

National Park Service
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Natural Resource Stewardship and Science

Joshua Tree National Park Visitor Study

Fall 2010



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Joshua Tree National Park Visitor Study

Fall 2010

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Visitor Services Project
Park Studies Unit
University of Idaho
Moscow, ID 83844-1139

October 2011

U.S. Department of the Interior
National Park Service
Natural Resource Stewardship and Science
Fort Collins, Colorado

The National Park Service Natural Resource Stewardship and Science publishes a range of reports that address natural resource topics and applicability to a broad audience in the National Park Service and others in natural resource management, including scientists, conservation and environmental constituencies, and the public.

Data in this report were collected and analyzed using methods based on established, peer-reviewed protocols and were analyzed and interpreted within the guidelines of the protocols.

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Please cite this publication as:

Jette, C., A. Blotkamp, Y.Le., S. J. Hollenhorst. 2011. Joshua Tree National Park: Winter 2010. National Park Service, Fort Collins, Colorado.

Contents

Executive Summary	v
Acknowledgements	vii
About the Authors	vii
Introduction	1
Organization of the Report	1
Presentation of the Results	2
Methods.....	3
Survey Design and Procedures.....	3
Sample size and sampling plan	3
Questionnaire design	3
Survey procedure.....	4
Data analysis.....	4
Limitations	5
Special conditions	5
Checking non-response bias.....	6
Results	7
Group and Visitor Characteristics	7
Visitor group size.....	7
Visitor group type	7
Visitors with organized groups	8
United States visitors by state of residence	10
Visitors from California and adjacent states by county of residence	11
International visitors by country of residence	12
Number of lifetime visits	13
Visitor age	14
Language used for speaking and reading.....	15
Visitors with physical conditions	16
Awareness of park issues	17
Trip/Visit Characteristics and Preferences	18
Information sources prior to visit	18
Information sources for future visit	21
Park as destination.....	22
Primary reason for visiting the park area	23
Entrance used	24
Number of vehicles used to arrive at the park.....	25
Number of park entries.....	25
Overnight stays in the park and area	26
Accommodations used inside the park	28
Accommodations used outside the park	28
Campsite reservations in the park.....	29
Length of stay in park.....	30
Order of sites visited in the park.....	31
Sites visited in the park	32
Activities on this visit	35
Primary activity.....	36
Rock climbing.....	37
Awareness of and learning about park issues	39

CONTENTS (continued)

Ratings of Services, Facilities, Attributes, Resources and Elements 40
 Information services and facilities used 40
 Importance ratings of information services and facilities 41
 Quality ratings of information services and facilities 43
 Mean scores of importance and quality ratings of information services and facilities 45
 Visitor services and facilities used 46
 Importance ratings of visitor services and facilities 47
 Quality ratings of visitor services and facilities 49
 Mean scores of importance and quality ratings of visitor services and facilities 51
 Importance of services to enjoyment of park visit 52
 Importance of protecting park attributes, resources, and experiences 55
 Importance of Joshua trees 57
 Opinions about safety 58
Expenditures 61
 Total expenditures inside and outside the park 61
 Number of adults covered by expenditures 62
 Number of children covered by expenditures 62
 Expenditures inside the park 63
 Expenditures outside the park 67
Overall Quality 73
Visitor Comment Summaries 74
 Planning for the future 74
 Additional comments 77
Visitor Comments 79
Appendix 1: The Questionnaire 81
Appendix 2: Additional Analysis 83
Appendix 3: Decision Rules for Checking Non-response Bias 84
Appendix 4: Visitor Services Project Publications 86

Executive Summary

This visitor study report profiles a systematic random sample of Joshua Tree National Park (NP) visitors during November 16-22, 2010. A total of 767 questionnaires were distributed to visitor groups. Of those, 502 questionnaires were returned, resulting in a 65.5% response rate.

Group size and type	Fifty-two percent of visitor groups consisted of two people and 23% were in groups of three or four. Fifty-four percent of visitor groups consisted of family groups.
State or country of residence	United States visitors were from 45 states and Washington, D.C. and comprised 81% of total visitation during the survey period, with 62% from California. International visitors were from 19 countries and comprised 19% of total visitation.
Frequency of visits	Fifty-six percent of visitors were visiting the park for the first time in their lifetime. Twenty-two percent had visited five or more times in their lifetime.
Age	Twenty-eight percent of visitors were 56 to 70 years of age, 25% were 26 to 40 years old, 11% were 15 years or younger, and 6% were 71 years or older.
Physical conditions	Six percent of visitor groups had members with physical conditions affecting their ability to access or participate in activities and services.
Awareness of park prior to visit	Thirty-eight percent of visitor groups were aware of the Congressionally designated wilderness in Joshua Tree NP. Eighteen percent of visitor groups visited the Congressionally designated wilderness areas during this visit to the park.
Information sources	Most visitor groups (87%) obtained information about the park prior to their visit from the park website (55%), and most (93%) received the information they needed. Seventy-two percent of visitor groups would use the park website to obtain information for a future visit.
How visit fit into travel plans	For 49% of visitor groups, the park was one of several destinations, and for 43%, the park was the primary destination.
Primary reason for visiting the area	Six percent of visitor groups were residents of the area (Yucca Valley, Joshua Tree, Twentynine Palms). The most common primary reason for visiting the park area among non-resident visitor groups was to visit the park (75%).
Overnight stays in the park and area	Fifty-seven percent of visitor groups stayed overnight in Joshua Tree NP or in the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms), of which 35% stayed two nights inside the park and 33% spent one night in the surrounding area.
Accommodations	Seventy-two percent of visitor groups tent camped in a developed campground in the park, while 36% of visitor groups were RV/trailer camping outside the park in the surrounding area.

Executive Summary (continued)

Length of visit in park	Of the visitor groups that spent less than 24 hours, the average length of visit was 5.5 hours. Of those that spent more than 24 hours, the average length of visit was 4.5 days. The average length of visit for all visitors was 2 days.
Sites visited in the park	The most commonly visited sites in the park were Jumbo Rocks area (55%), Hidden Valley (50%), and Joshua Tree Visitor Center (50%). The site visitor groups most often visited first was Joshua Tree Visitor Center (81%).
Activities on this visit	The most common activities were sightseeing (63%), walking self-guided nature trails (62%), visiting visitor centers (59%), and dayhiking (53%). For 27% of visitor groups the most important activity was dayhiking, and for 23% the primary activity was sightseeing.
Rock climbing	Twenty-nine percent of visitor groups participated in rock climbing activities; of these, 51% climbed on this or past visits in the park.
Park issues learned about	Sixty-three percent of visitor groups were aware that off-road vehicles damaged the desert, while 57% were aware of the dark night sky issue. Thirty-six percent learned about air pollution impacts during their visit.
Information services and facilities	The information services and facilities most commonly used by visitor groups were the park brochure/map (80%), assistance from visitor center staff (71%), and the trailside exhibits/signs (50%).
Visitor services and facilities	The visitor services and facilities most commonly used by visitor groups were paved roads (86%), restrooms (81%), and directional road signs inside park (81%).
Protecting park attributes, resources, and experiences	Views without development (90%), clean air (89%), and natural quiet/sounds of nature (87%) received the highest combined proportions of “extremely important” and “very important” ratings regarding the protection of park attributes, resources, and experiences.
Importance of Joshua trees	Twenty-one percent of visitor groups were aware that Joshua Trees are declining and that climate change may be a direct cause. The presence of healthy Joshua tree populations to the future of Joshua Tree NP was “extremely important” or “very important” to 86% of visitor groups.
Opinions about safety	Most visitor groups (80%) felt “very safe” from crime, 59% felt “very safe” from accidents, and 69% felt their personal property was “very safe” from crime.
Expenditures	The average visitor group expenditure (inside and outside the park in the surrounding area) was \$387. The median group expenditure (50% of groups spent more and 50% of groups spent less) was \$150, and the average total expenditure per person (per capita) was \$128.
Overall quality	Most visitor groups (96%) rated the overall quality of facilities, services, and recreational opportunities at Joshua Tree NP as “very good” or “good.” One percent of groups rated the overall quality as “very poor” or “poor.”

For more information about the Visitor Services Project, please contact the Park Studies Unit at the University of Idaho at (208) 885-7863 or the following website <http://www.psu.uidaho.edu>.

Acknowledgements

We thank Dr. Yen Le for overseeing the fieldwork, Cynthia Mika and the staff and volunteers of Joshua Tree National Park for assisting with the survey, and David Vollmer and Matthew Strawn for data processing.

About the Authors

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Introduction

This report describes the results of a visitor study at Joshua Tree National Park (NP) near Twentynine Palms, CA, conducted November 16-22, 2010 by the National Park Service (NPS) Visitor Services Project (VSP), part of the Park Studies Unit (PSU) at the University of Idaho.

The National Park Service website for Joshua Tree NP, describes the park: “Viewed from the road, this desert park only hints at its vitality. Closer examination reveals a fascinating variety of plants and animals that make their home in this land shaped by strong winds, unpredictable torrents of rain, and climatic extremes. Dark night skies, a rich cultural history, and surreal geologic features add to the attraction of this place” (<http://www.nps.gov/jotr>, retrieved June, 2011).

Organization of the Report

This report is organized into three sections.

Section 1: **Methods**. This section discusses the procedures, limitations, and special conditions that may affect the study results.

Section 2: **Results**. This section provides summary for each question in the questionnaire and includes visitor comments to open-ended questions. The presentation of the results of this study does not follow the order of questions in the questionnaire.

Section 3: **Appendices**

Appendix 1: *The Questionnaire*. A copy of the questionnaire distributed to visitor groups.

Appendix 2: *Additional Analysis*. A list of sample questions for cross-references and cross comparisons. Comparisons can be analyzed within a park or between parks, Results of additional analyses are not included in this report.

Appendix 3: *Decision rules for checking non-response bias*. An explanation of how the non-response bias was determined.

Appendix 4: *Visitor Services Project Publications*: A complete list by the VSP. Copies of these reports can be obtained by visiting the website: www.psu.uidaho.edu/reports.htm or by contacting the VSP office at (208) 885-7863.

Presentation of the Results

Results are represented in the form of graphs (see example below), scatter plots, pie charts, tables or text.

SAMPLE

1. The figure title describes the graph’s information.
2. Listed above the graph, the “N” shows the number of individuals or visitor groups responding to the question. If “N” is less than 30, “CAUTION!” is shown on the graph to indicate the results may be unreliable.

* appears when the total percentages do not equal 100 due to rounding.

** appears when total percentages do not equal 100 because visitors could select more than one answer choice.

3. Vertical information describes the response categories.
4. Horizontal information shows the number or proportions of responses in each category.
5. In most graphs, percentages provide additional information.

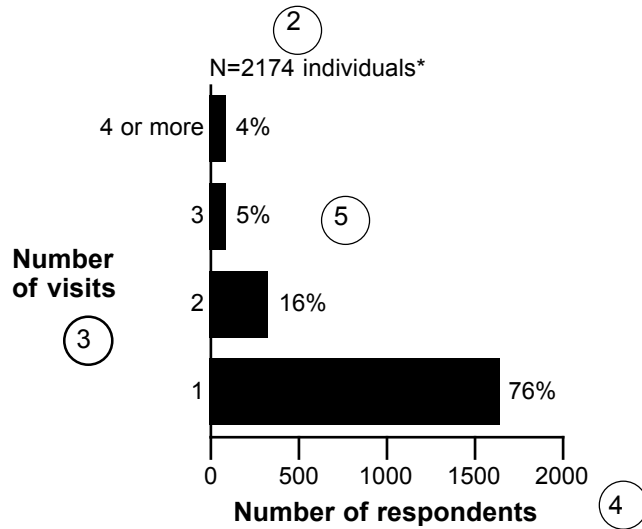


Figure 14. Number of visits to the park in past 12 months

Methods

Survey Design and Procedures

Sample size and sampling plan

All VSP questionnaires follow design principles outlined in Don A. Dillman's book *Mail and Internet Surveys: The Tailored Design Method* (2007). Using this method, the sample size was calculated based on the park visitation statistics of previous years.

Brief interviews were conducted with a systematic, random sample of visitor groups that arrived at eight sites during November 16-22, 2010. Visitors were surveyed between the hours of 7 a.m. and 9 p.m. Table 1 shows the eight locations, number of questionnaires distributed at each location, and the response rate for each location. During this survey, 837 visitor groups were contacted and 767 of these groups (91.6%) accepted questionnaires. (The average acceptance rate for 228 VSP visitor studies conducted from 1988 through 2010 is 91.5%.) Questionnaires were completed and returned by 502 visitor groups, resulting in a 65.5% response rate for this study. (The average response rate for the 228 VSP visitor studies is 72.6%)

Table 1. Questionnaire distribution, fall 2010

Sampling site	Distributed		Returned	
	N	%	N	%
Barker Dam	78	10	58	12
Black Rock Entrance Station	20	3	17	3
Cottonwood Visitor Center	129	17	82	16
Indian Cove Entrance Station	53	7	27	5
Joshua Tree Visitor Center	165	22	110	22
North Entrance Station	103	13	65	13
Oasis Visitor Center	77	10	50	10
West Entrance Station	142	19	93	19
Total	767	101*	502	100

* total percentages do not equal 100 due to rounding

Questionnaire design

The Joshua Tree NP questionnaire was developed at a workshop held with park staff to design and prioritize questions. Some of the questions were comparable with VSP studies conducted at other parks while others were customized for Joshua Tree NP. Many questions asked visitors to choose answers from a list of responses, often with an open-ended option, while others were completely open-ended.

No pilot study was conducted to test the Joshua Tree NP questionnaire. However, all questions followed Office Management and Budget (OMB) guidelines and/or were used in previous surveys; thus, the clarity and consistency of the survey instrument have been tested and supported.

Survey procedure

Visitor groups were greeted, briefly introduced to the purpose of the study, and asked to participate. If visitors agreed, they were asked which member (at least 16 years old) had the next birthday. The individual with the next birthday was selected to complete the questionnaire for the group. An interview, lasting approximately two minutes, was conducted with that person to determine group size, group type, and the age of the member completing the questionnaire. These individuals were asked their names and addresses, and telephone numbers or email addresses in order to mail a reminder/thank-you postcard and follow-ups. Visitors were asked to complete the survey after their visit, and return the questionnaire by mail. The questionnaires were pre-addressed and affixed with a U.S. first-class postage stamp.

Two weeks following the survey, a reminder/thank-you postcard was mailed to all participants who provided a valid mailing address (see Table 2). Replacement questionnaires were mailed to participants who had not returned their questionnaires four weeks after the survey. Seven weeks after the survey, a second round of replacement questionnaires was mailed to visitors who had not returned their questionnaires.

Table 2. Follow-up mailing distribution

Mailing	Date	U.S.	International	Total
Postcards	December 8, 2010	588	126	714
1 st Replacement	December 22, 2010	338	59	397
2 nd Replacement	January 13, 2011	275	0	275

Data analysis

Returned questionnaires were coded and the visitor responses were processed using custom and standard statistical software applications—Statistical Analysis Software® (SAS), and a custom designed FileMaker Pro® application. Descriptive statistics and cross-tabulations were calculated for the coded data; responses to open-ended questions were categorized and summarized. Double-key data entry validation was performed on numeric and text entry variables and the remaining checkbox (bubble) variables were read by optical mark recognition (OMR) software.

Limitations

Like all surveys, this study has limitations that should be considered when interpreting the results.

1. This was a self-administered survey. Respondents completed the questionnaire after the visit, which may have resulted in poor recall. Thus, it is not possible to know whether visitor responses reflected actual behavior.
2. The data reflect visitor use patterns at the selected sites during the study period of November 16-22, 2010. The results present a “snapshot in time” and do not necessarily apply to visitors during other times of the year.
3. Caution is advised when interpreting any data with a sample size of less than 30, as the results may be unreliable. Whenever the sample size is less than 30, the word “**CAUTION!**” is included in the graph, figure, table, or text.
4. Occasionally, there may be inconsistencies in the results arising from missing data or incorrect answers (due to misunderstood directions, carelessness, or poor recall of information). Therefore, refer to both the percentage and N (number of individuals or visitor groups) when interpreting the results.

Special conditions

The weather during the survey period was hot (mid 70's) and sunny from November 16-18, cold, rainy and windy from November 19-21, and warm (50's) and sunny on the last day, November 22. Barker Dam was typically colder and much windier than the other sites, even on the warm days. A sharp shooting competition on November 21 may have affected the number of visitors. November 22 was the busiest day the fee collection staff had ever seen. On November 22, the leftover surveys were to be distributed to both the North and West entrances, but were all distributed at the West entrance.

Checking non-response bias

Three variables were used to check non-response bias: respondents' age, average group size, and group type. Participants at higher age ranges were more responsive to the survey but there was no significant difference in group size (see Table 3). There were no significant differences between respondents and nonrespondents in terms of group type (see Table 4). See Appendix 3 for more details of the non-response bias checking procedures.

Table 3. Comparison of respondents and nonrespondents by average age and group size

Variable	Respondent	Nonrespondent	P-value
Age	48.56 (N=502)	39.02 (N=261)	<0.001
Group size	2.58 (N=490)	2.73 (N=262)	0.302

Table 4. Comparison of respondents and nonrespondents by group type

Group type	Respondent	Nonrespondent	p-value
Alone	55	27	
Family	266	118	
Friends	134	93	
Family and friends	41	19	
Other	14	6	
Total	499	263	0.088

Results

Group and Visitor Characteristics

Visitor group size

Question 19b

On this visit, how many people were in your personal group, including yourself?

Results

- 52% of visitor groups consisted of two people (see Figure 1).
- 23% were in groups of three or four.

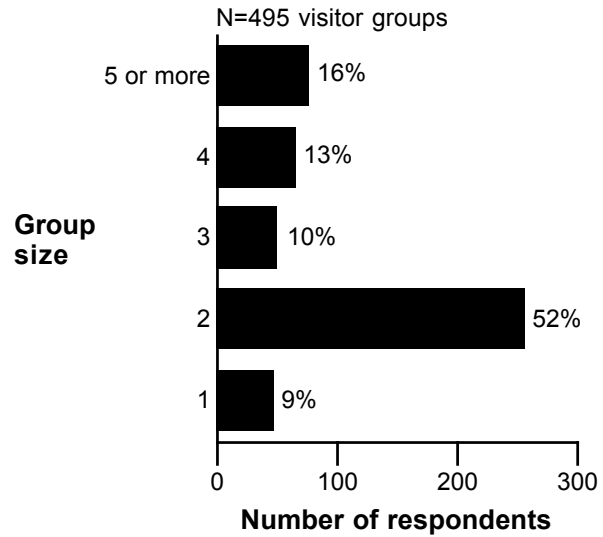


Figure 1. Visitor group size

Visitor group type

Question 19a

On this visit, which kind of personal group (not guided tour/school/climbing/other organized group) were you with?

Results

- 54% of visitor groups consisted of family members (see Figure 2).
- 27% of visitor groups consisted of friends.

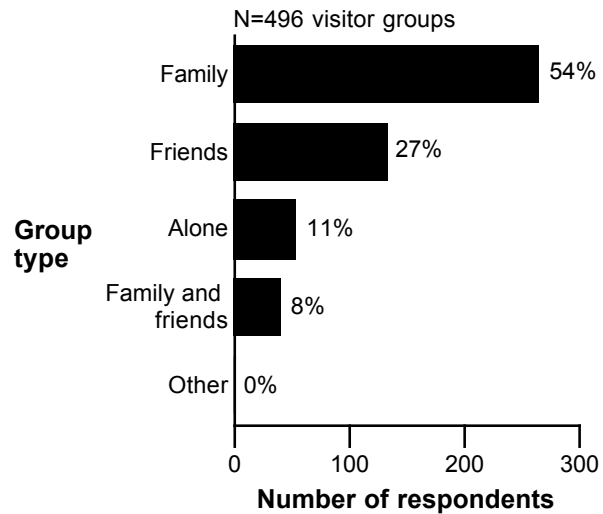


Figure 2. Visitor group type

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitors with organized groups

Question 18a

On this visit, were you and your personal group with a commercial guided tour group?

Results

- 1% of visitor groups were with a commercial guided tour group (see Figure 3).

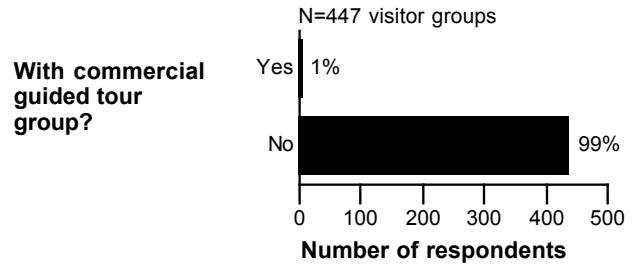


Figure 3. Visitors with a commercial guided tour group

Question 18b

On this visit, were you and your personal group with a school/ educational group?

Results

- 2% of visitor groups were with a school/educational group (see Figure 4).

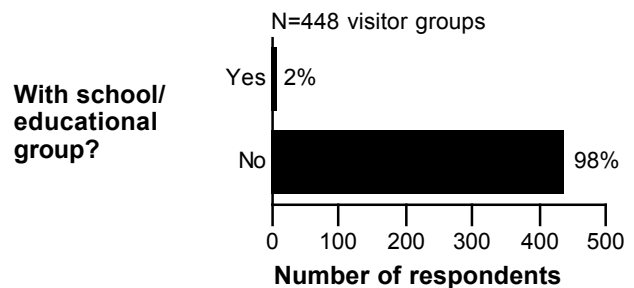


Figure 4. Visitors with a school/educational group

Question 18c

On this visit, were you and your personal group with a climbing group?

Results

- 4% of visitor groups were with a climbing group (see Figure 5).

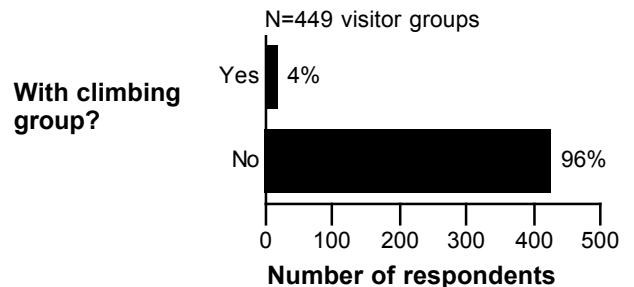


Figure 5. Visitors with a climbing group

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Question 18d

On this visit, were you and your personal group with an “other” organized group (business, church, scout, etc.)?

Results

- 2% of visitor groups were with an “other” organized group (see Figure 6).

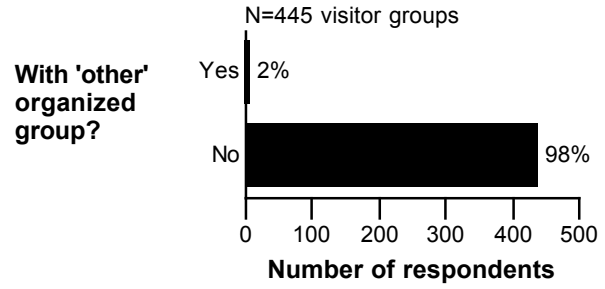


Figure 6. Visitors with an “other” organized group

Question 18e

If you were with one of these organized groups, how many people, including yourself, were in this organized group?

Results – Interpret with CAUTION!

- Not enough visitor groups responded to this question to provide reliable results (see Figure 7).

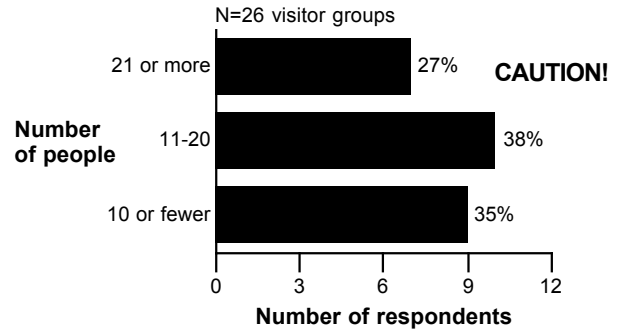


Figure 7. Organized group size

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

United States visitors by state of residence

Question 20b

For you and your personal group on this visit, what is your state of residence?

Note: Response was limited to seven members from each visitor group.

Results

- U.S. visitors were from 45 states and Washington, D.C. and comprised 81% of total visitation to the park during the survey period.
- 62% of U.S. visitors came from California (see Table 5 and Figure 8).
- 6% came from Washington.
- Smaller proportions came from 43 other states and Washington, D.C.

Table 5. United States visitors by state of residence

State	Number of visitors	Percent of U.S. visitors N=1,023 individuals*	Percent of total visitors N=1,269 individuals
California	630	62	50
Washington	58	6	5
Colorado	35	3	3
Oregon	27	3	2
Illinois	22	2	2
Arizona	21	2	2
New York	17	2	1
Texas	17	2	1
Virginia	17	2	1
Arkansas	14	1	1
Iowa	12	1	1
Florida	11	1	1
Nevada	11	1	1
Pennsylvania	10	1	1
Louisiana	9	1	1
Massachusetts	9	1	1
Minnesota	8	1	1
Maryland	6	1	<1
Ohio	6	1	<1
Wisconsin	6	1	<1
25 other states and Washington, D.C.	77	8	6

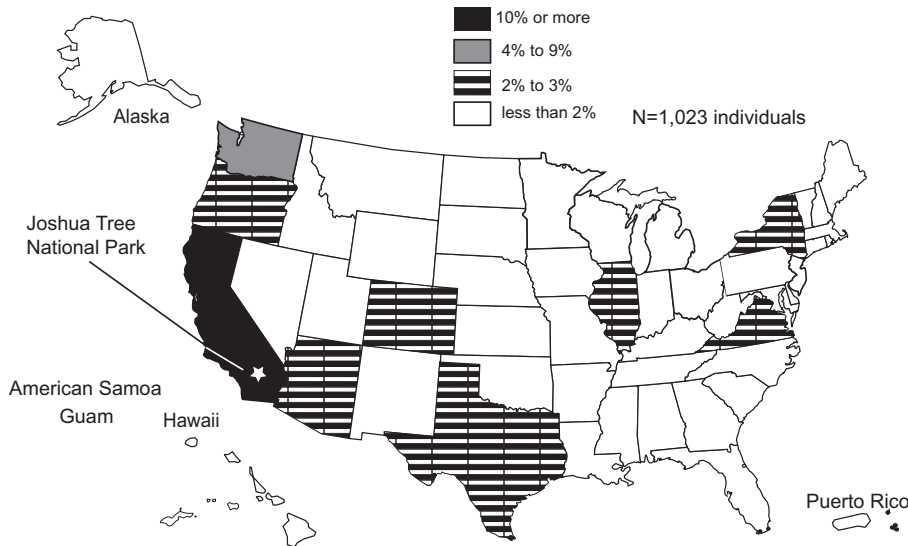


Figure 8. United States visitors by state of residence

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitors from California and adjacent states by county of residence

Note: Response was limited to seven members from each visitor group.

Table 6. Visitors from California and adjacent states by county of residence

Results	County, State	Number of visitors	
		N=686 individuals	Percent*
<ul style="list-style-type: none"> • Visitors from California and adjacent states were from 50 counties and comprised 67% of the total U.S. visitation to the park during the survey period. • 20% came from Los Angeles County, CA (see Table 6). • 18% Came from San Diego County, CA. • Smaller proportions of visitors came from 48 other counties in California and adjacent states. 	Los Angeles, CA	140	20
	San Diego, CA	122	18
	Riverside, CA	80	12
	San Bernardino, CA	69	10
	Orange, CA	64	9
	Santa Clara, CA	28	4
	Sacramento, CA	18	2
	San Francisco, CA	14	2
	Contra Costa, CA	13	2
	Alameda, CA	12	2
	Ventura, CA	11	2
	Multnomah, OR	10	1
	Clark, NV	9	1
	San Mateo, CA	9	1
	Maricopa, AZ	8	1
	Marin, CA	6	1
	Coconino, AZ	5	1
	Deschutes, OR	5	1
	Tulare, CA	5	1
	Inyo, CA	4	1
	Shasta, CA	4	1
	29 other counties	50	7

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

International visitors by country of residence

Question 20b

For you and your personal group on this visit, what is your country of residence?

Note: Response was limited to seven members from each visitor group.

Results

- International visitors were from 19 countries and comprised 19% of total visitation to the park during the survey period.
- 47% of international visitors came from Canada (see Table 7).
- 18% came from Germany.
- Smaller proportions of international visitors came from 17 other countries.

Table 7. International visitors by country of residence

Country	Number of visitors	Percent of International visitors N=246 individuals*	Percent of total visitors N=1,269 individuals
Canada	116	47	9
Germany	45	18	4
United Kingdom	17	7	1
France	11	4	1
Australia	10	4	1
Netherlands	8	3	1
New Zealand	7	3	1
Switzerland	6	2	<1
Sweden	5	2	<1
Czech Republic	5	2	<1
Italy	3	1	<1
Chile	2	1	<1
China	2	1	<1
Denmark	2	1	<1
Luxembourg	2	1	<1
Pakistan	2	1	<1
Brazil	1	1	<1
Ireland	1	1	<1
Norway	1	1	<1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Number of lifetime visits

Question 20c

For you and your personal group on this visit, how many times have you visited Joshua Tree NP in your lifetime (including this visit)?

Note: Response was limited to seven members from each visitor group.

Results

- 56% of visitors were visiting the park for the first time in their lifetime (see Figure 9).
- 22% had visited five or more times.

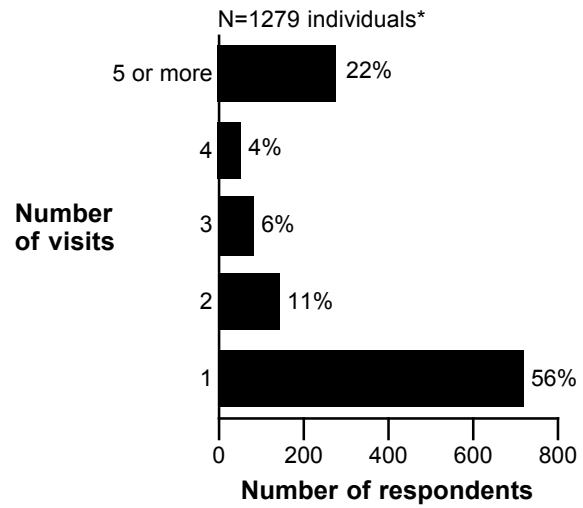


Figure 9. Number of visits to park in lifetime

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitor age

Question 20a

For you and your personal group on this visit, what is your current age?

Note: Response was limited to seven members from each visitor group.

Results

- Visitor ages ranged from 1 to 88 years.
- 28% of visitor groups were 56 to 70 years old (see Figure 10).
- 25% were 26 to 40 years old.
- 11% were in the 15 years or younger age group.
- 6% were 71 years or older.

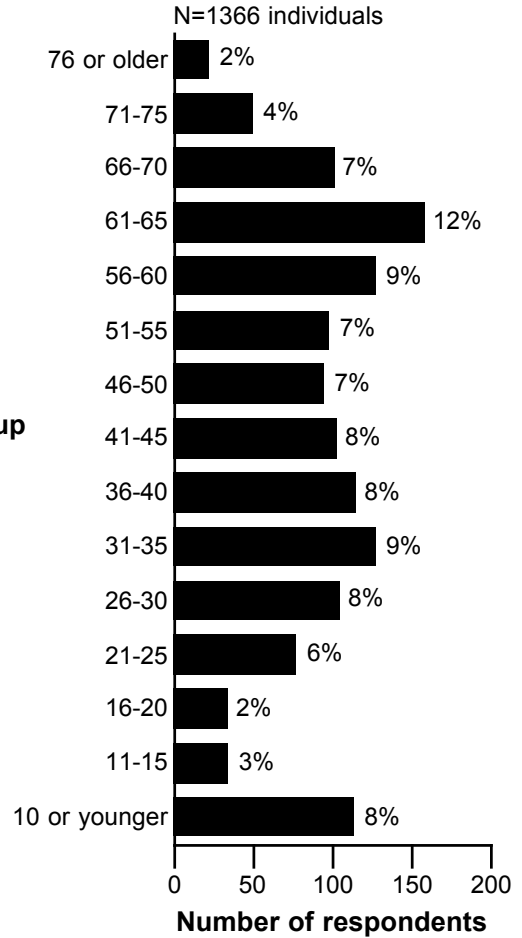


Figure 10. Visitor age

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Language used for speaking and reading

Question 21a

When visiting an area such as Joshua Tree NP, which language(s) do you and most members of your personal group prefer to use for speaking?

Results

- 94% of visitor groups preferred English for speaking (see Figure 11).
- “Other” languages (6%) are listed in Table 8.

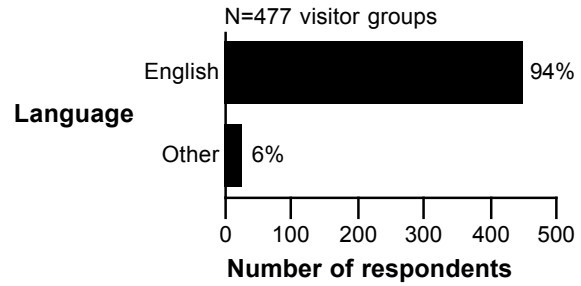


Figure 11. Language preferred for speaking

Question 21b

When visiting an area such as Joshua Tree NP, which language(s) do you and most members of your personal group prefer to use for reading?

Results

- 94% of visitor groups preferred English for reading (see Figure 12).
- “Other” languages (6%) are listed in Table 9.

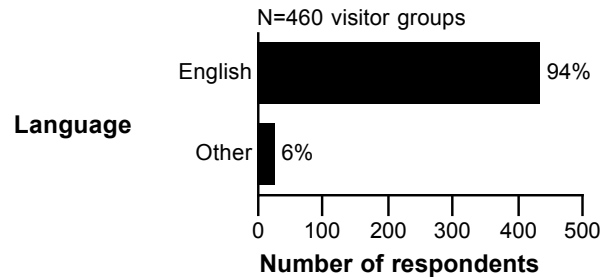


Figure 12. Language preferred for reading

Table 8. Other languages preferred for speaking (N=20 comments) – **CAUTION!**

Language	Number of times mentioned
German	7
Spanish	5
French	4
Chinese	1
Czech	1
Japanese	1
Polish	1

Table 9. Other languages preferred for reading (N=18 comments) – **CAUTION!**

Language	Number of times mentioned
German	7
Spanish	3
Chinese	2
French	2
Czech	1
Japanese	1
Polish	1
Swedish	1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitors with physical conditions

Question 22a

Does anyone in your personal group have a physical condition that made it difficult to access or participate in activities or services in Joshua Tree NP?

Results

- 6% of visitor groups had members with physical conditions (see Figure 13).

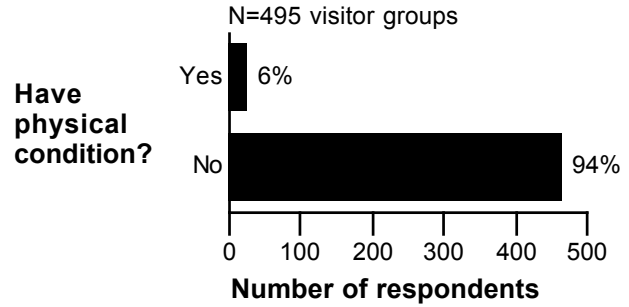


Figure 13. Visitor groups that had members with physical conditions

Question 22b

If YES, on this visit, which activities or services did the person(s) have difficulty accessing or participating in?

Results – Interpret with CAUTION!

- Not enough visitor groups responded to this question to provide reliable results (see Figure 14).
- “Other” services (14%) were:
 - Keys View
 - Railing at Key View was faulty
 - Some gravel roads
 - Unpaved geology tour road

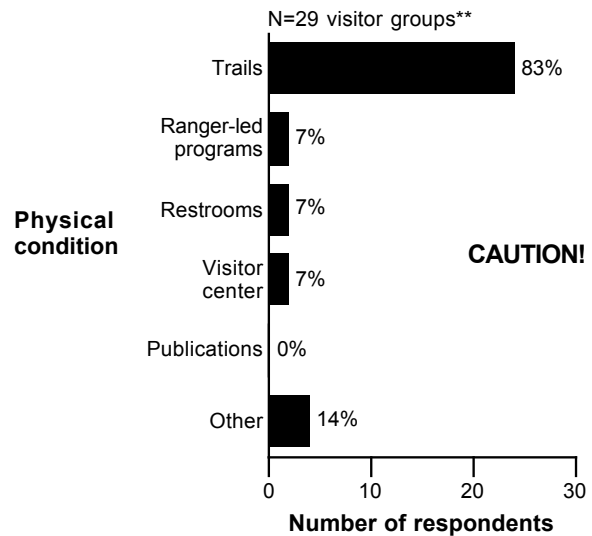


Figure 14. Activities/services that were difficult to access or participate in

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Awareness of park issues

Question 4a

Prior to this visit, did you know that Joshua Tree NP contains Congressionally designated wilderness areas?

Results

- 38% of visitor groups were aware that Joshua Tree NP contains Congressionally designated wilderness areas (see Figure 15).

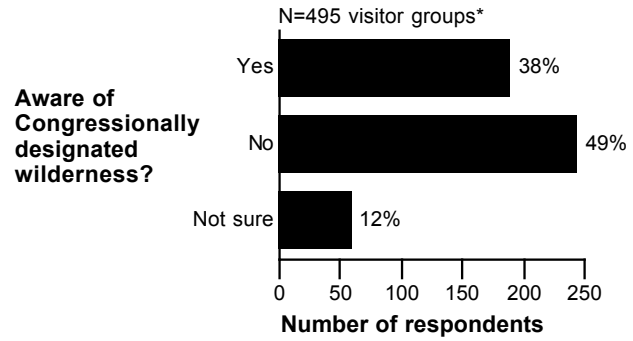


Figure 15. Visitors' awareness of Congressionally designated wilderness areas

Question 4b

During this visit to Joshua Tree NP, did you visit these wilderness areas?

Results

- 18% of visitor groups visited Congressionally designated wilderness areas in Joshua Tree NP (see Figure 16).

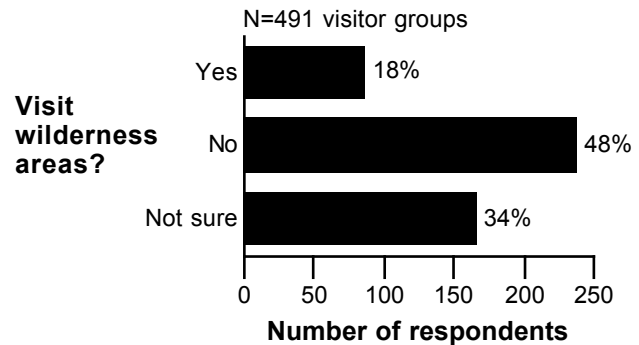


Figure 16. Visitor groups that visited Congressionally designated wilderness areas

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Trip/Visit Characteristics and Preferences

Information sources prior to visit

Question 1a

Prior to this visit, how did you and your personal group obtain information about Joshua Tree NP?

Results

- 87% of visitor groups obtained information about Joshua Tree NP prior to their visit (see Figure 17).
- As shown in Figure 18, among those visitor groups that obtained information about Joshua Tree NP prior to their visit, the most common sources were:

55% Joshua Tree NP website
 44% Friends/relatives/word of mouth

- “Other” sources (5%) were:

GPS
 NOAA weather
 Scouts
 U2 album/cover
 Vertical Adventures

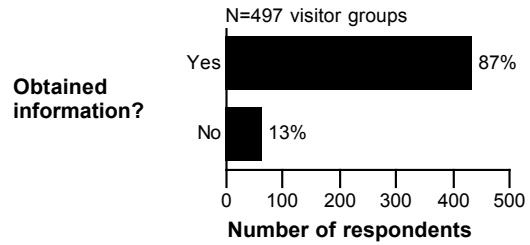


Figure 17. Visitor groups that obtained information prior to visit

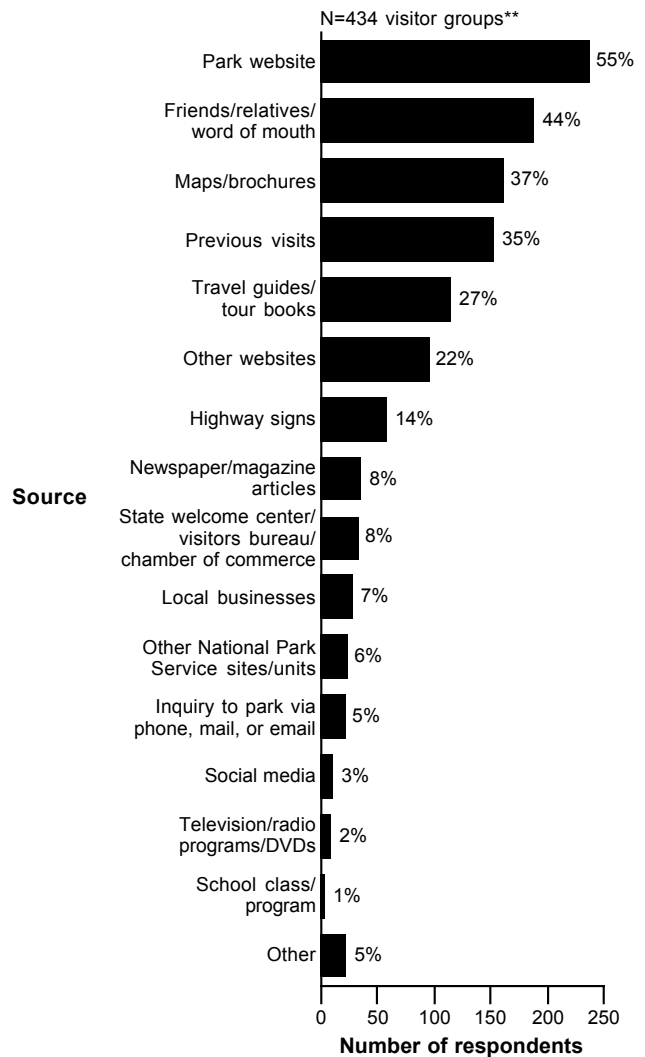


Figure 18. Sources of information used by visitor groups prior to visit

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

- Figure 19 shows social media used by visitor groups to obtain park information prior to their visit.

Interpret with **CAUTION!**
 Not enough visitor groups responded to this question to provide reliable results.

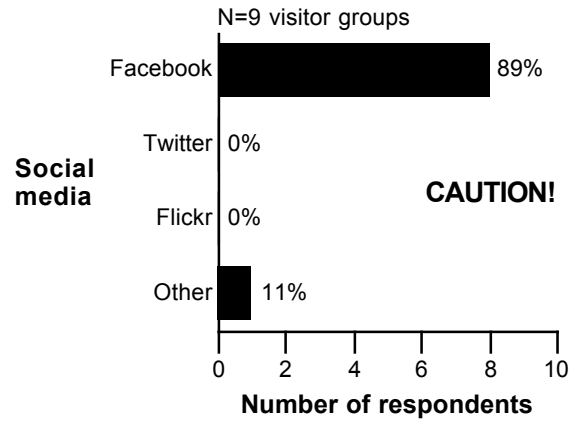


Figure 19. Social media used by visitor groups prior to visit

Question 1c

From the sources you used prior to this visit, did you and your personal group receive the type of information about the park that you needed?

Results

- 93% of visitor groups received needed information prior to their visit (see Figure 20).

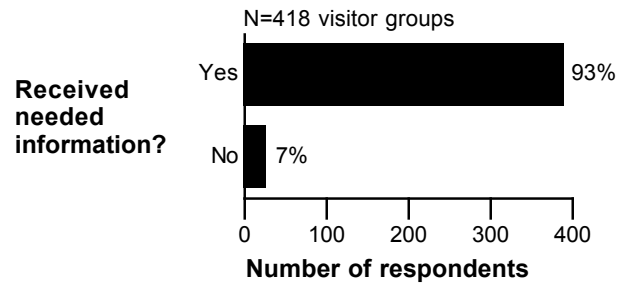


Figure 20. Visitor groups that received needed information prior to their visit

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Question 1d

If NO, what type of park information did you and your personal group need that was not available? (Open-ended)

Results – Interpret results with **CAUTION!**

- 23 visitor groups listed information they needed but was not available (see Table 10).

Table 10. Needed information that was not available (N=26 comments; some visitor groups made more than one comment) **CAUTION!**

Needed information	Number of times mentioned
More detailed map	3
More detailed hiking information and maps	3
Better/more detailed map on website	2
Directions to the park	2
How to time visit	2
Camping information	1
Climbing information	1
Hiking information	1
Hours of operation	1
Information on bird/wildlife distributions	1
Information on peak visitation times	1
Information that campsites not suitable for RVs	1
Location of Joshua Trees	1
More detailed climbing guides	1
More information about lodging	1
More information about park beauty	1
Park features	1
Suggestion for hiking	1
Website needs calendar of monthly ranger programs	1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Information sources for future visit

Question 1b

If you were to visit Joshua Tree NP in the future, how would you and your personal group prefer to obtain information about the park?

Results

- As shown in Figure 21, visitor groups' more preferred sources of information for a future visit were:
 - 72% Joshua Tree NP website
 - 36% Maps/brochures
 - 33% Previous visits
- "Other" sources of information (2%) were:
 - GPS (directions)
 - Information center
 - NOAA weather

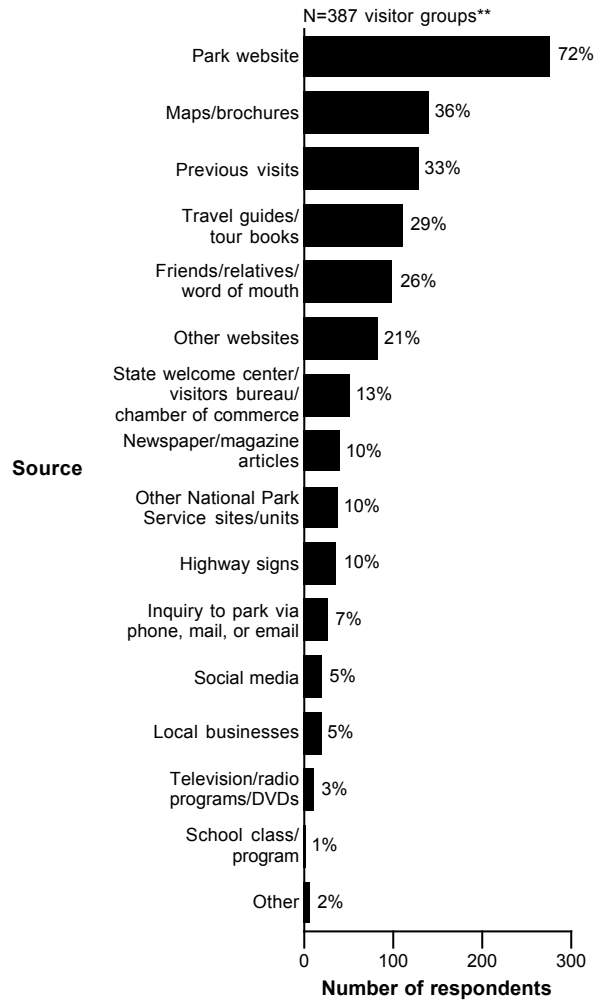


Figure 21. Sources of information to use for a future visit

- Figure 22 shows social media preferred by visitor groups to obtain park information for a future visit. Interpret with **CAUTION!** Not enough visitor groups responded to this question to provide reliable results.

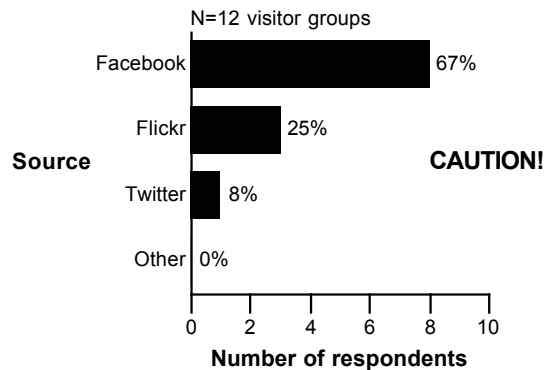


Figure 22. Social media preferred for a future visit

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Park as destination

Question 2

How did this visit to Joshua Tree NP fit into your personal group’s travel plans?

Results

- For 49% of visitor groups, Joshua Tree NP was one of several destinations (see Figure 23).
- For 43%, Joshua Tree NP was the primary destination.

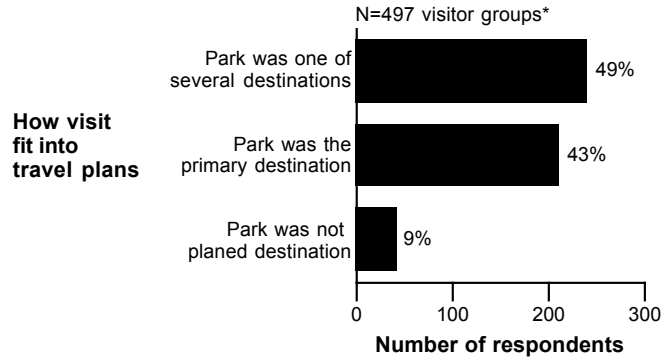


Figure 23. How visit to park fit into visitor groups’ travel plans

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Primary reason for visiting the park area

Question 5

On this trip, what was the primary reason that you and your personal group came to Joshua Tree NP area (Yucca Valley, Joshua Tree, Twentynine Palms)?

Results

- 6% of visitor groups were residents of the area (see Figure 24).
- As shown in Figure 25, the primary reason for visiting the Joshua Tree NP area among non-resident visitor groups was:

75% Visit the park

- “Other” primary reasons (5%) were:

- Camping
- Friends told us about sights and hiking
- Hiking
- Indio timeshare
- Mental physics retreat
- Met for family camping
- Palm Desert timeshare
- Rock climbing
- Staying off the interstate
- Tracking with kids
- Trying to visit all national parks
- Vacation/holidays

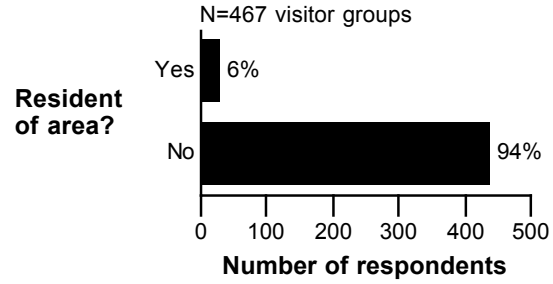


Figure 24. Residents of the area (Yucca Valley, Joshua Tree, Twentynine Palms)

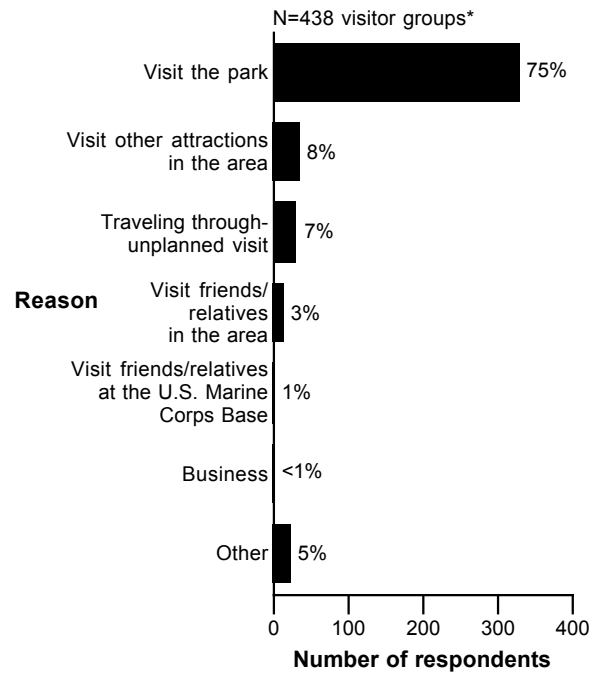


Figure 25. Primary reason for visiting the Joshua Tree NP area

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Entrance used

Question 8a

At which entrance did you and your personal group first enter the park?

Results

- 53% of visitor groups used the West entrance station to enter the park (see Figure 26).
- 23% used the North entrance station.
- “Other” entrance used (2%) was:
Black Rock Canyon

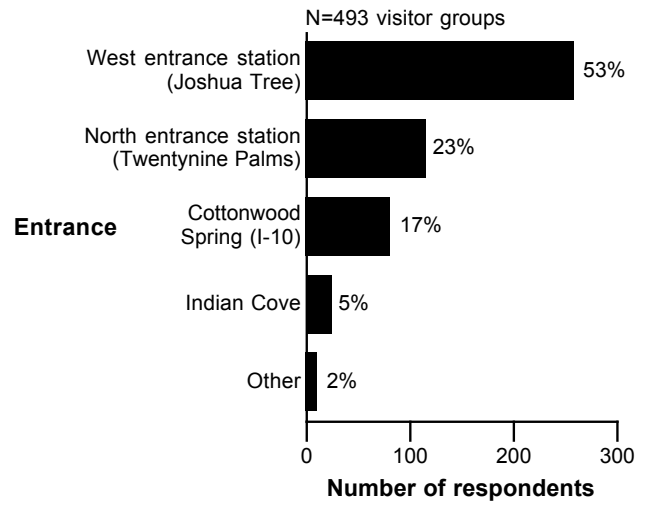


Figure 26. Entrances used to enter park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Number of vehicles used to arrive at the park

Question 19c

On this visit, how many vehicles did you and your personal group use to arrive at the park?

Results

- 80% of visitor groups used one vehicle to arrive at the park (see Figure 27).

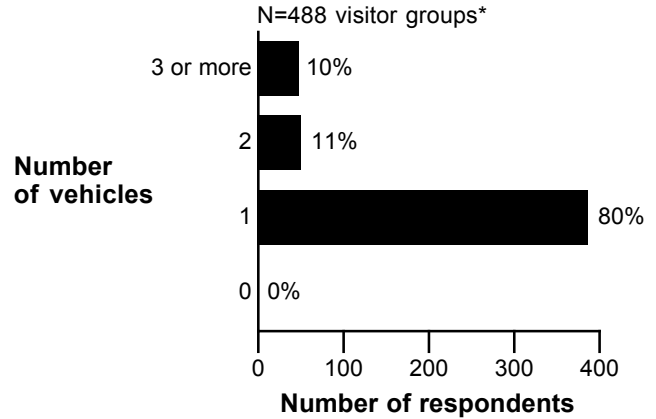


Figure 27. Number of vehicles used to arrive at the park

Number of park entries

Question 19d

On this visit, how many times did you and your personal group enter the park?

Results

- 57% of visitor groups entered the park one time (see Figure 28).
- 22% entered twice.

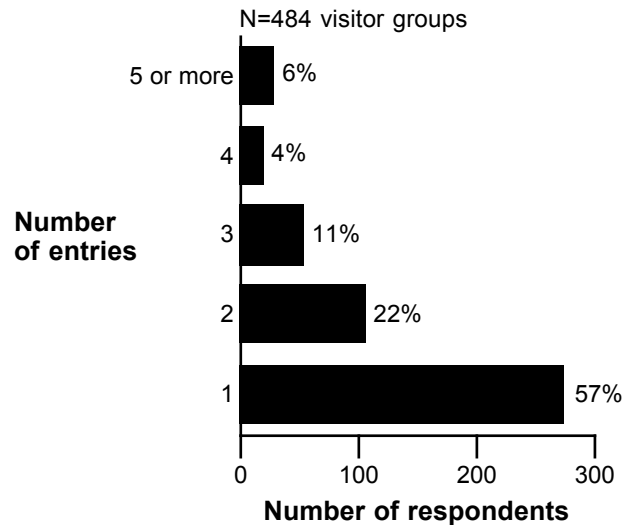


Figure 28. Number of park entries

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Overnight stays in the park and area

Question 9a

On this visit, did you and your personal group stay overnight away from home in Joshua Tree NP or the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms)?

Results

- 57% of visitor groups stayed overnight away from home in Joshua Tree NP or the surrounding area (see Figure 29).

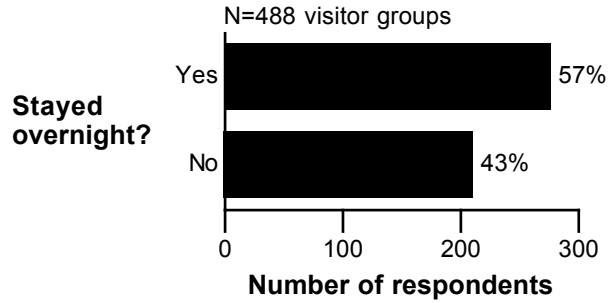


Figure 29. Visitor groups that stayed overnight in Joshua Tree NP or the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms)

Question 9b

Please list the number of nights you and your personal group stayed inside the park during this visit.

Results

- 35% of visitor groups stayed two nights inside the park (see Figure 30).
- 21% stayed one night.

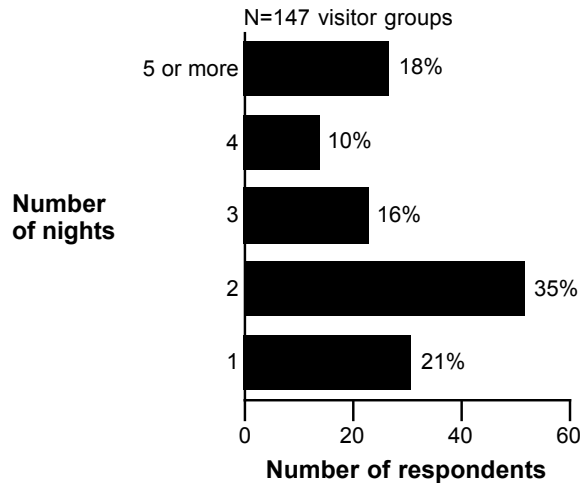


Figure 30. Number of nights spent inside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Question 9b

Please list the number of nights you and your personal group stayed in the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms).

Results

- 33% of visitor groups stayed one night outside the park in the surrounding area (see Figure 31).
- 30% stayed two nights.

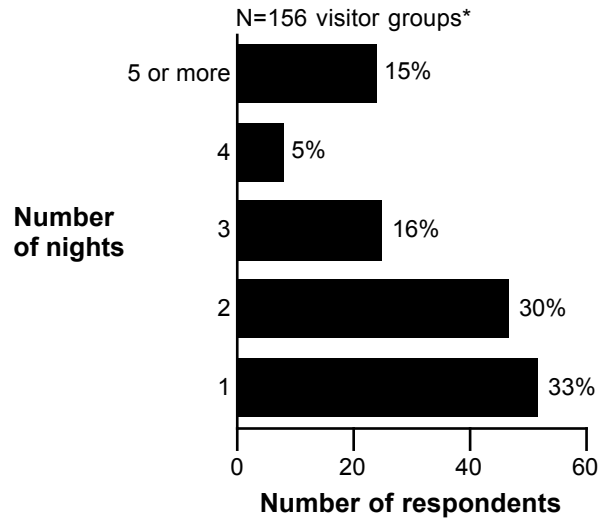


Figure 31. Number of nights spent in the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms)

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Accommodations used inside the park

Question 9c

In what type of lodging did you and your personal group spend the night(s) inside Joshua Tree NP?

Results

- 72% of visitor groups tent camped in a developed campground (see Figure 32).
- 27% were RV/trailer camping.
- No visitor groups specified an “other” accommodation (1%).

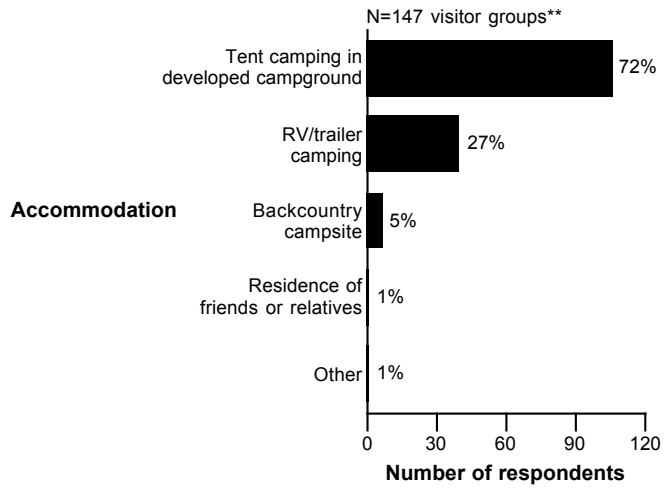


Figure 32. Accommodations used inside the park

Accommodations used outside the park

Question 9d

In what type of lodging did you and your personal group spend the night(s) outside Joshua Tree NP in the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms)?

Results

- 36% of visitor groups RV/trailer camping (see Figure 33).
- 21% stayed in a residence of friends or relatives.
- “Other” (21%) accommodations were:
 - BLM land
 - Pulled off on roadside

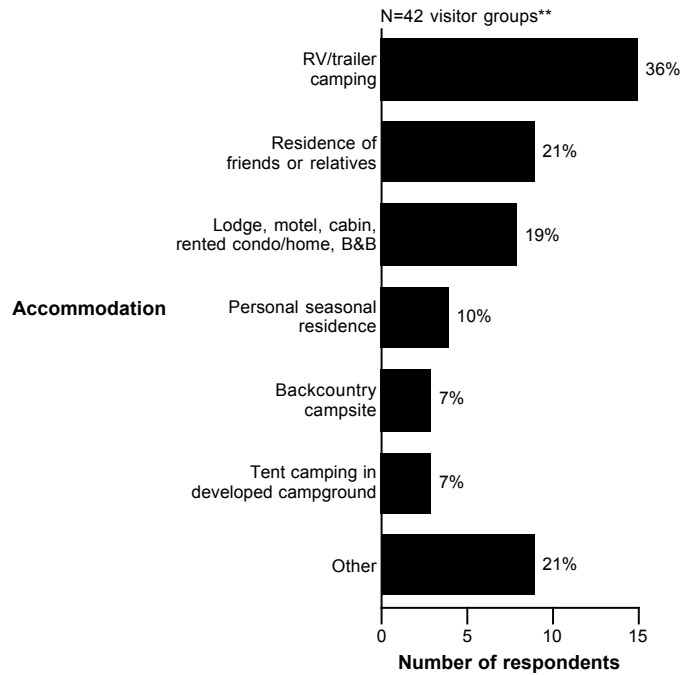


Figure 33. Accommodations used outside the park in the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms)

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Campsite reservations in the park

Question 6a

Prior to this visit, did you or members of your personal group attempt to make reservations for campsites at Joshua Tree NP for this trip?

Results

- 11% of visitor groups attempted to make reservations for campsites at Joshua Tree NP for this trip (see Figure 34).

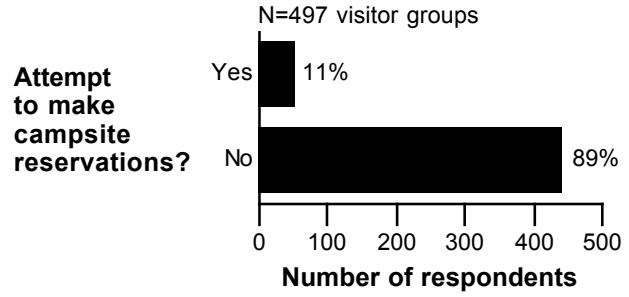


Figure 34. Visitor groups that attempted to make campsite reservations at the park

Question 6b

Were you able to make campsite reservations for this trip?

Results

- 84% of visitor groups were able to make campsite reservations for this trip (see Figure 35).

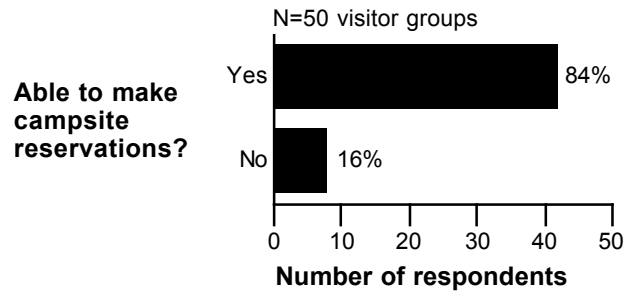


Figure 35. Visitor groups that were able to make campsite reservations

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Length of stay in park

Question 7

On this trip, how long did you and your personal group spend visiting Joshua Tree NP?

Number of hours, if less than 24 hours

- 25% of visitor groups spent 7 or more hours visiting the park (see Figure 36).
- 17% spent 4 hours.
- The average length of stay for visitor groups that spent less than 24 hours was 5.5 hours.

Number of days, if 24 hours or more

- 32% of visitor groups spent 2 days visiting the park (see Figure 37).
- 24% spent 3 days.
- 23% spent 5 or more days.
- The average length of stay for visitor groups that spent 24 hours or more was 4.5 days.

Average length of stay

- The average length of stay for all visitor groups was 47.6 hours, or 1.9 days.

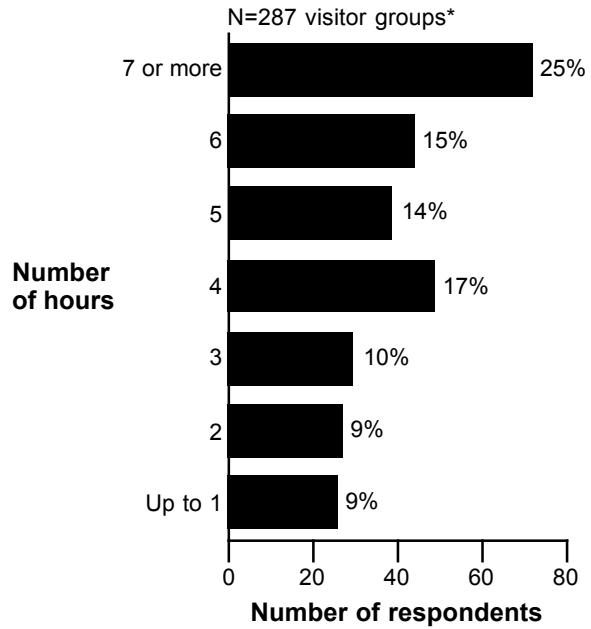


Figure 36. Hours spent in the park

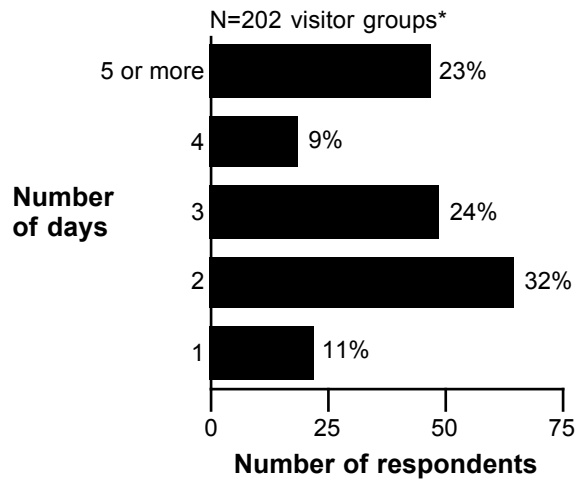


Figure 37. Days spent in the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Order of sites visited in the park**Question 8b**

For this trip, please list the order in which you and your personal group visited the following sites in Joshua Tree NP.

Results

- The order in which the sites were visited is shown in Table 11.
- See Table 12 for a listing of “other” sites visited.

Table 11. Order of sites visited
(N=number of visitor groups that visited each site)

Site	N	Order visited (%)*				
		1 st	2 nd	3 rd	4 th	5 th and up
Joshua Tree Visitor Center	227	81	2	4	5	8
Oasis Visitor Center	117	50	10	11	6	22
Cottonwood Visitor Center	109	54	8	6	4	28
Keys Ranch	68	7	34	26	13	19
Keys View	191	5	20	36	23	17
Barker Dam	171	7	22	30	18	23
Hidden Valley	232	13	42	16	12	17
Jumbo Rocks Area	259	13	27	23	23	15
Cottonwood Spring	87	14	24	8	3	51
Cholla Cactus Garden	169	2	25	14	15	44
Fortynine Palms Oasis	40	5	10	15	13	57
Lost Palms Oasis	30	0	17	10	0	73
Indian Cove	65	38	15	15	8	23
Black Rock Canyon	39	36	18	10	8	28
Lost Horse Mine	33	3	12	33	21	30
Covington Flats	11	0	36	0	18	45
Geology Tour Road	35	3	11	29	20	37
Other	76	14	25	26	11	24

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Sites visited in the park

- As shown in Figure 38, the most commonly visited sites by visitor groups at Joshua Tree NP were:
 - 55% Jumbo Rocks Area
 - 50% Hidden Valley
 - 50% Joshua Tree Visitor Center
- The least visited site was:
 - 2% Covington Flats
- “Other” sites visited (17%) are shown in Table 12.

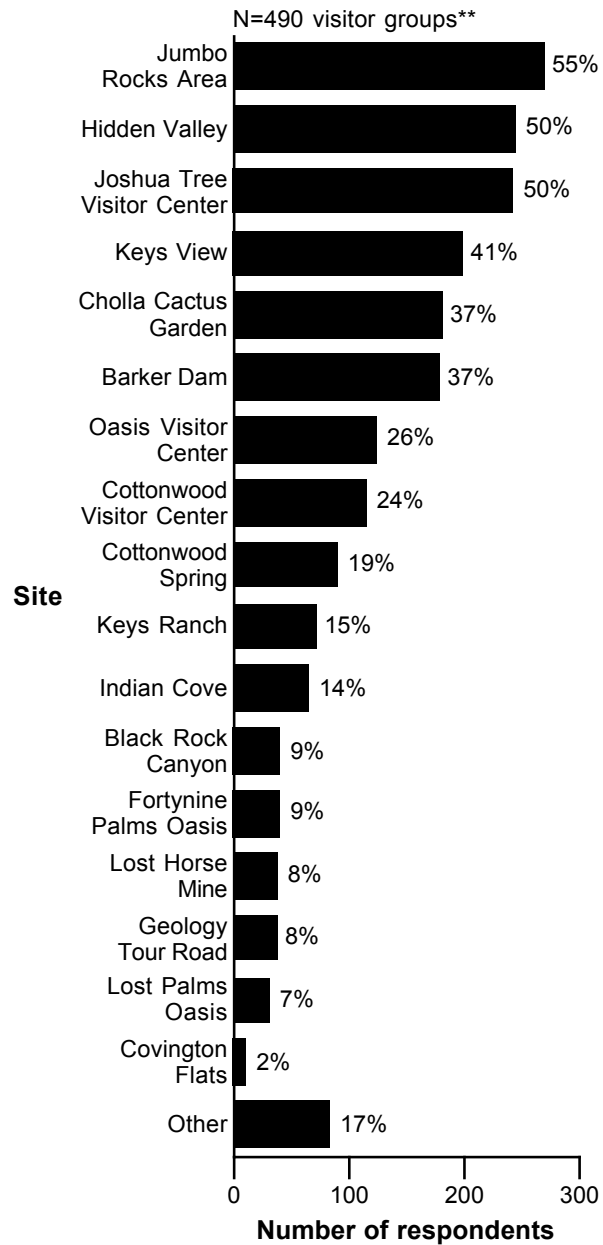


Figure 38. Sites visited in the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 12. “Other” sites visited in the park
(N=124 comments)

Site	Number of times mentioned
Ryan Mountain	16
Arch Rock	9
Skull Rock	9
Cap Rock	6
Wall Street Mill	5
Ryan Campground	4
Boy Scout Trail	3
Hall of Horrors	3
Split Rock	3
White Tank	3
Wonderland of Rocks	3
Belle	2
Live Oak	2
Pine City	2
Quail Springs	2
Queen Mine	2
Tallest Joshua tree	2
White Tank campground	2
Assorted climbing areas	1
Belle Campground	1
Berdoo Canyon Rd	1
Black Rock Camp	1
Carey's Castle	1
Cohn Prop	1
Contact Mine	1
Dairy Queen Wall	1
Desert Queen Mine	1
Drive through from Joshua Tree to Twentynine Palms	1
Echo Canyon	1
Echo Cove	1
Eureka Peak	1
Follow the road	1
Geology tour	1
Gold Mines	1
Hemingway Trail	1
Hiking areas	1
Intersection Rock	1
Isles climbing area past Jumbo Rocks south	1
Live Oak picnic area	1
Lost Horse Area	1
Lost Horse Road Area	1
Mammoth Mine, Pine City	1
Mill	1
Picnic areas north of Hidden Valley	1
Picnic grounds south of Oasis Visitor Center	1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 12. “Other” sites visited in the park (continued)

Site	Number of times mentioned
Pine City Trail	1
Pinto Mountains	1
Porcupine Wash	1
Pull out for stargazing	1
Quail	1
Queen Valley Road	1
Samuelson's Rocks	1
Sand dunes	1
Sheep Pass	1
Sheep Pass Group Camp	1
Split Rock hike	1
The Maze	1
The Rocks	1
Turkey Flats	1
Twin Tanks	1
West Entrance	1
White Rock	1
Willow Hole	1
Wonder Rocks	1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Activities on this visit

Question 10a

On this visit, in which activities did you and your personal group participate within Joshua Tree NP?

Results

- As shown in Figure 39, the most common activities in which visitor groups participated on this visit were:

- 63% Sightseeing
- 62% Walking self-guided nature trails
- 59% Visiting visitor centers
- 53% Dayhiking

- “Other” activities (9%) were:

- 4-wheel driving
- Berdo Canyon backcountry road
- Birdwatching
- Community service documenting baby Joshua trees
- Driving Geology Tour Road
- Driving/touring
- Educating children about desert ecology
- Got engaged
- Learn about park geology
- Motorcycle
- Night fires
- Photography
- Plant viewing
- Talk to ranger at Black Rock
- Trail run
- Watching the climbers
- Wildlife viewing

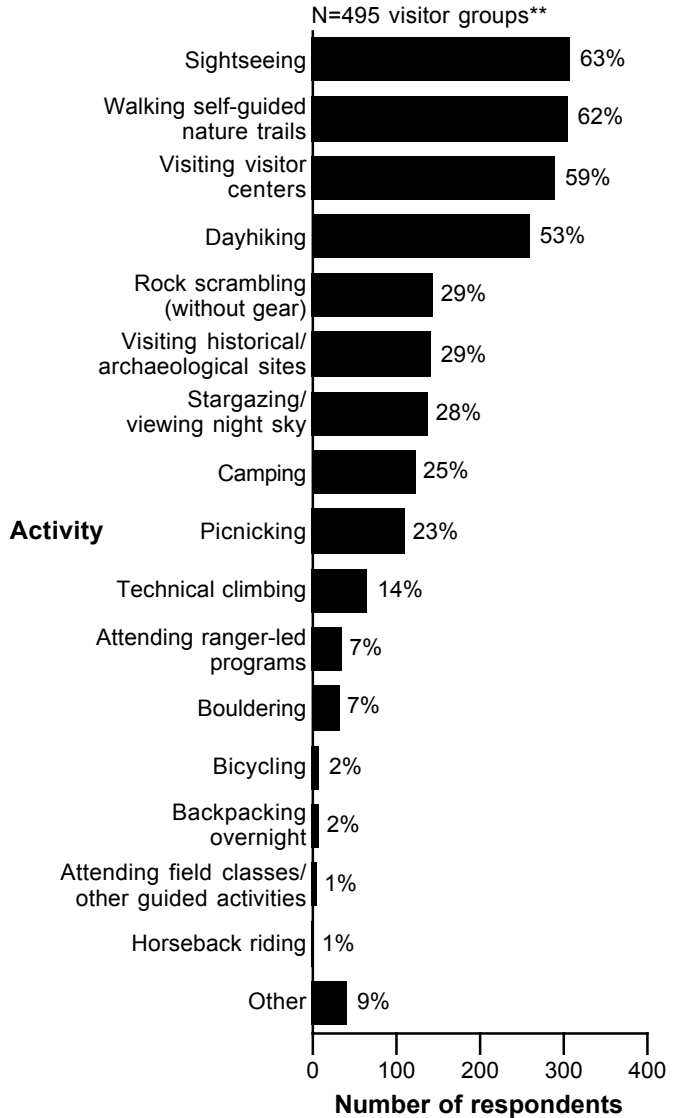


Figure 39. Activities on this visit

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Primary activity

Question 10b

Which one of the above activities was the primary activity in which you and your personal group participated at Joshua Tree NP on this visit?

Results

- As shown in Figure 40, the primary activities most commonly listed by visitor groups were:
 - 27% Day hiking
 - 23% Sightseeing
 - 14% Technical climbing
 - 13% Walking self-guided nature trails
- “Other” primary activities (3%) were:
 - Bird watching
 - Bird and wildlife watching
 - Driving
 - Night hiking
 - Photography
 - Trail run

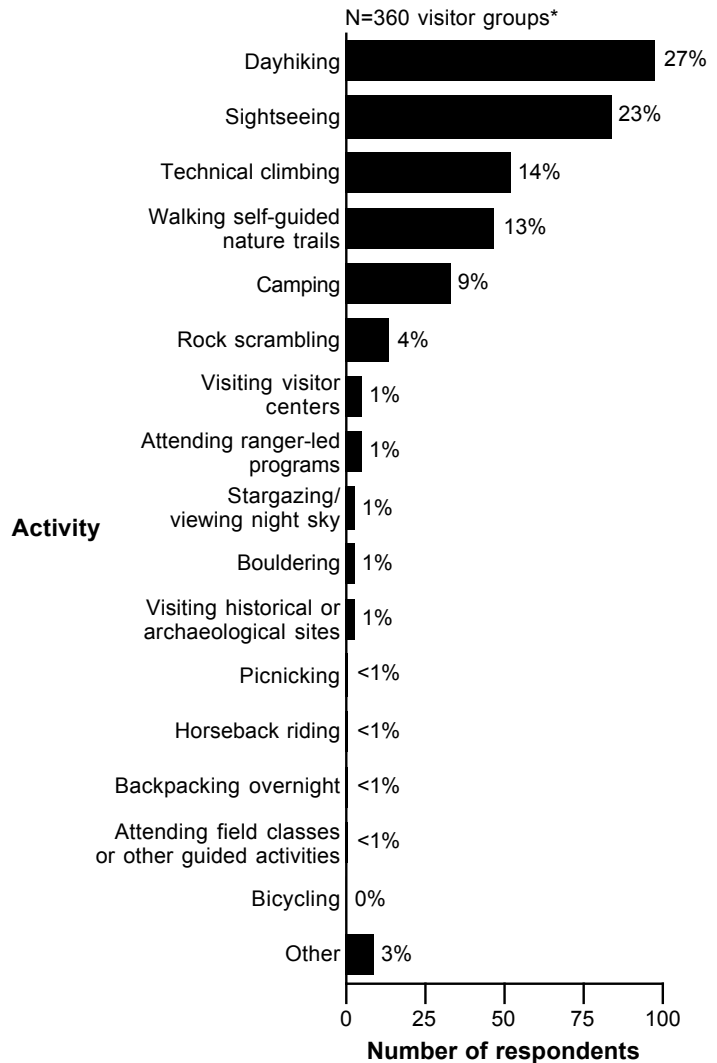


Figure 40. Primary activity at Joshua Tree NP

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Rock climbing

Question 14a

Did anyone in your personal group participate in rock climbing in Joshua Tree NP on this visit or past visit(s)?

Results

- 29% of visitor groups participated in rock climbing activities (see Figure 41).
- Of those visitor groups that participated in climbing activities, 51% of visitor groups climbed on this and past visits in the park (see Figure 42).

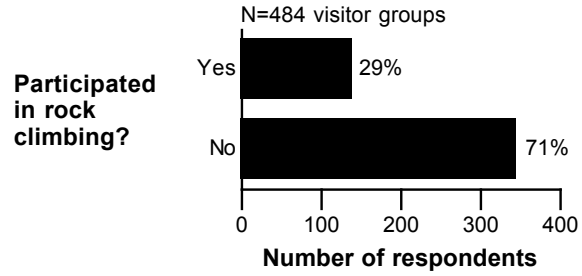


Figure 41. Visitor groups that participated in rock climbing activities

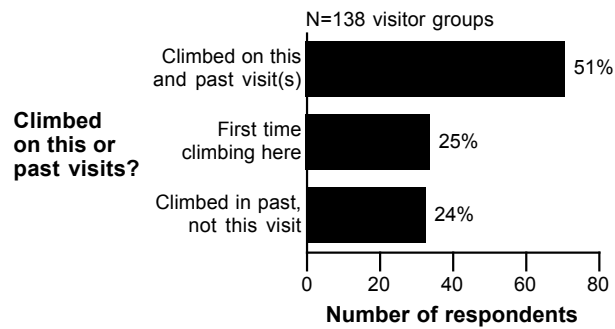


Figure 42. Visitor groups that participated in rock climbing on this or past visits

Question 14b

Where is your personal group’s preferred area to climb in Joshua Tree NP?

Results

- 31% of visitor groups had a preferred climbing area (see Figure 43).
- Table 13 shows visitor groups’ preferred areas for climbing.

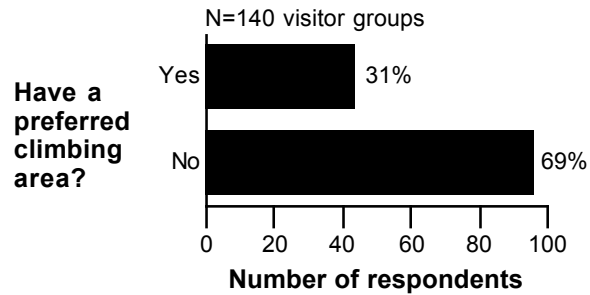


Figure 43. Visitor groups that had a preferred climbing area

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 13. Preferred climbing areas
(N=31 comments)

Climbing area	Number of times mentioned
Hidden Valley	12
Indian Cove	10
Jumbo rocks	4
"Real" Hidden Valley	2
Cottonwood Springs	1
Echo Cove	1
Echo Rock	1

Question 14c

Has anyone in your personal group ever developed a new climbing route in Joshua Tree NP?

Results

- 7% of visitor groups have developed a new climbing route in the park (see Figure 44).

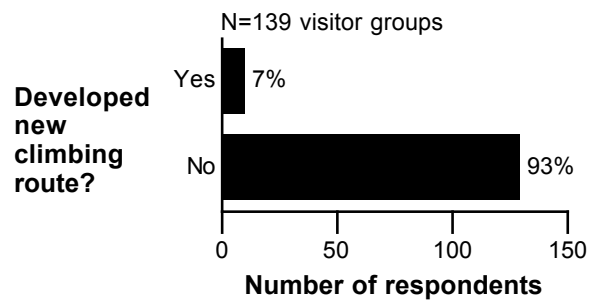


Figure 44. Visitor groups that have developed a new climbing route in the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Awareness of and learning about park issues

Question 3a

Prior to this visit, were you and your personal group aware of the following issues at Joshua Tree NP?

Results

- Table 14 shows visitor groups that were aware of selected park issues prior to their visit.

Question 3b

Did you and your personal group learn or learn more about these issues (via publications, signs, talking to park staff, etc.) during this visit to Joshua Tree NP?

Results

- Table 14 also shows the visitor groups that learned or learned more about these issues during their visit.

Table 14. Visitor groups that were aware of or learned more about park issues (N=number of visitor groups that responded to each item)

a) Aware prior to visit?			Issues	b) Learned or learned more about during visit?		
N	Yes (%)	No (%)		N	Yes (%)	No (%)
476	28	72	Air pollution impacts	434	36	64
468	29	71	Damage to cryptobiotic crust	438	28	72
478	57	43	Dark night sky	423	29	71
470	36	64	Desert fire ecology	425	32	68
469	30	70	Effects of climate change on the park	432	34	66
473	63	37	Off-road vehicles damaging the desert	431	30	70
468	37	63	Theft of cultural resources	427	26	74
467	42	58	Theft of natural resources	428	28	72
471	37	63	Threats to desert tortoise populations	434	34	66
470	32	68	Urban/industrial development near park	430	27	73

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Ratings of Services, Facilities, Attributes, Resources and Elements

Information services and facilities used

Question 11a

Please indicate all the information services and facilities that you or your personal group used during this visit to Joshua Tree NP.

Results

- As shown in Figure 45, the most common information services and facilities used by visitor groups were:

80% Park brochure/map
71% Assistance from visitor center staff

- The least used service/facility was:

2% Climbers' coffee

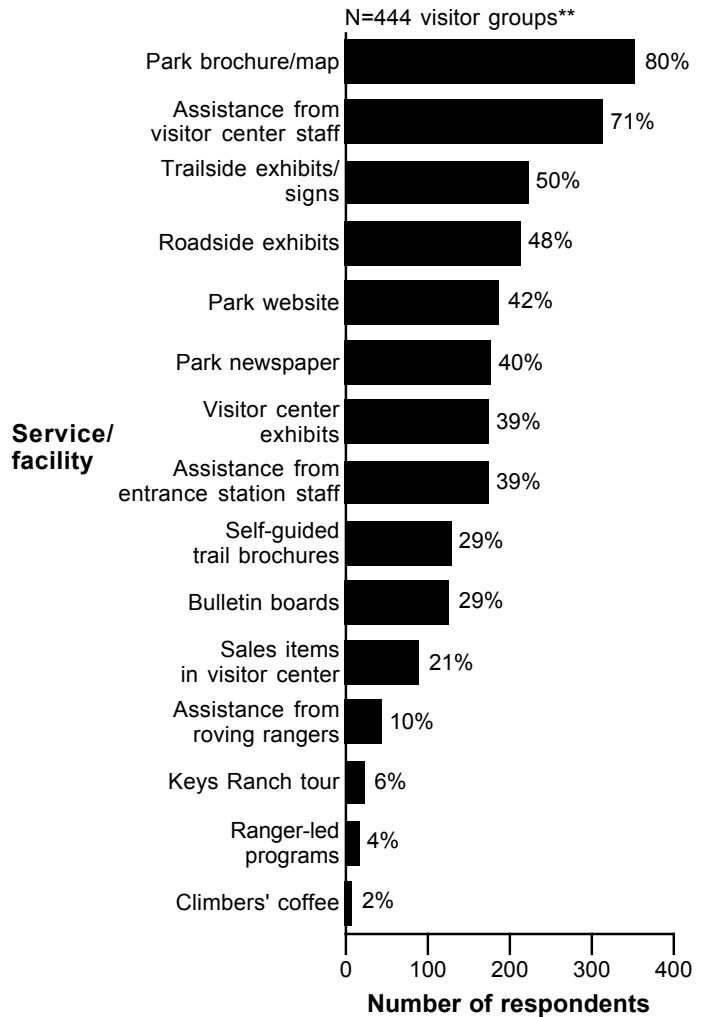


Figure 45. Information services and facilities used

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Importance ratings of information services and facilities

Question 11b

Next, for only those services and facilities that you or your personal group used, please rate their importance.

- 1=Not important
- 2=Somewhat important
- 3=Moderately important
- 4=Very important
- 5=Extremely important

Results

- Figure 46 shows the combined proportions of “extremely important” and “very important” ratings of information services and facilities that were rated by 30 or more visitor groups.
- The services and facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:
 - 82% Park brochure/map
 - 73% Self-guided trail brochures
 - 72% Park website
 - 72% Assistance from visitor center staff
- Table 15 shows the importance ratings of each service and facility.
- The service/facility receiving the highest “not important” rating that was rated by 30 or more visitor groups was:
 - 7% Sales items in visitor center

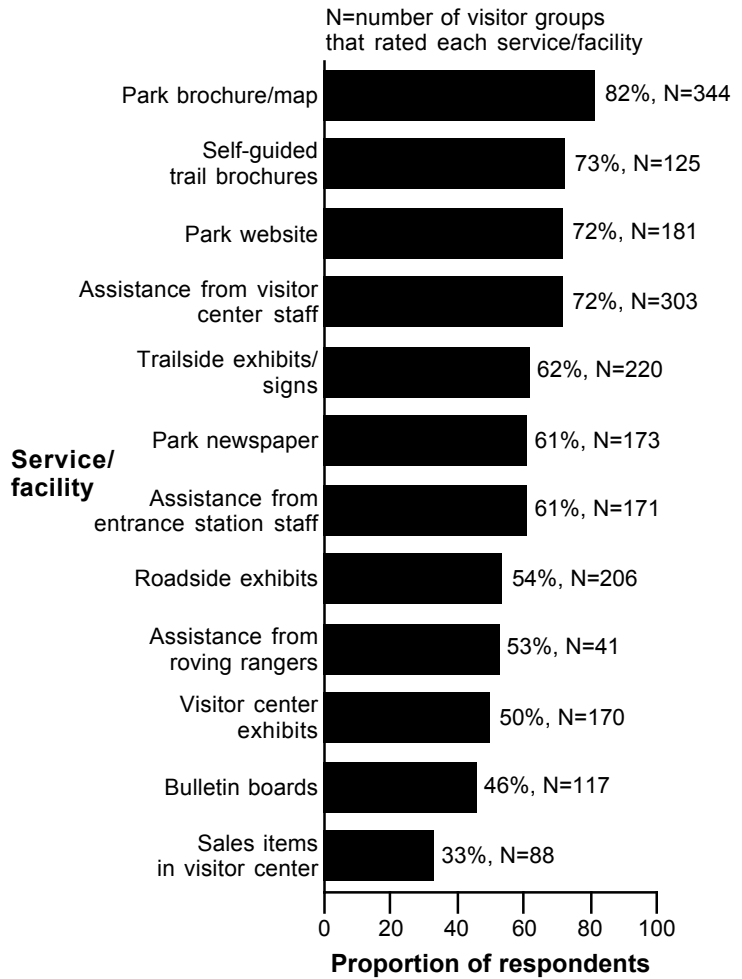


Figure 46. Combined proportions of “extremely important” and “very important” ratings of information services and facilities

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 15. Importance ratings of information services and facilities
(N=number of visitor groups that rated each service and facility)

Service/facility	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Assistance from visitor center staff	303	2	7	20	40	32
Assistance from entrance staff	171	4	12	23	32	29
Assistance from roving rangers	41	2	22	22	29	24
Bulletin boards	117	3	16	35	31	15
Climbers' coffee - CAUTION!	9	11	11	11	67	0
Joshua Tree NP website: www/nps.gov/jotr	181	1	11	17	35	37
Keys Ranch tour - CAUTION!	24	0	8	4	25	63
Park brochure/map	344	2	3	13	32	50
Park newspaper: <i>Joshua Tree Guide</i>	173	1	9	28	29	32
Ranger-led programs (walks, talks, etc.) - CAUTION!	15	7	0	27	13	53
Roadside exhibits	206	<1	12	34	31	23
Sales items in visitor center (selection, price, etc.)	88	7	25	35	25	8
Self-guided trail brochures	125	2	6	20	32	41
Trailside exhibits/signs	220	1	10	27	35	27
Visitor center exhibits	170	1	11	38	29	21

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Quality ratings of information services and facilities

Question 11c

Finally, for only those services and facilities that you or your personal group used, please rate their quality.

- 1=Very poor
- 2=Poor
- 3=Average
- 4=Good
- 5=Very good

Results

- Figure 47 shows the combined proportions of “very good” and “good” ratings of information services and facilities that were rated by 30 or more visitor groups.
- The services and facilities receiving the highest combined proportions of “very good” and “good” ratings were:
 - 92% Assistance from entrance station staff
 - 92% Assistance from visitor center staff
 - 87% Park brochure/map
- Table 16 shows the quality ratings of each service and facility.
- The service/facility receiving the highest “very poor” rating that was rated by 30 or more visitor groups was:
 - 10% Assistance from roving rangers

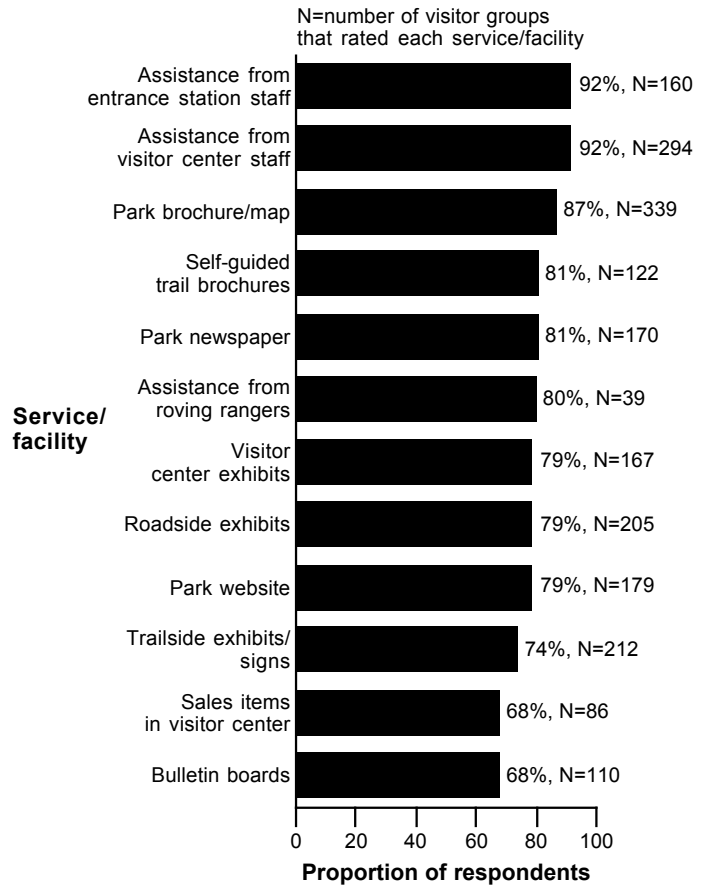


Figure 47. Combined proportions of “very good” and “good” ratings of information services and facilities

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 16. Quality ratings of information services and facilities
(N=number of visitor groups that rated each service and facility)

Service/facility	N	Rating (%)*				
		Very poor	Poor	Average	Good	Very good
Assistance from visitor center staff	294	<1	1	6	30	62
Assistance from entrance staff	160	2	1	6	30	62
Assistance from roving rangers	39	10	3	8	18	62
Bulletin boards	110	0	3	30	45	23
Climbers' coffee - CAUTION!	9	0	0	11	22	67
Joshua Tree NP website: www/nps.gov/jotr	179	0	3	18	45	34
Keys Ranch tour - CAUTION!	22	5	0	0	23	73
Park brochure/map	339	1	2	11	41	46
Park newspaper: <i>Joshua Tree Guide</i>	170	1	1	18	45	36
Ranger-led programs (walks, talks, etc.) - CAUTION!	12	0	0	8	17	75
Roadside exhibits	205	<1	2	19	48	31
Sales items in visitor center (selection, price, etc.)	86	0	9	23	40	28
Self-guided trail brochures	122	0	2	16	38	43
Trailside exhibits/ signs	212	1	2	23	44	30
Visitor center exhibits	167	1	3	17	41	38

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Mean scores of importance and quality ratings of information services and facilities

- Figures 48 and 49 show the mean scores of importance and quality ratings of information and facilities that were rated by 30 or more visitor groups.
- All information services and facilities were rated above average, except sales items in visitor center.

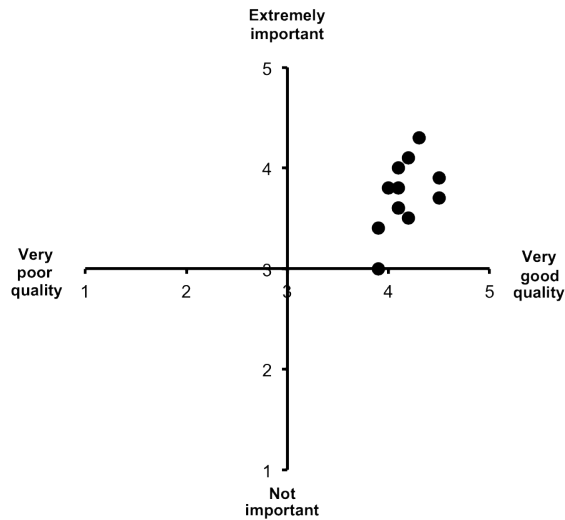


Figure 48. Mean scores of importance and quality of information services and facilities

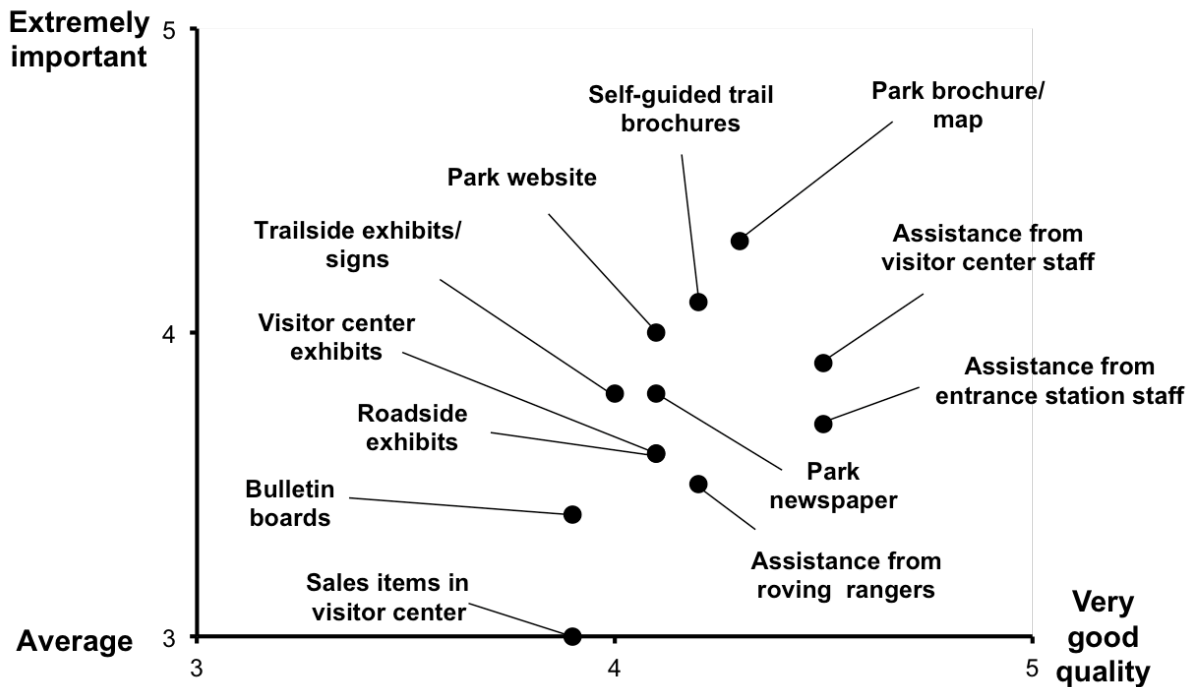


Figure 49. Detail of Figure 48

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitor services and facilities used

Question 12a

Please indicate all the visitor services and facilities that you or your personal group used during this visit to Joshua Tree NP.

Results

- As shown in Figure 50, the most common visitor services and facilities used by visitor groups were:

- 86% Paved roads
- 81% Restrooms
- 81% Directional road signs inside park

- The least used service/facility was:

- <1% Emergency telephone

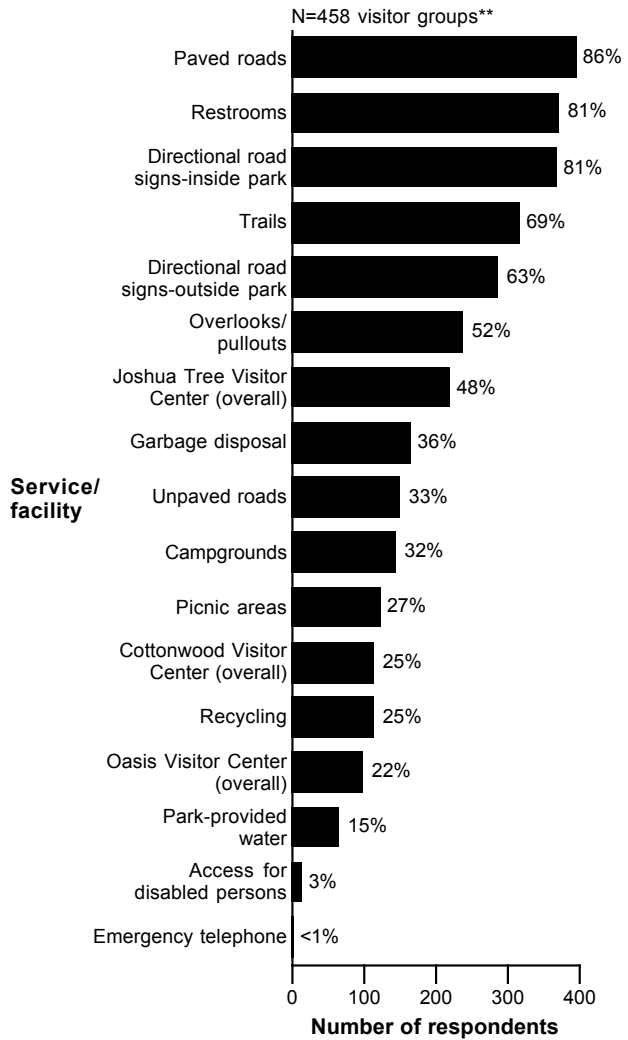


Figure 50. Visitor services and facilities used

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Importance ratings of visitor services and facilities

Question 12b

Next, for only those services and facilities that you or your personal group used, please rate their importance.

- 1=Not important
- 2=Somewhat important
- 3=Moderately important
- 4=Very important
- 5=Extremely important

Results

- Figure 51 shows the combined proportions of “extremely important” and “very important” ratings of visitor services and facilities that were rated by 30 or more visitor groups.
- The visitor services and facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:
 - 97% Campgrounds
 - 92% Trails
 - 91% Park-provided water
 - 90% Restrooms
- Table 17 shows the importance ratings of each service and facility.
- The service/facility receiving the highest “not important” rating that was rated by 30 or more visitor groups was:
 - 3% Unpaved roads

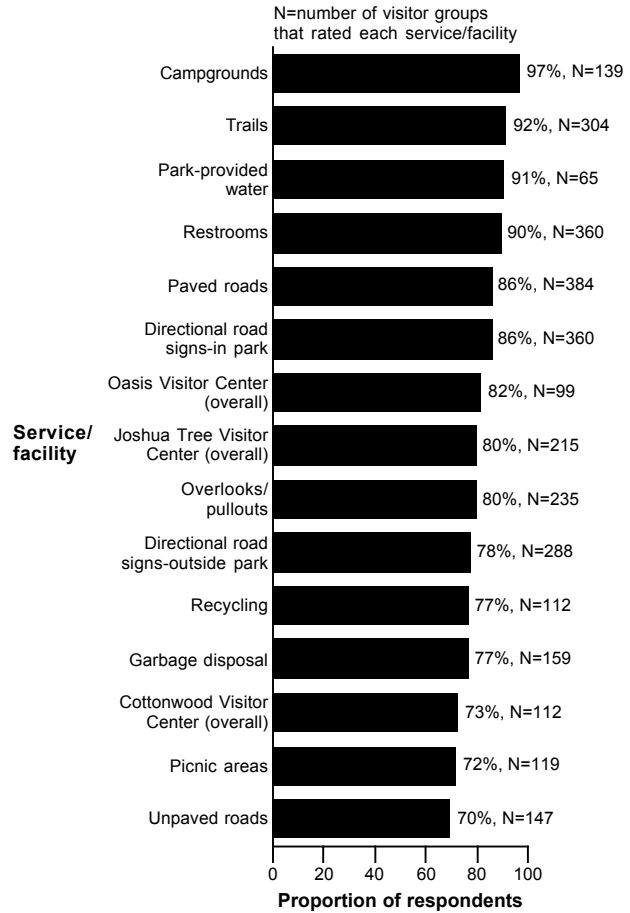


Figure 51. Combined proportions of “extremely important” and “very important” ratings of visitor services and facilities

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 17. Importance ratings of visitor services and facilities
(N=number of visitor groups that rated each service and facility)

Service/facility	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Access for disabled persons – CAUTION!	14	0	7	0	57	36
Campgrounds	139	0	0	3	12	85
Directional road signs outside park	288	1	7	15	37	41
Directional road signs in park	360	1	3	11	36	50
Emergency telephone – CAUTION!	2	0	50	0	0	50
Garbage disposal	159	1	5	17	22	55
Overlooks/pullouts	235	0	3	17	44	36
Park-provided water (at campgrounds and visitor centers)	65	0	3	6	20	71
Paved roads	384	2	1	11	35	51
Unpaved roads	147	3	9	18	33	37
Picnic areas	119	1	3	24	37	35
Recycling	112	1	4	18	24	53
Restrooms	360	1	2	8	23	67
Trails	304	<1	1	7	27	65
Cottonwood Visitor Center (overall)	112	0	4	22	33	40
Joshua Tree Visitor Center (overall)	215	<1	3	16	32	48
Oasis Visitor Center (overall)	99	1	4	13	31	51

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Quality ratings of visitor services and facilities

Question 12c

Finally, for only those services and facilities that you or your personal group used, please rate their quality.

- 1=Very poor
- 2=Poor
- 3=Average
- 4=Good
- 5=Very good

Results

- Figure 52 shows the combined proportions of “very good” and “good” ratings of visitor services and facilities that were rated by 30 or more visitor groups.
- The services and facilities receiving the highest combined proportions of “very good” and “good” ratings were:
 - 92% Paved roads
 - 89% Oasis Visitor Center (overall)
 - 88% Joshua Tree Visitor Center (overall)
 - 88% Trails
- Table 18 shows the quality ratings of each service and facility.
- The service/facility receiving the highest “very poor” rating that was rated by 30 or more visitor groups was:
 - 4% Directional road signs – outside park

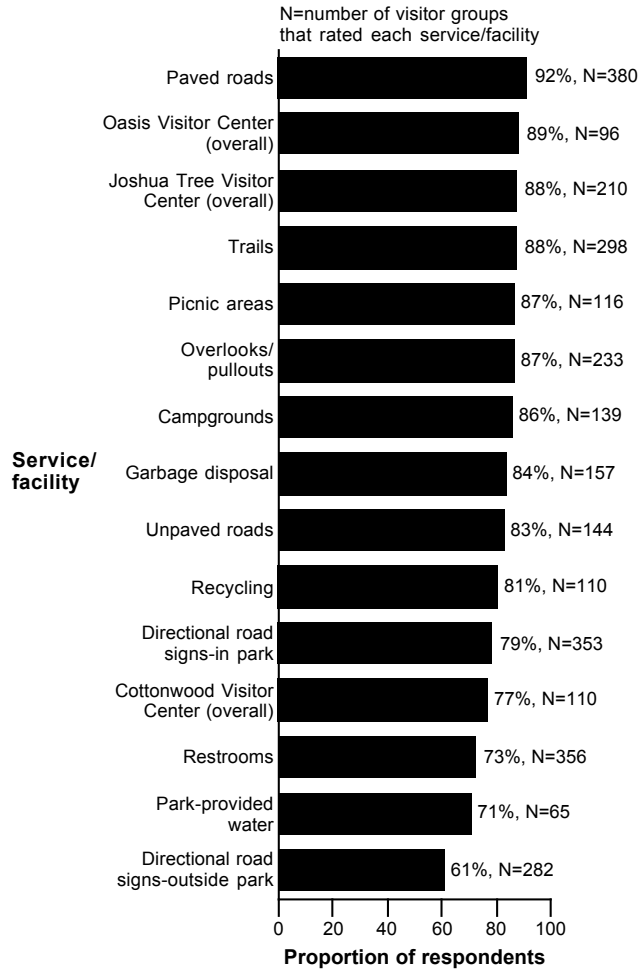


Figure 52. Combined proportions of “very good” and “good” ratings of visitor services and facilities

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 18. Quality ratings of visitor services and facilities
(N=number of visitor groups that rated each service and facility)

Service/facility	N	Rating (%)*				
		Very poor	Poor	Average	Good	Very good
Access for disabled persons – CAUTION!	14	0	0	0	71	29
Campgrounds	139	1	2	11	30	56
Directional road signs – outside park	282	4	7	28	33	28
Directional road signs – in park	353	1	5	16	41	38
Emergency telephone – CAUTION!	2	0	100	0	0	0
Garbage disposal	157	1	3	12	27	57
Overlooks/pullouts	233	<1	<1	12	39	48
Park-provided water (at campgrounds and visitor centers)	65	2	12	15	28	43
Paved roads	380	1	1	6	28	64
Unpaved roads	144	1	2	14	41	42
Picnic areas	116	0	1	12	31	56
Recycling	110	0	5	15	27	54
Restrooms	356	1	4	22	38	35
Trails	298	<1	1	11	41	47
Cottonwood Visitor Center (overall)	110	1	3	19	38	39
Joshua Tree Visitor Center (overall)	210	<1	1	10	34	54
Oasis Visitor Center (overall)	96	0	1	9	33	56

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Mean scores of importance and quality ratings of visitor services and facilities

- Figures 53 and 54 show the mean scores of importance and quality ratings of visitor services and facilities that were rated by 30 or more visitor groups.
- All visitor services and facilities were rated above average.

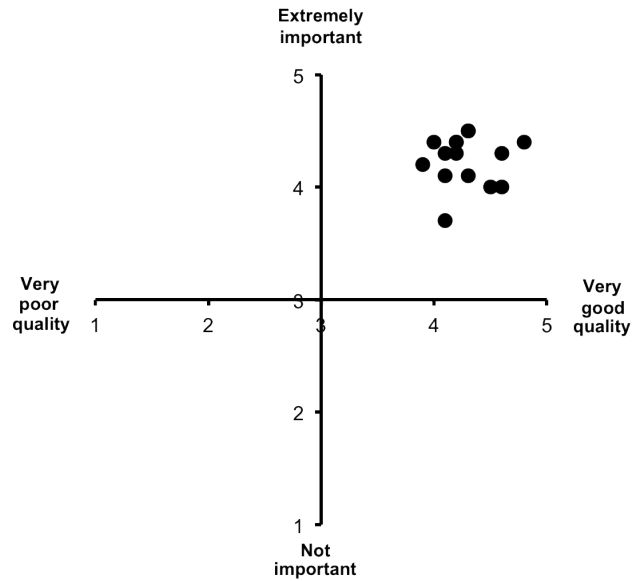


Figure 53. Mean scores of importance and quality of visitor services and facilities

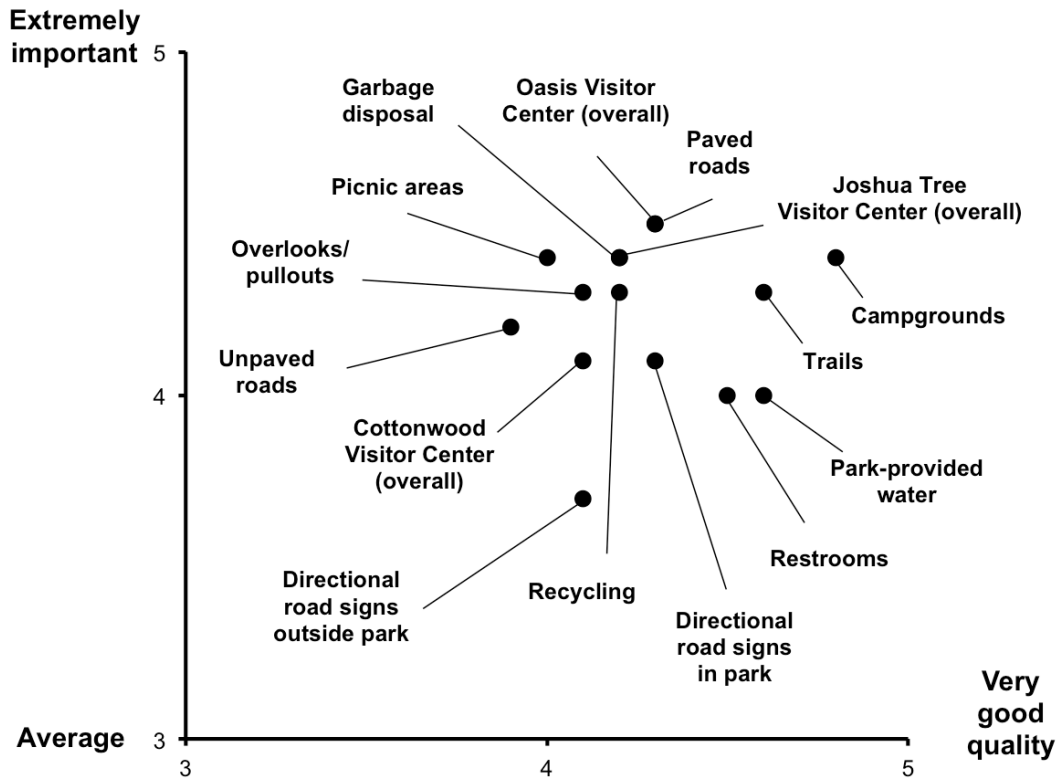


Figure 54. Detail of Figure 53

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Importance of services to enjoyment of park visit

Question 16

How important are the following services to the enjoyment of your visit to Joshua Tree NP?

- 1=Not important
- 2=Somewhat important
- 3=Moderately important
- 4=Very important
- 5=Extremely important

Results

Current services

- Figure 55 shows the combined proportions of “extremely important” and “very important” ratings of current services that were rated by 30 or more visitor groups.
- The services receiving the highest combined proportions of “extremely important” and “very important” ratings were:
 - 57% Availability of park employees and volunteers
 - 57% Availability of emergency medical services
 - 56% Availability of water
- Table 19 shows the importance ratings of each service.
- The service receiving the highest “not important” rating that was rated by 30 or more visitor groups was:
 - 47% Internet/WIFI at visitor centers

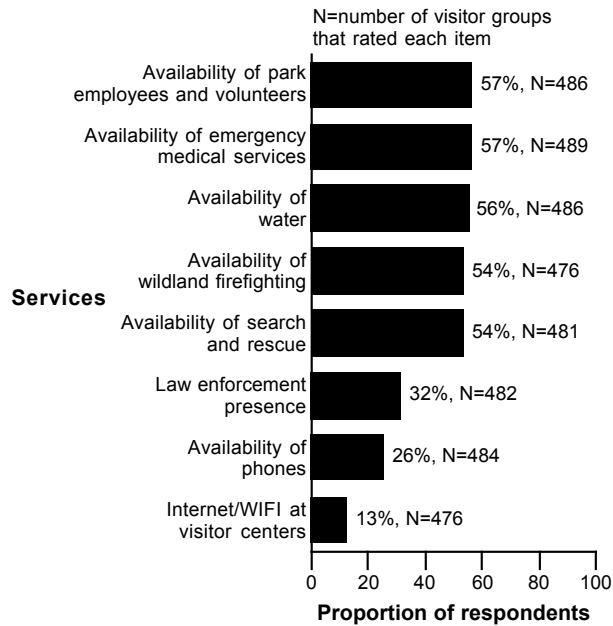


Figure 55. Importance of current services to enjoyment of visit to the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Future service

- 19% of visitor groups rated the importance of a shuttle system in the future to take visitors between major park sites as “extremely important” and “very important” (see Figure 56).
- 57% rated the importance as “not important” or “somewhat important”.
- Table 19 shows the importance ratings of a future shuttle system.

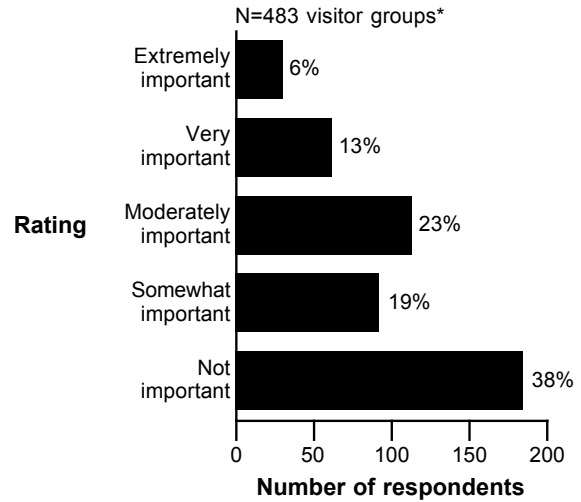


Figure 56. Importance of a future shuttle system to take visitors between major park sites

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 19. Importance ratings of services to the enjoyment of visit to park (N=number of visitor groups that rated each service)

Current service	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Availability of emergency medical services	489	5	13	25	33	24
Availability of park employees & volunteers	486	5	12	26	37	20
Availability of phones	484	28	21	25	17	9
Availability of search and rescue	481	9	16	22	33	21
Availability of water	486	8	12	24	28	28
Availability of wildland firefighting	476	9	13	24	34	20
Internet/WIFI at visitor centers	476	47	22	18	9	4
Law enforcement presence	482	15	24	30	23	9
Future service						
Shuttle system to take visitors between major park sites	483	38	19	23	13	6

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Importance of protecting park attributes and resources

Question 13

Joshua Tree NP was established to preserve and protect outstanding geological features and scenery while conserving natural and cultural resources, and allowing for public enjoyment of these resources. On this visit, how important were the following attributes/resources to you and your personal group?

- 1=Not important
- 2=Somewhat important
- 3=Moderately important
- 4=Very important
- 5=Extremely important

Results

- As shown in Figure 57, the highest combined proportions of “extremely important” and “very important” ratings of protecting park attributes and resources were:

- 90% Views without development
- 89% Clean air
- 87% Natural quiet/ sounds of nature

- Table 20 shows the importance ratings of protecting park attributes and resources were.
- The attribute/resource receiving the highest “not important” rating was:

- 16% Dark, starry night skies

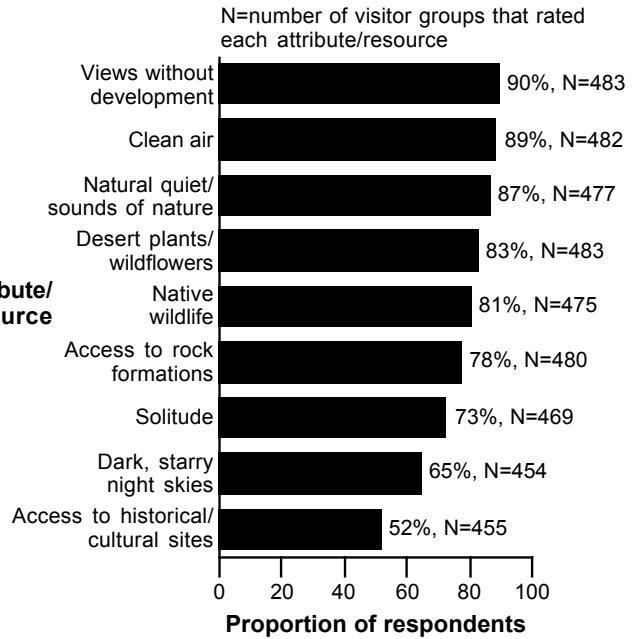


Figure 57. Combined proportions of “extremely important” and “very important” ratings of protecting park attributes and resources

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Table 20. Visitor ratings of importance of protecting park attributes, resources, and experiences (N=number of visitors that rated each attribute/resource/experience)

Attribute/resource	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Access to historical/cultural sites	455	13	11	23	33	19
Access to rock formations	480	4	4	14	34	44
Clean air	482	1	2	9	37	52
Dark, starry night skies	454	16	4	15	24	41
Desert plants/wildflowers	483	1	3	13	33	50
Natural quiet/ sounds of nature	477	1	3	9	31	56
Native wildlife	475	2	4	12	27	54
Solitude	469	4	6	17	33	40
Views without development	483	1	3	6	26	64

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Importance of Joshua trees

Question 23

Some scientists have proposed that Joshua Tree National Park may lose its Joshua trees due to the effects of global climate change in the next 100-150 years. Were you and your personal group aware that Joshua trees are declining and that climate change may be a direct cause?

Results

- 21% of visitor groups were aware that Joshua trees are declining and that climate change may be a direct cause (see Figure 58).

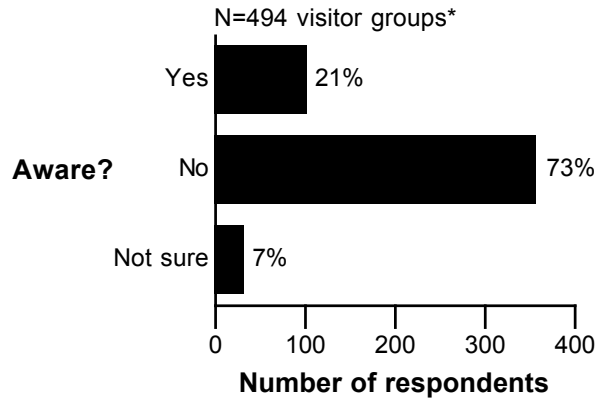


Figure 58. Awareness that climate change may be a direct cause of the decline of Joshua trees

Question 24

To you and your personal group, how important is the presence of healthy Joshua tree populations to the future of Joshua Tree NP?

Results

- 86% of visitor groups felt that the presence of healthy Joshua trees to the future of Joshua Tree NP was “extremely important” or “very important” (see Figure 59).
- Less than 5% rated the trees’ future “not important” or “somewhat important”.

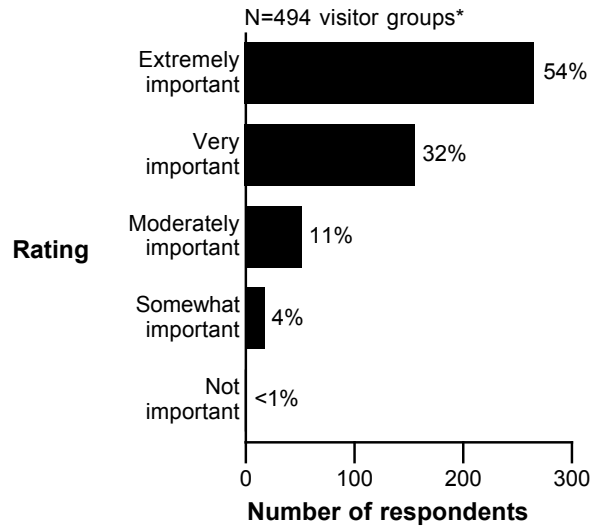


Figure 59. Importance of healthy Joshua trees to the future of Joshua Tree NP

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Opinions about safety

Question 15a

For the questions below, please indicate from 1 to 5 how safe you and your personal group felt from crime and accidents during this visit to Joshua Tree NP.

Results

Personal property – from crime

- 69% of visitor groups felt their personal property was “very safe” from crime in the park (see Figure 60).
- 22% felt “somewhat safe.”

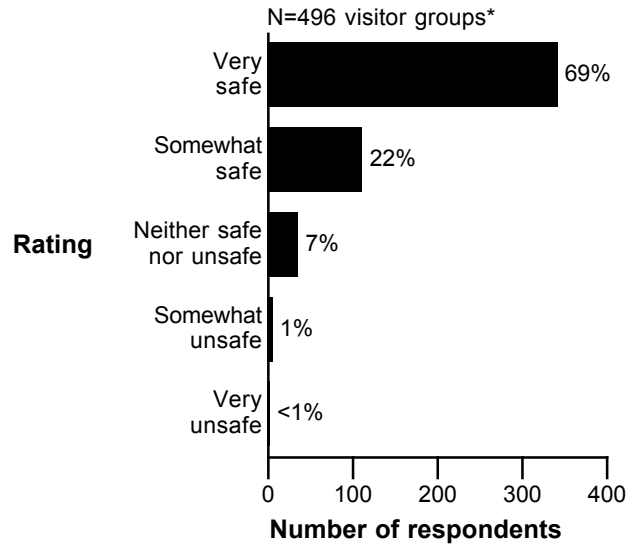


Figure 60. Safety of personal property from crime at Joshua Tree NP

Personal safety – from crime

- 80% of visitor groups felt “very safe” from crime in the park (see Figure 61).
- 15% felt “somewhat safe.”

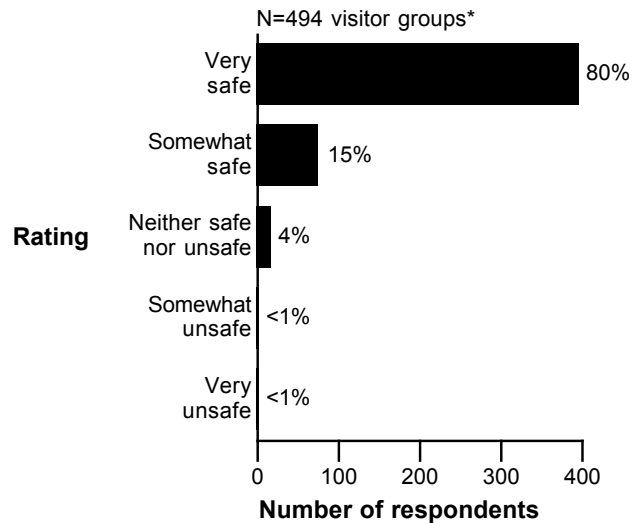


Figure 61. Personal safety from crime at Joshua Tree NP

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Personal safety – from accidents

- 59% of visitor groups felt “very safe” from accidents in the park (see Figure 62).
- 30% felt “somewhat safe.”

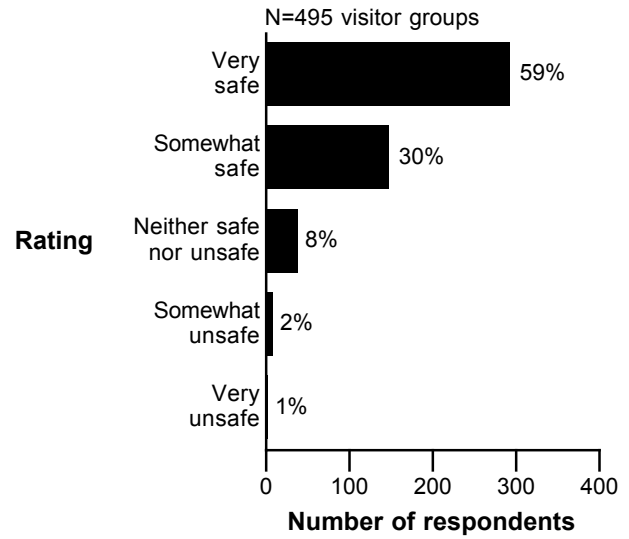


Figure 62. Personal safety from accidents at Joshua Tree NP

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Question 15b

If you marked “very unsafe” or “somewhat unsafe” on any of the above items, please explain why.
(Open-ended)

Results – Interpret with **CAUTION!**

- 26 visitor groups responded to this question.
- Table 21 lists reasons why visitor groups felt “very unsafe” or “somewhat unsafe” in the park.

Table 21. Reasons why visitor groups felt “very unsafe” or “somewhat unsafe” in the park (N=28 comments; some visitor groups made more than one comment) **CAUTION!**

Reasons	Number of times mentioned
Would like to see more rangers on patrol	4
Drivers were speeding	3
Incidence of crime in parks	2
Rock climbing has risks	2
Accidents happen	1
Aware of thefts of climbing gear	1
Climbing	1
College-age hikers seemed hostile	1
Have to pay attention when hiking	1
Lack of bolted anchors	1
Loose gravel by large boulder	1
Newer, safer, camouflaged bolts on anchors would be nice	1
Other campers	1
Parking areas are subject to break-ins/theft	1
Road shoulders are narrow for bicycles	1
Rock scrambling without gear	1
Thieves	1
Trails need some work	1
Was bitten by unleashed dog	1
Was hiking alone	1
Young people late at night	1

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Expenditures

Total expenditures inside and outside the park

Question 17

For you and your personal group, please report all expenditures for the items listed below for this visit to Joshua Tree NP and the surrounding area (Yucca Valley, Joshua Tree, Twentynine Palms).

Results

- 36% of visitor groups spent \$1-\$100 (see Figure 63).
- 22% spent \$401 or more.
- The average visitor group expenditure was \$387.
- The median group expenditure (50% groups spent more and 50% of groups spent less) was \$150.
- The average total expenditure per person (per capita) was \$128.
- As shown in Figure 64, the largest proportions of total expenditures inside and outside the park were:

- 40% Lodges, hotels, motels, cabins, B&Bs, etc.
- 13% Restaurants and bars
- 10% Groceries and take out food
- 10% Gas and oil

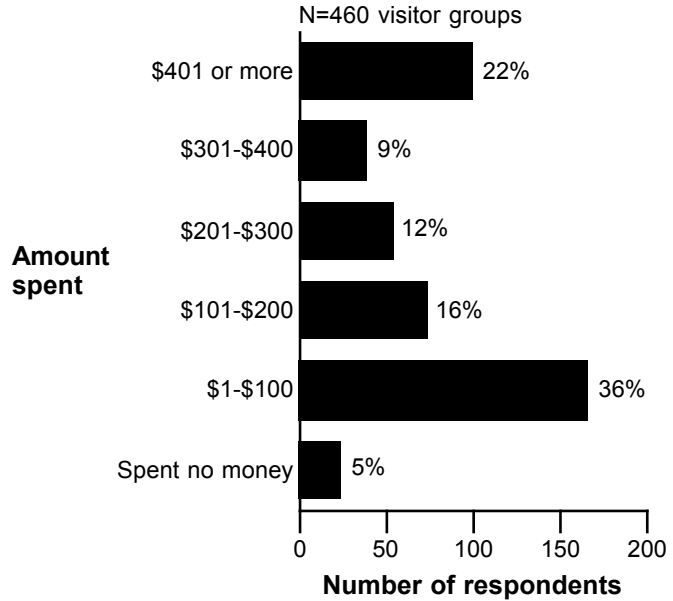


Figure 63. Total expenditures inside and outside the park

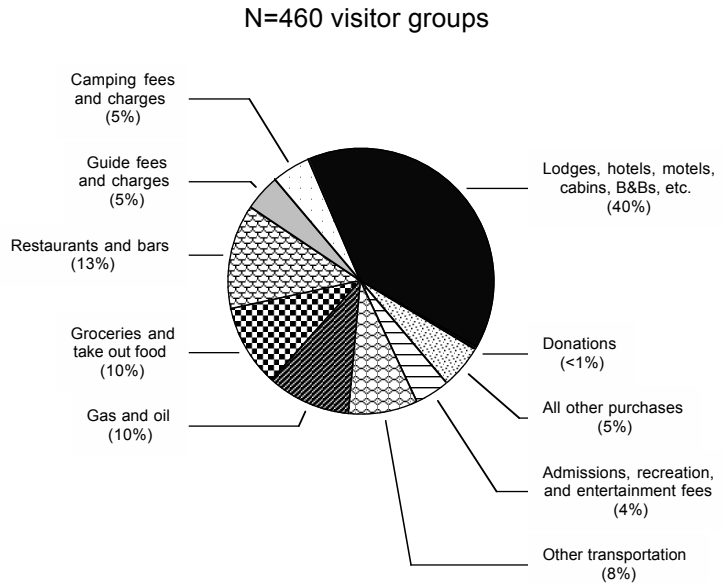


Figure 64. Proportions of total expenditures inside and outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Number of adults covered by expenditures

Question 17c

How many adults (18 years or older) do these expenses cover?

Results

- 63% of visitor groups had two adults covered by expenditures (see Figure 65).
- 19% had 4 or more adults.

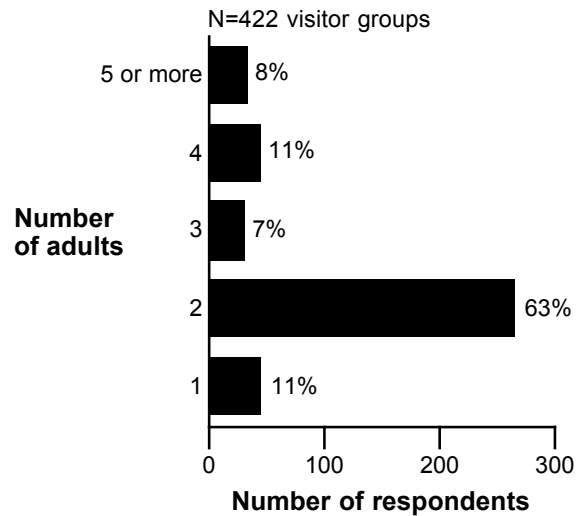


Figure 65. Number of adults covered by expenditures

Number of children covered by expenditures

Question 17c

How many children (under 18 years) do these expenses cover?

Results

- 80% of visitor groups had no children covered by expenditures (see Figure 66).
- 9% had two children.

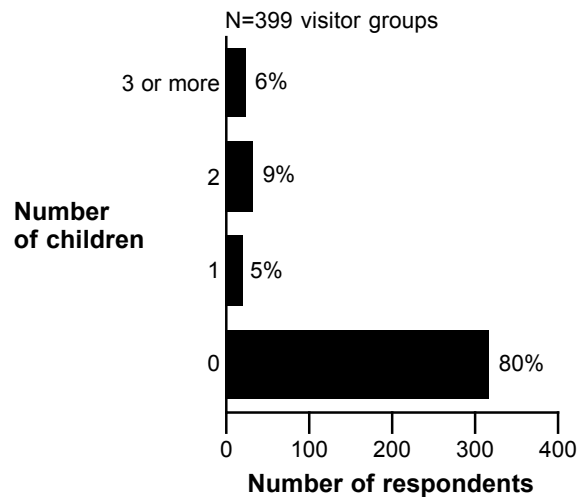


Figure 66. Number of children covered by expenditures

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Expenditures inside the park

Question 17a

Please list your personal group’s total expenditures inside Joshua Tree NP.

Results

- 59% of visitor groups spent \$1-\$50 (see Figure 67).
- 16% spent \$51-\$100 or more.
- The average visitor group expenditure inside the park was \$63.
- The median group expenditure (50% groups spent more and 50% of groups spent less) was \$25.
- The average total expenditure per person (per capita) was \$21.
- As shown in Figure 68, the largest proportions of total expenditures inside the park were:

31% Guide fees and charges
 29% Camping fees and charges

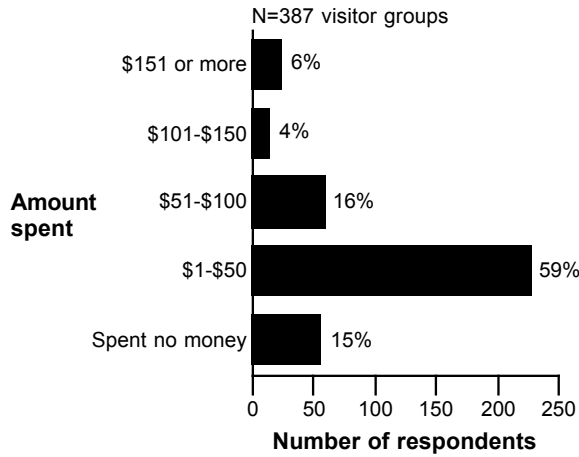


Figure 67. Total expenditures inside the park

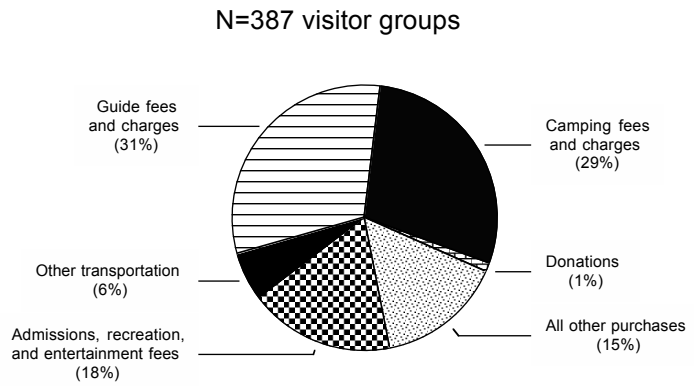


Figure 68. Proportions of total expenditures inside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Camping fees and charges

- 55% of visitor groups spent no money on camping fees and charges inside the park (see Figure 69).
- 27% spent \$1-\$40.

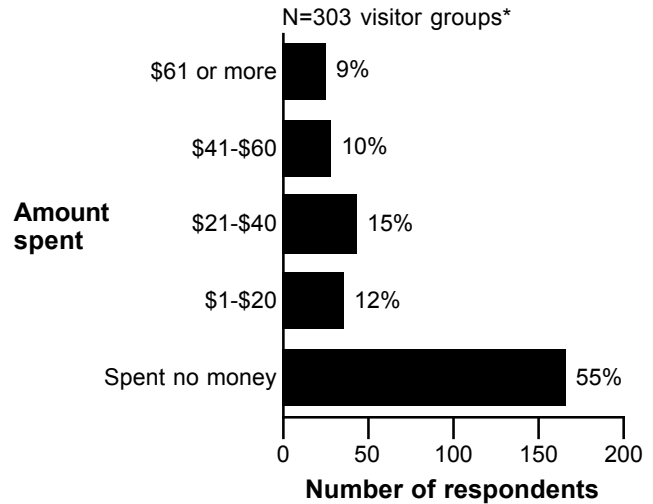


Figure 69. Expenditures for camping fees and charges inside the park

Guide fees and charges

- 87% of visitor groups spent no money on guide fees and charges inside the park (see Figure 70).
- 9% spent \$1-\$20.

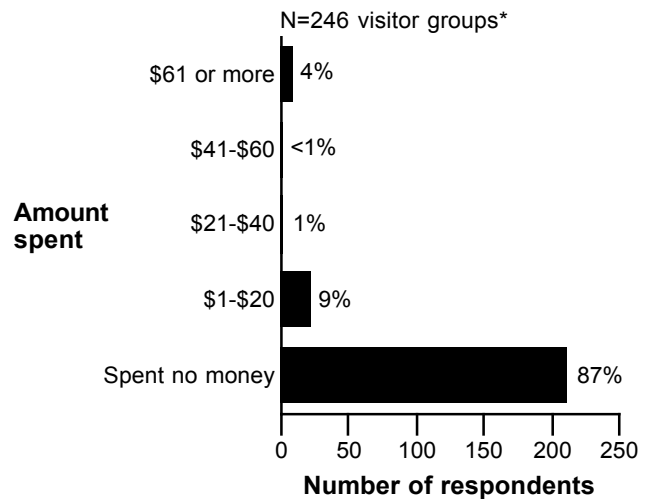


Figure 70. Expenditures for guide fees and charges inside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Other transportation (rental cars, auto repairs, taxis, but not including airfare)

- 95% of visitor groups spent no money on transportation inside the park (see Figure 71).

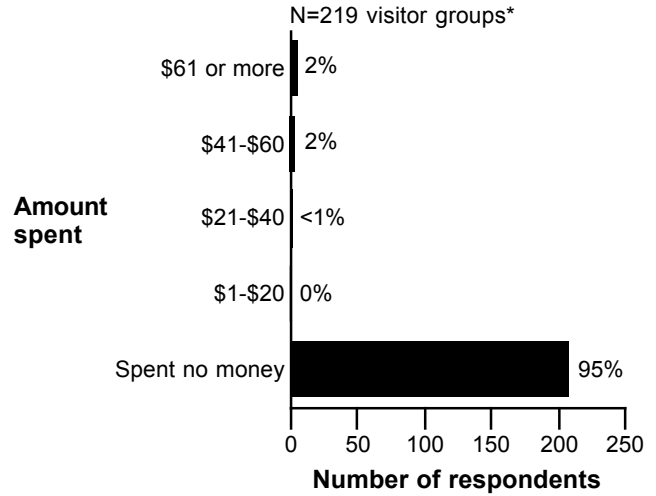


Figure 71. Expenditures for transportation inside the park

Admissions, recreation, and entertainment fees

- 44% of visitor groups spent \$1-\$20 on admissions, recreation, and entertainment fees inside the park (see Figure 72).
- 39% spent no money.

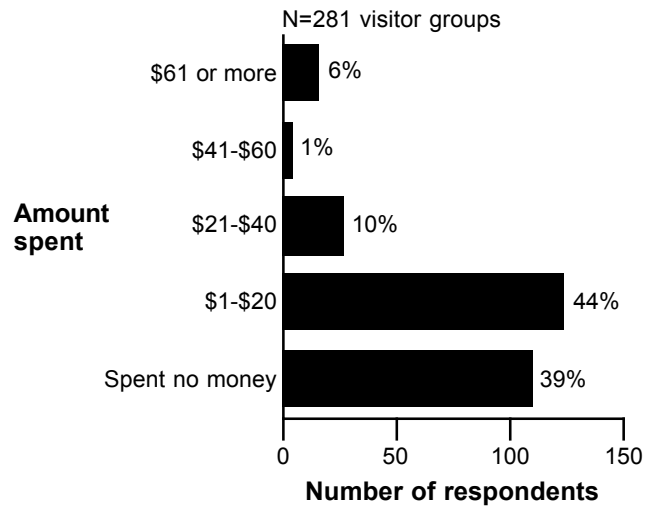


Figure 72. Expenditures for admissions, recreation, and entertainment fees inside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

All other purchases (souvenirs, film, books, sporting goods, clothing, etc.)

- 51% of visitor groups spent no money on all other purchases inside the park (see Figure 73).
- 28% spent \$1-\$20.

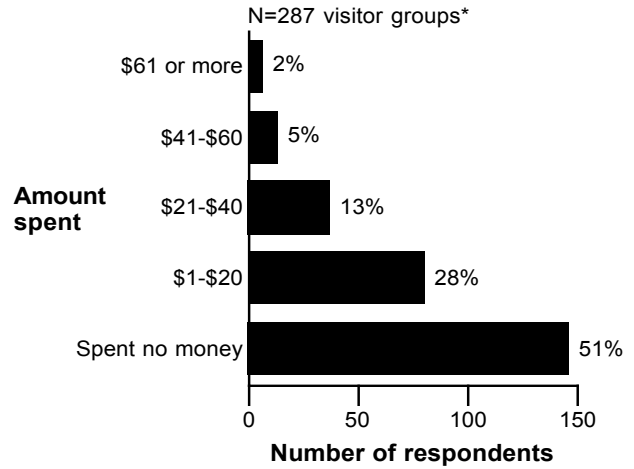


Figure 73. Expenditures for all other purchases inside the park

Donations

- 85% of visitor groups spent no money on donations inside the park (see Figure 74).
- 8% spent \$1-\$5.

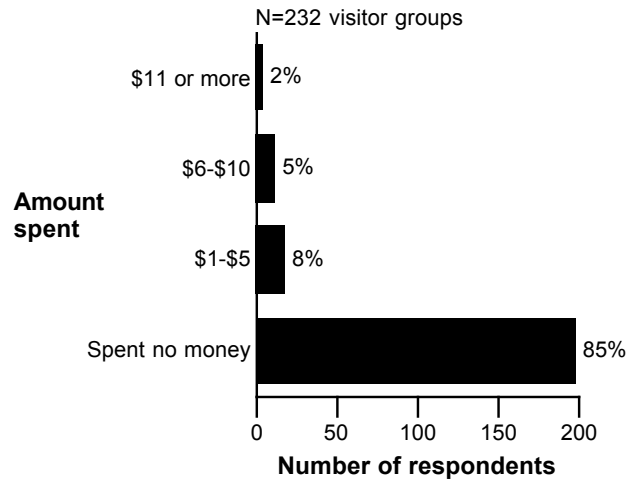


Figure 74. Expenditures for donations inside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Expenditures outside the park

Question 17b

Please list your personal group’s total expenditures in the surrounding area outside the park (Yucca Valley, Joshua Tree, Twentynine Palms).

Results

- 37% of visitor groups spent \$1-\$100 (see Figure 75).
- 20% spent \$401 or more.
- The average visitor group expenditure outside the park was \$356.
- The median group expenditure (50% groups spent more and 50% of groups spent less) was \$115.
- The average total expenditure per person (per capita) was \$133.
- As shown in Figure 76, the largest proportions of total expenditures outside the park were:

- 46% Hotels, motels, cabins, B&Bs, etc.
- 15% Restaurants and bars
- 12% Groceries and take out food
- 12% Gas and oil

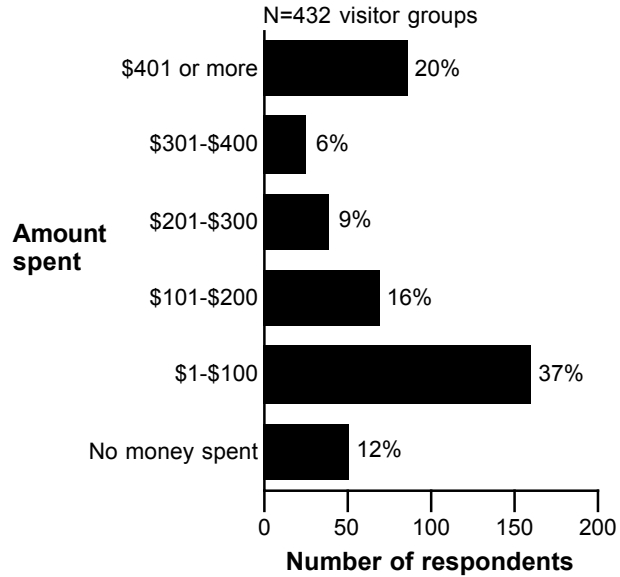


Figure 75. Total expenditures outside the park

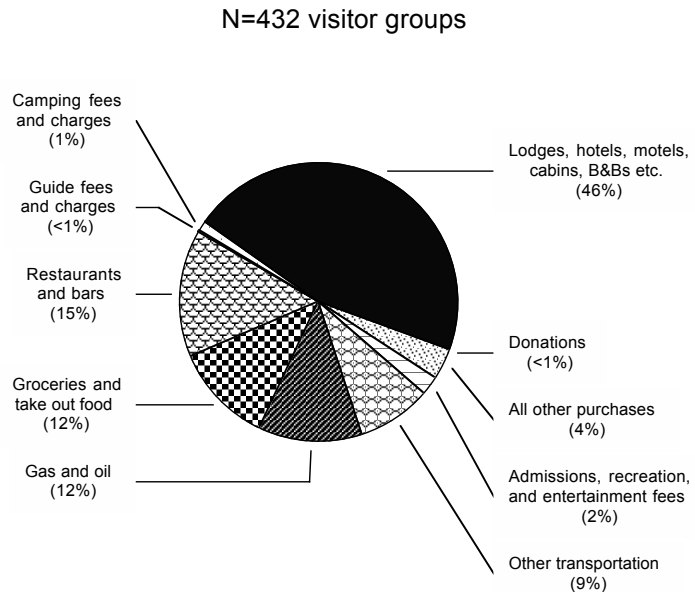


Figure 76. Proportions of total expenditures outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Hotels, motels, cabins, B&Bs, etc.

- 57% of visitor groups spent no money on lodging outside the park (see Figure 77).
- 24% spent \$1-\$200.

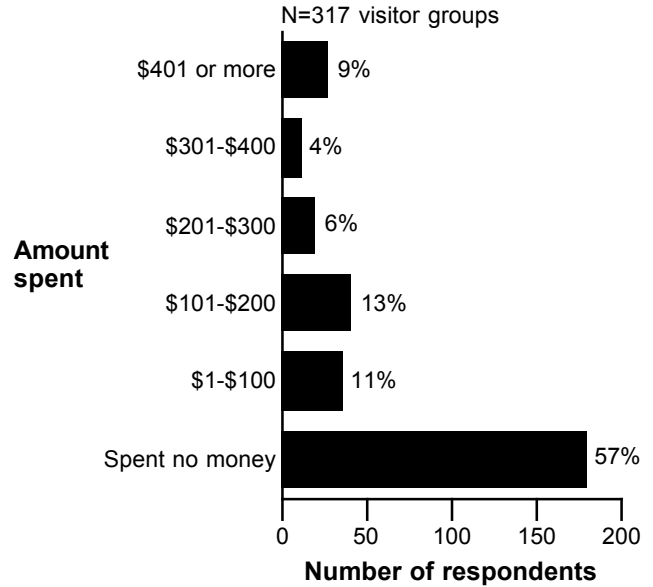


Figure 77. Expenditures for lodging outside the park

Camping fees and charges

- 96% of visitor groups spent no money on camping fees and charges outside the park (see Figure 78).

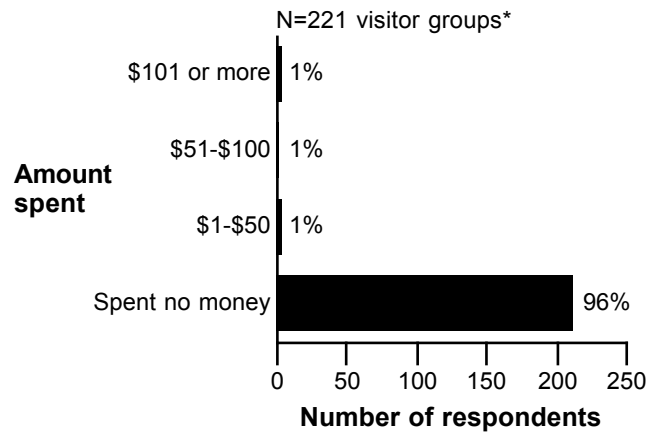


Figure 78. Expenditures for camping fees and charges outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Guide fees and charges

- 99% of visitor groups spent no money on guide fees and charges outside the park (see Figure 79).

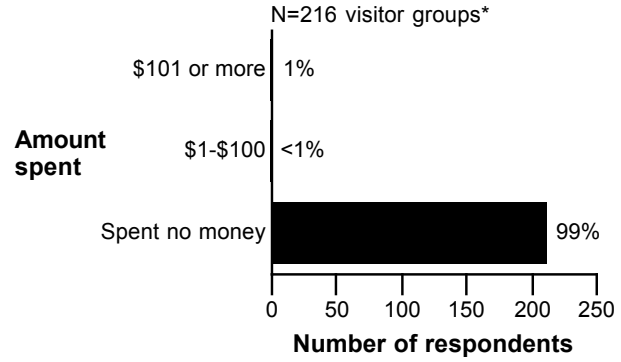


Figure 79. Expenditures for guide fees and charges outside the park

Restaurants and bars

- 49% of visitor groups spent \$1-\$100 on restaurants and bars outside the park (see Figure 80).
- 37% spent no money.

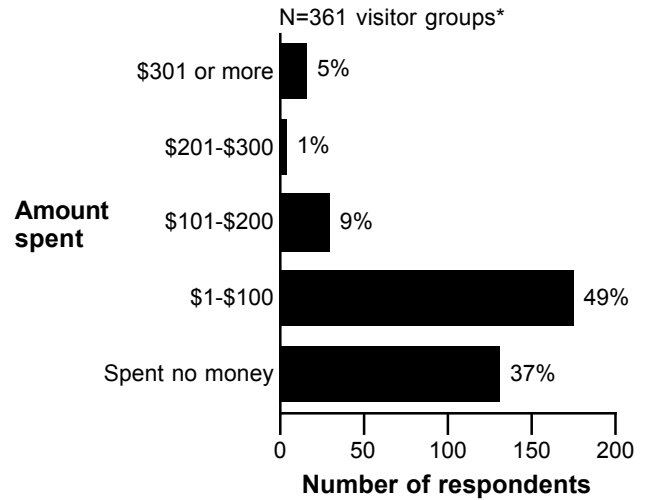


Figure 80. Expenditures for restaurants and bars outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Groceries and take out food

- 43% of visitor groups spent \$1-\$50 on groceries and take out food outside the park (see Figure 81).
- 34% spent no money.

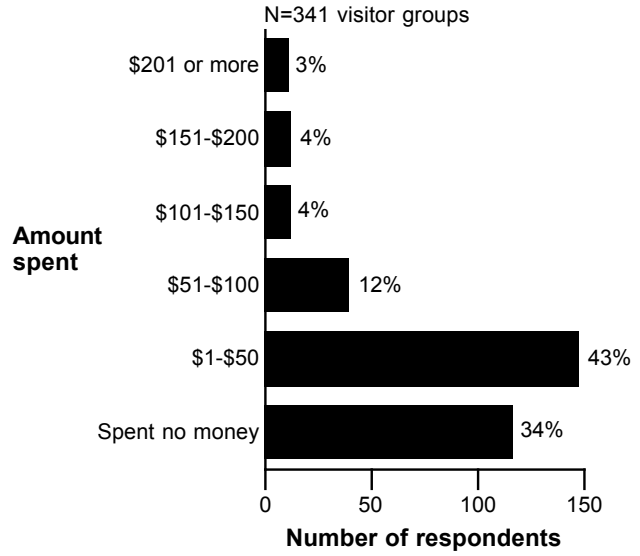


Figure 81. Expenditures for groceries and take out food outside the park

Gas and oil (auto, RV, boat, etc.)

- 57% of visitor groups spent \$1-\$50 on gas and oil outside the park (see Figure 82).
- 19% spent \$51-\$100
- 19% spent no money.

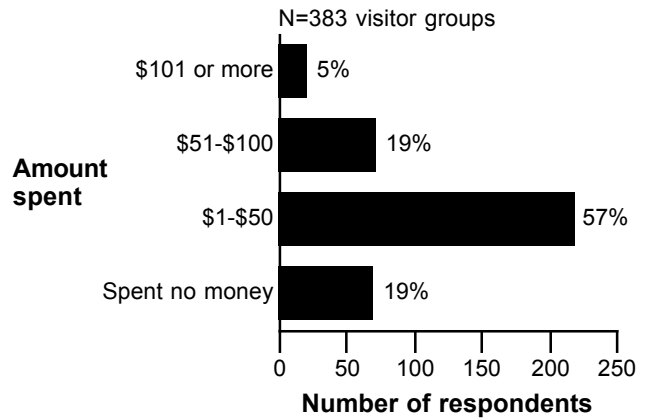


Figure 82. Expenditures for gas and oil outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Other transportation (rental cars, taxis, auto repairs, but NOT airfare)

- 77% of visitor groups spent no money on other transportation outside the park (see Figure 83).
- 13% spent \$101 or more.

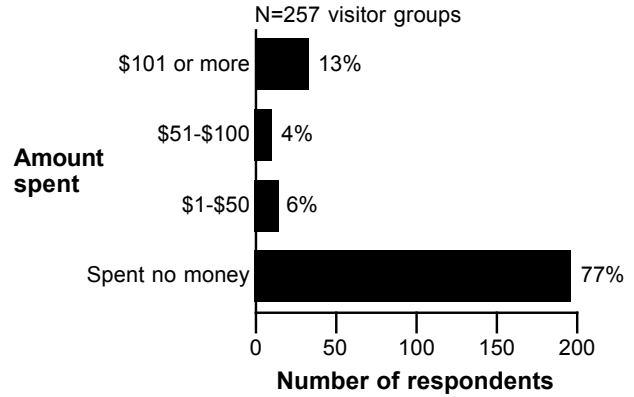


Figure 83. Expenditures for other transportation outside the park

Admissions, recreation, and entertainment fees

- 82% of visitor groups spent no money on admissions, recreation, and entertainment fees outside the park (see Figure 84).
- 10% spent \$1-\$20.

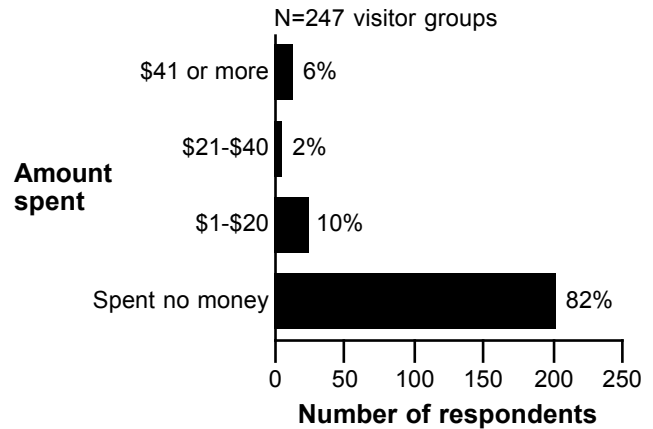


Figure 84. Expenditures for admissions, recreation, and entertainment fees outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

All other purchases (souvenirs, film, books, sporting goods, clothing, etc.)

- 67% of visitor groups spent no money on all other purchases outside the park (see Figure 85).
- 21% spent \$1-\$50.

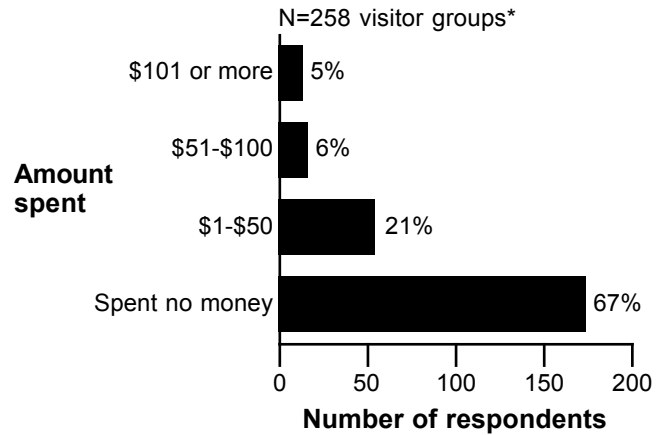


Figure 85. Expenditures for all other purchases outside the park

Donations

- 96% of visitor groups spent no money on donations outside the park (see Figure 86).

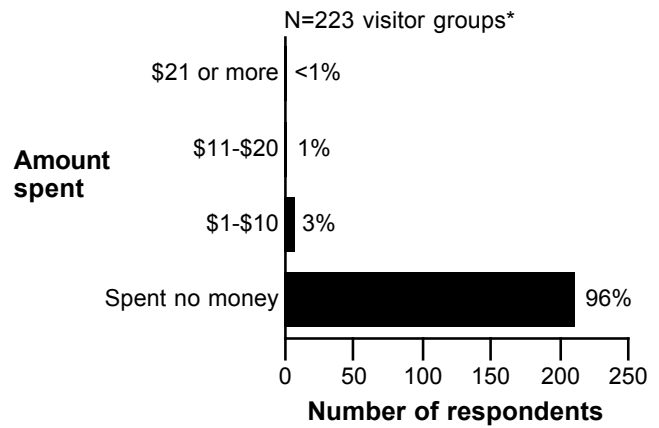


Figure 86. Expenditures for donations outside the park

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Overall Quality

Question 27

Overall, how would you and your personal group rate the quality of facilities, services, and recreational opportunities at Joshua Tree NP during this visit?

Results

- 96% of visitor groups rated the overall quality of facilities, services, and recreational opportunities as “very good” or “good” (see Figure 87).
- 1% of visitor groups rated the quality as “very poor” or “poor”.

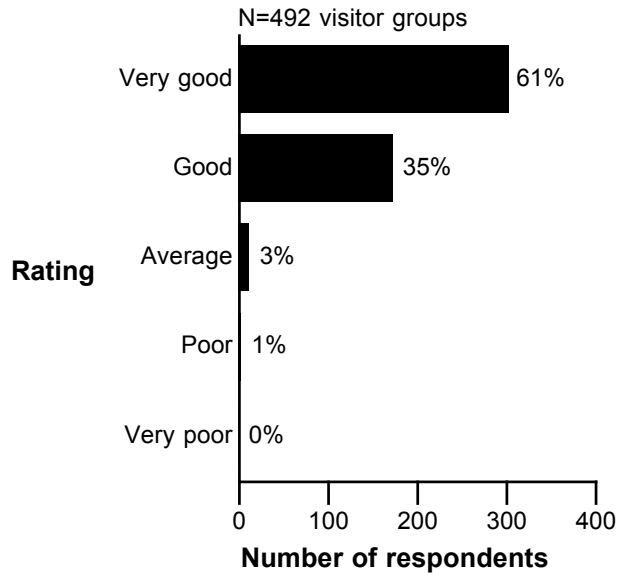


Figure 87. Overall quality rating of facilities, services, and recreational opportunities

*total percentages do not equal 100 due to rounding

**total percentages do not equal 100 because visitors could select more than one answer

Visitor Comment Summaries

Planning for the future

Question 25

If you were a manager planning for the future of Joshua Tree NP, what would you and personal group propose?
(Open-ended)

Results

- 58% of visitor groups (N=292) responded to this question.
- Table 22 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

Table 22. Planning for the future
(N=447 comments; some visitor groups made more than one comment.)

Comment	Number of times mentioned
PERSONNEL (2%)	
More rangers on patrol	5
More rangers	2
INTERPRETIVE SERVICES (15%)	
Inform general public about need to protect Joshua trees	16
Educate visitors to protect resources	13
More ranger programs	10
Improve website	2
More detailed information on interpretive signs	2
More ranger/educational programs	2
More roadside exhibits	2
Other comments	26
FACILITIES/MAINTENANCE (25%)	
Improve/repair trail signage	11
More campsites/campgrounds	9
More water available throughout park	7
Add recycling bins/program	5
Water at campsites	5
Improve road signs for locations of sites/trailheads	4
More moderate-length hikes	4
Provide showers	4
Bike lanes/routes/trails	3
Larger road signs	3
Limit climbers' unnecessary trails	3
Hand sanitizers in restrooms	2

Table 22. Planning for the future (continued)

Comment	Number of times mentioned
FACILITIES/MAINTENANCE (continued)	
Improve campgrounds	2
Improve roads	2
Improve signage	2
Longer hiking trails	2
Maintain current facilities/cleanliness	2
More nature/loop trails	2
No additional roads	2
Trails for wheelchairs	2
Other comments	36
POLICIES/MANAGEMENT (45%)	
Institute shuttle system in park	25
Protect the park	15
No additional development	15
Keep the park pristine/untouched/less developed	12
Limit vehicle use/access in park	9
Continue present management	7
Install emergency phones	7
Keep the park as it is	7
Keep visitors/climbers on trails	7
Protect park from surrounding development	6
Address/support protection from global climate change	5
Advertise/market the park	5
Cell phone access/coverage	5
Limit visitation	5
Allow campground reservations	4
Keep the park natural	4
Limit areas open to public	4
Park is well-managed	4
Increase park land/expand boundaries	3
Ban RVs from the park	2
Develop support organizations	2
Do not commercialize	2
Generator-free zones in campground	2
Increase fees to help maintain park	2
Limit/ban ORV use	2
More wilderness areas	2
Restrict use of bouldering pads	2
Trails for dogs on leash	2
Other comments	34

Table 22. Planning for the future (continued)

Comment	Number of times mentioned
RESOURCE MANAGEMENT (8%)	
Preserve/propagate Joshua trees	16
Protect dark night skies	11
Protect/restore wildlife/plants	7
Other comments	3
CONCESSION SERVICES (2%)	
Food services inside park	3
Lodging in park	2
Sell firewood	2
Other comments	3
GENERAL COMMENTS (4%)	
Fine as is	5
Keep up the good work	3
Other comments	9

Additional comments

Question 26

Is there anything else you and your personal group would like to tell us about your visit to Joshua Tree NP?
(Open-ended)

Results

- 55% of visitor groups (N=275) responded to this question.
- Table 23 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

Table 23. Additional comments
(N=490 comments; some visitor groups made more than one comment.)

Comment	Number of times mentioned
PERSONNEL (8%)	
Helpful staff/rangers	12
Great job/your work is appreciated	4
Great rangers/staff	4
Friendly rangers/staff	3
Kind staff	3
Great volunteer at visitor center	2
Other comments	11
INTERPRETIVE SERVICES (8%)	
Improve the park map (details of sites, trails, etc.)	6
Continue to create opportunities to inform and educate	3
Loved the Junior Ranger program	3
More detailed information (about vegetation, birds, geology, etc.)	3
Climbers Coffee program is effective	2
Improve the newspaper	2
Map information and signs are inconsistent	2
Other comments	20
FACILITIES/MAINTENANCE (16%)	
Park is well maintained/clean	13
Improve trail signage	8
Improve directional signage on roads	4
Restrooms were clean	3
Good campgrounds	3
Good services/facilities	3
Impressed with the recycling/trash disposal availability	2
Improve recycling facilities	2
Nice trails	2
Nice, new roads	2
Pick up trash	2
Other comments	28

Table 23. Additional comments (continued)

Comment	Number of times mentioned
POLICIES/MANAGEMENT (8%)	
Preserve the park	5
Accommodations in park too expensive	2
Combat climate change	2
Keep climbing access open/preserved	2
Keep focus on nature/leave nature alone	2
Many cars/noise from cars is concerning	2
Need some trails for dogs	2
Questionnaire too long	2
Weekends and holidays are too crowded	2
Other comments	16
CONCESSION SERVICES (1%)	
Comments	5
RESOURCE MANAGEMENT (1%)	
Love wildlife	2
Other comments	4
GENERAL COMMENTS (60%)	
Enjoyed visit	58
Love the park	24
Beautiful	23
Wonderful park/place	22
Will return	21
Thank you	13
A favorite place	11
Repeat visitor	9
Had limited time/only drove through	8
Great climbing opportunities	7
Peaceful/quiet	7
We were impressed/better than expected	6
Unique national park	5
Will return to camp	5
Enjoyed solitude	4
Fascinating geology/rocks	4
Magical/unparalleled park	4
Will recommend to others	4
Diverse/unusual landscapes	3
Fewer Joshua trees than expected	3
Would have liked to have seen more wildlife	3
Enjoyed dark skies	2
Enjoyed scrambling on the rocks	2
Global warming is largely natural	2
Love the national park system	2
Nearby resident	2
Other comments	36

Visitor Comments

This section contains visitor responses to open-ended questions.

Appendix 1: The Questionnaire

Appendix 2: Additional Analysis

The Visitor Services Project (VSP) offers the opportunity to learn from VSP visitor study data through additional analysis. Two-way and three-way cross tabulations can be made with any questions.

Below are some examples of the types of cross tabulations that be requested. To make a request, please use the contact information below, and include your name, address and phone number in the request.

1. What proportion of family groups with children attend interpretive programs?
2. Is there a correlation between visitors ages and their preferred sources of information about the park?
3. Are highly satisfied visitors more likely to return for a future visit?
4. How many international visitors participate in hiking?
5. What ages of visitors would use the park website as a source of information on a future visit?
6. Is there a correlation between visitor groups' rating of the overall quality of their park experience, and their ratings of individual services and facilities?
7. Do larger visitor groups (e.g. four or more) participate in different activities than smaller groups?
8. Do frequent visitors rate the overall quality of their park experiences differently than less frequent visitors?

The VSP database website (<http://vsp.uidaho.edu>) allows data searches for comparisons of data from one or more parks.

For more information please contact:

Visitor Services Project, PSU
College of Natural Resources
P.O. Box 441139
University of Idaho
Moscow, ID 83843-1139

Phone: 208-885-7863
Fax: 208-885-4261
Email: littlej@uidho.edu
Website: <http://www.psu.uidaho.edu>

Appendix 3: Decision Rules for Checking Non-response Bias

There are several methods for checking non-response bias. However, the most common way is to use some demographic indicators to compare between respondents and non-respondents (Dey 1997; Salant and Dillman 1994; Dillman and Carley-Baxter 2000; Dillman, 2007; Stoop 2004). In this study, group type, group size and age of the group member (at least 16 years old) completing the survey were three variables that were used to check for non-response bias.

A Chi-square test was used to detect the difference in the response rates among different group types. The hypothesis was that group types are equally represented. If p-value is greater than 0.05, the difference in group type is judged to be insignificant.

Two independent-sample T-tests were used to test the differences between respondents and non-respondents. The p-values represent the significance levels of these tests. If p-value is greater than 0.05, the two groups are judged to be insignificantly different.

Therefore, the hypotheses for checking non-response bias are:

1. Respondents from different group types are equally represented
2. Average age of respondents – average age of non-respondents = 0
3. Average group size of respondents – average group size of non-respondents = 0

As shown in Table 3, the p-value for respondent/non-respondent group size test is greater than 0.05, indicating insignificant differences between respondents and non-respondents. Table 4 shows no significant difference in group type. Thus, non-response bias for group structure is judged to be insignificant.

The p-value for respondent/non-respondent age test is less than 0.05 indicating significant age differences between respondents and non-respondents. In regard to age difference, various reviews of survey methodology (Dillman and Carley-Baxter 2000; Goudy 1976, Fillion 1976, Mayer and Pratt Jr. 1967) have consistently found that in public opinion surveys, average respondent ages tend to be higher than average non-respondent ages. This difference is often caused by other reasons such as availability of free time rather than problems with survey methodology. In addition, because unit of analysis for this study is a visitor group, the group member who received the questionnaire may be different than the one who actually completed it after the visit. Sometimes the age of the actual respondent is higher than the age of the group member who accepted the questionnaire at the park. This survey had a similar issue like other mail-back surveys that it may be biased toward a higher age range.

References

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- Salant, P. and Dillman, D. A. (1994). *How to Conduct Your Own Survey*. U.S.: John Wiley and Sons, Inc.
- Stoop, I. A. L. (2004). Surveying Non-respondents. *Field Methods*, 16 (1): 23.

Appendix 4: Visitor Services Project Publications

All VSP reports are available on the Park Studies Unit website at www.psu.uidaho.edu.vsp.reports. All studies were conducted in summer unless otherwise noted.

1982

1. Mapping interpretive services: A pilot study at Grand Teton National Park.

1983

2. Mapping interpretive services: Identifying barriers to adoption and diffusion of the method.
3. Mapping interpretive services: A follow-up study at Yellowstone National Park and Mt Rushmore National Memorial.
4. Mapping visitor populations: A pilot study at Yellowstone National Park.

1985

5. North Cascades National Park Service Complex
6. Crater Lake National Park

1986

7. Gettysburg National Military Park
8. Independence National Historical Park
9. Valley Forge National Historical Park

1987

10. Colonial National Historical Park (summer & fall)
11. Grand Teton National Park
12. Harpers Ferry National Historical Park
13. Mesa Verde National Park
14. Shenandoah National Park (summer & fall)
15. Yellowstone National Park
16. Independence National Historical Park: Four Seasons Study

1988

17. Glen Canyon National Recreational Area
18. Denali National Park and Preserve
19. Bryce Canyon National Park
20. Craters of the Moon National Monument

1989

21. Everglades National Park (winter)
22. Statue of Liberty National Monument
23. The White House Tours, President's Park

1989 (continued)

24. Lincoln Home National Historic Site
25. Yellowstone National Park
26. Delaware Water Gap National Recreation Area
27. Muir Woods National Monument

1990

28. Canyonlands National Park (spring)
29. White Sands National Monument
30. National Monuments & Memorials, Washington, D.C.
31. Kenai Fjords National Park
32. Gateway National Recreation Area
33. Petersburg National Battlefield
34. Death Valley National Monument
35. Glacier National Park
36. Scott's Bluff National Monument
37. John Day Fossil Beds National Monument

1991

38. Jean Lafitte National Historical Park (spring)
39. Joshua Tree National Monument (spring)
40. The White House Tours, President's Park (spring)
41. Natchez Trace Parkway (spring)
42. Stehekin-North Cascades NP/Lake Chelan NRA
43. City of Rocks National Reserve
44. The White House Tours, President's Park (fall)

1992

45. Big Bend National Park (spring)
46. Frederick Douglass National Historic Site (spring)
47. Glen Echo Park (spring)
48. Bent's Old Fort National Historic Site
49. Jefferson National Expansion Memorial
50. Zion National Park
51. New River Gorge National River
52. Klondike Gold Rush National Historical Park, AK
53. Arlington House-The Robert E. Lee Memorial

Visitor Services Project Publications (continued)**1993**

- 54. Belle Haven Park/Dyke Marsh Wildlife Park (spring)
- 55. Santa Monica Mountains National Recreation Area (spring)
- 56. Whitman Mission National Historic Site
- 57. Sitka National Historical Park
- 58. Indiana Dunes National Lakeshore
- 59. Redwood National Park
- 60. Channel Islands National Park
- 61. Pecos National Historical Park
- 62. Canyon de Chelly National Monument
- 63. Bryce Canyon National Park (fall)

1994

- 64. Death Valley National Monument Backcountry (winter)
- 65. San Antonio Missions National Historical Park (spring)
- 66. Anchorage Alaska Public Lands Information Center
- 67. Wolf Trap National Park for the Performing Arts
- 68. Nez Perce National Historical Park
- 69. Edison National Historic Site
- 70. San Juan Island National Historical Park
- 71. Canaveral National Seashore
- 72. Indiana Dunes National Lakeshore (fall)
- 73. Gettysburg National Military Park/ Eisenhower National Historic Site (fall)

1995

- 74. Grand Teton National Park (winter)
- 75. Yellowstone National Park (winter)
- 76. Bandelier National Monument
- 77. Wrangell-St. Elias National Park & Preserve
- 78. Adams National Historic Site
- 79. Devils Tower National Monument
- 80. Manassas National Battlefield Park
- 81. Booker T. Washington National Monument
- 82. San Francisco Maritime National Historical Park
- 83. Dry Tortugas National Park

1996

- 84. Everglades National Park (spring)
- 85. Chiricahua National Monument (spring)

1996 (continued)

- 86. Fort Bowie National Historic Site (spring)
- 87. Great Falls Park, Virginia (spring)
- 88. Great Smoky Mountains National Park
- 89. Chamizal National Memorial
- 90. Death Valley National Park (fall)
- 91. Prince William Forest Park (fall)
- 92. Great Smoky Mountains National Park (fall and summer)

1997

- 93. Virgin Islands National Park (winter)
- 94. Mojave National Preserve (spring)
- 95. Martin Luther King, Jr., National Historic Site (spring)
- 96. Lincoln Boyhood National Memorial
- 97. Grand Teton National Park
- 98. Bryce Canyon National Park
- 99. Voyageurs National Park
- 100. Lowell National Historical Park

1998

- 101. Jean Lafitte National Historical Park & Park (spring)
- 102. Chattahoochee River National Recreation Area (spring)
- 103. Cumberland Island National Seashore (spring)
- 104. Iwo Jima/Netherlands Carillon Memorials
- 105. National Monuments & Memorials, Washington, D.C.
- 106. Klondike Gold Rush National Historical Park, AK
- 107. Whiskeytown National Recreation Area
- 108. Acadia National Park

1999

- 109. Big Cypress National Preserve (winter)
- 110. San Juan National Historic Site, Puerto Rico (winter)
- 111. St. Croix National Scenic Riverway
- 112. Rock Creek Park
- 113. New Bedford Whaling National Historical Park
- 114. Glacier Bay National Park & Preserve
- 115. Kenai Fjords National Park
- 116. Lassen Volcanic National Park
- 117. Cumberland Gap National Historical Park (fall)

Visitor Services Project Publications (continued)**2000**

- 118. Haleakala National Park (spring)
- 119. White House Tour and White House Visitor Center (spring)
- 120. USS Arizona Memorial
- 121. Olympic National Park
- 122. Eisenhower National Historic Site
- 123. Badlands National Park
- 124. Mount Rainier National Park

2001

- 125. Biscayne National Park (spring)
- 126. Colonial National Historical Park (Jamestown)
- 127. Shenandoah National Park
- 128. Pictured Rocks National Lakeshore
- 129. Crater Lake National Park
- 130. Valley Forge National Historical Park

2002

- 131. Everglades National Park (spring)
- 132. Dry Tortugas National Park (spring)
- 133. Pinnacles National Monument (spring)
- 134. Great Sand Dunes National Park & Preserve
- 135. Pipestone National Monument
- 136. Outer Banks Group (Cape Hatteras National Seashore, Ft. Raleigh National Historic Site, and Wright Brothers National Memorial)
- 137. Sequoia & Kings Canyon National Parks and Sequoia National Forest
- 138. Catoclin Mountain Park
- 139. Hopewell Furnace National Historic Site
- 140. Stones River National Battlefield (fall)

2003

- 141. Gateway National Recreation Area: Floyd Bennett Field (spring)
- 142. Cowpens National Battlefield (spring)
- 143. Grand Canyon National Park – North Rim
- 144. Grand Canyon National Park – South Rim
- 145. C&O Canal National Historical Park
- 146. Capulin Volcano National Monument
- 147. Oregon Caves National Monument
- 148. Knife River Indian Villages National Historic Site
- 149. Fort Stanwix National Monument
- 150. Arches National Park

2003 continued

- 151. Mojave National Preserve (fall)

2004

- 152. Joshua Tree National Park (spring)
- 153. New River Gorge National River
- 154. George Washington Birthplace National Monument
- 155. Craters of the Moon National Monument & Preserve
- 156. Dayton Aviation Heritage National Historical Park
- 157. Apostle Islands National Lakeshore
- 158. Keweenaw National Historical Park
- 159. Effigy Mounds National Monument
- 160. Saint-Gaudens National Historic Site
- 161. Manzanar National Historic Site
- 162. John Day Fossil Beds National Monument

2005

- 163. Congaree National Park (spring)
- 164. San Francisco Maritime National Historical Park (spring)
- 165. Lincoln Home National Historic Site
- 166. Chickasaw National Recreation Area
- 167. Timpanogos Cave National Monument
- 168. Yosemite National Park
- 169. Fort Sumter National Monument
- 170. Harpers Ferry National Historical Park
- 171. Cuyahoga Valley National Park
- 172. Johnstown Flood National Memorial
- 173. Nicodemus National Historic Site

2006

- 174. Kings Mountain National Military Park (spring)
- 175. John Fitzgerald Kennedy National Historic Site
- 176. Devils Postpile National Monument
- 177. Mammoth Cave National Park
- 178. Yellowstone National Park
- 179. Monocacy National Battlefield
- 180. Denali National Park & Preserve
- 181. Golden Spike National Historic Site
- 182. Katmai National Park and Preserve
- 183. Zion National Park (spring and fall)

Visitor Services Project Publications (continued)**2007**

- 184.1. Big Cypress National Preserve (spring)
- 184.2. Big Cypress National Preserve (ORV Permit Holder/Camp Owner)
- 185. Hawaii Volcanoes National Park (spring)
- 186. Glen Canyon National Recreation Area (spring and summer)
- 187. Lava Beds National Monument
- 188. John Muir National Historic Site
- 189. Fort Union Trading Post NHS
- 190. Fort Donelson National Battlefield
- 191. Agate Fossil Beds National Monument
- 192. Mount Rushmore National Memorial
- 193. Ebey's Landing National Historical Reserve
- 194. Rainbow Bridge National Monument
- 195. Independence National Historical Park
- 196. Minute Man National Historical Park

2008

- 197. Blue Ridge Parkway (fall and summer)
- 198. Yosemite National Park (winter)
- 199. Everglades National Park (winter and spring)
- 200. Horseshoe Bend National Military Park (spring)
- 201. Carl Sandburg Home National Historic Site (spring)
- 202. Fire Island National Seashore resident (spring)
- 203. Fire Island National Seashore visitor
- 204. Capitol Reef National Park
- 205.1 Great Smoky Mountains National Park (summer)
- 205.2 Great Smoky Mountains National Park (fall)
- 206. Grand Teton National Park
- 207. Herbert Hoover National Historic Site
- 208. City of Rocks National Reserve

2009

- 209. Fort Larned National Historic Site
- 210. Homestead National Monument of America
- 211. Minuteman Missile National Historic Site

2009 (continued)

- 212. Perry's Victory & International Peace Memorial
- 213. Women's Rights National Historical Park
- 214. Klondike Gold Rush – Seattle Unit National Historical Park
- 215. Yosemite National Park
- 216. Sleeping Bear Dunes National Lakeshore
- 217. James A. Garfield National Historic Site
- 218. Boston National Historical Park
- 219. Bryce Canyon National Park
- 220. Indiana Dunes National Lakeshore
- 221. Acadia National Park
- 222. Laurance S. Rockefeller Preserve
- 223. Martin Van Buren National Historic Site

2010

- 224.1 Death Valley National Park (fall)
- 224.2 Death Valley National Park (spring)
- 225. San Juan National Historic Site (spring)
- 226. Ninety Six National Historic Site (spring)
- 227. Kalaupapa National Historical Park (fall and winter)
- 228. Little River Canyon National Preserve
- 229. George Washington Carver National Monument
- 230. Chattahoochee River National Recreation Area
- 231. Black Canyon of the Gunnison National Park
- 232. Fort Union National Monument
- 233. Curecanti National Recreation Area
- 234. Richmond National Battlefield
- 235. Rocky Mountain National Park
- 236. New Bedford Whaling National Historical Park
- 237. Wind Cave National Park
- 238. Niobrara National Scenic River
- 239. Delaware Water Gap National Recreation Area
- 240. Fossil Butte National Monument
- 241.1 Joshua Tree National Park (fall)
- 242. Chiricahua National Monument (spring)
- 243. Fort Bowie National Historic Site (spring)

For more information about the Visitor Services Project, please contact the University of Idaho Park Studies Unit, website: www.psu.uidaho.edu or phone (208) 885-7863.

The Department of the Interior protects and manages nation's natural resources and cultural heritage; provides scientific and other information about those resources; and honors its special responsibilities to American Indians, Alaska Natives, and affiliated Island Communities.

NPS 156/111374 October 2011

**National Park Service
U.S. Department of the Interior**

Natural Resource Stewardship and Science



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