 50.0)

19. Gender? (n=103)

Female	62.1%
Male	37.9%

20. What is the highest level of education you have completed? (n=107)

grade school	0.0%	vocational school	4.7%	graduate of 4-year college	29.0%
high school	17.8%	some college	31.8%	advanced graduate degree	16.8%

21. What is your primary occupation? (n=101)

homemaker	8.7%	professional/technical	45.6%
self-employed	8.7%	retired	19.4%
service-based	11.7%	student	0.0%
manufacturing-based	2.9%	other	2.9%

22. What is your household composition? (n=105)

single with no children	10.3%	married with children living at home	21.5%
single with children	4.7%	married with children grown	43.9%
married with no children	16.8%	other	2.8%

23. What is your ethnic origin? (n=108)

African American	0.0%	Asian	0.0%	White	99.1%
American Indian	0.0%	Hispanic	0.0%	Other	0.9%

24. What is your 5-digit zip code (or country of residence, if you live outside the U.S.)? (n=107)

The states with the highest percentages of respondents were:

- Missouri (60.7%)
- Illinois (6.5%)
- Kansas (5.6%)
- Iowa (4.7%)

25. What is your annual household income? (n=90)

less than \$25,000	8.9%	\$50,001 - \$75,000	26.7%
\$25,000 - \$50,000	41.1%	over \$75,000	23.3%

26. Please write any additional comments about your site visit or suggestions on how the Missouri Department of Natural Resources can make your experience in Deutschheim State Historic Site a better one.

21 of the 113 visitors (18.6%) responded to this question. Frequencies and percentages of responses in 3 category are listed.

	<u>Frequency</u>	<u>Percent</u>
1. General positive comments	18	85.7%
2. Comments regarding question 17	2	9.5%
3. Other	<u>1</u>	<u>4.8%</u>
Total	21	100.0%

Appendix F. List of Responses for Safety Concerns (Q 9)

Responses to Question # 9

If you did not rate the site as excellent on being safe (Question 8, letter g.), what influenced your rating?

Steep stairs/number of steps

- Lots of stairs.
- Lots of steps may prevent handicapped people from enjoying this site.
- Lots of steps.
- Mostly the steps.
- Some things are part of construction of the time, i.e. lot of steps.
- Stairs a problem for husband; can't be helped and keep history.
- Stairs.
- Steep steps, uneven walks.
- Steps and uneven flooring, which are authentic.
- Steps.

Uneven flooring

- Steps and uneven flooring, which are authentic.
- The floors.
- Uneven floors and poor lighting.
- Uneven floors but good instruction on safety.

No reason

- I felt perfectly safe; please, no intrusive additions of railings, etc.
- I seldom give excellent ratings. Good is a good rating.
- Just did not particularly notice.

Poor lighting

- Poor lighting.
- Uneven floors and poor lighting.

Uneven sidewalks

- Steep steps, uneven walks.
- Uneven sidewalks.

Other

- Don't know what is done to prevent collapse, etc.
- There is a place at the Strehly House where it would be easy to hit your head as you are headed to the back yard.

Appendix G. List of Responses for Additional Comments (Q 26)

Responses to Question #26

Please write any additional comments about your site visit or suggestions on how the Missouri Department of Natural Resources can make your experience at Deutschheim State Historic Site a better one.

General positive comments

- Enjoyed.
- Excellent presentation.
- Excellent.
- Excellent.
- Great work of restoration and hope that work will continue before further loss.
- I really thought our tour guide Cheryl was very knowledgeable about this site.
- Keep on keeping on.
- Lovely presentations. Great guide -- he really loves his work.
- Really was very informative and we both enjoyed it a lot.
- Steve Sitton, great guide. Thank you.
- Thanks -- incredibly informed tour guide.
- The tour guide was very knowledgeable and very nice.
- The town was excellent. Our guide, Cheryl Hoffman, was great -- very knowledgeable, friendly, and truly cared about the sites and sharing the culture. Thanks!
- Thorough presentation, explanation. Pristine quality of some displays.
- Very good job.
- Very informative. Good tour!!
- Very interesting.
- Very interesting.

Comments regarding question 17

- Priceless.
- That's an arbitrary value. Actually, historically, it's invaluable. A treasure.

Other

- More time to look around.