



Social Science Program  
National Park Service  
U.S. Department of the Interior

Visitor Services Project



# Lava Beds National Monument

## Visitor Study

Spring – Summer 2007



University of Idaho

Park Studies Unit  
Visitor Services Project  
Report 187





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# **Lava Beds National Monument Visitor Study Spring - Summer 2007**

**Park Studies Unit  
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Report 187**

February 2008

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**Visitor Services Project  
Lava Beds National Monument  
Report Summary**

- This report describes the results of a visitor study at Lava Beds National Monument during May 25 - June 8, 2007. A total of 340 questionnaires were distributed to visitor groups. Of those, 223 questionnaires were returned resulting in a 65.6% response rate.
- This report profiles a systematic random sample of Lava Beds National Monument. Most results are presented in graphs and frequency tables. Summaries of visitor comments are included in the report and complete comments are included in the Visitor Comments Appendix.
- Fifty-one percent of visitor groups were in groups of two and 16% were in groups of five or more. Sixty-six percent of visitor groups were in family groups.
- United States visitors were from California (47%), Oregon (26%), Washington, (8%) and 18 other states. International visitors, comprising 9% of the total visitation, were from Germany (13%), United Kingdom (8%), and 11 other countries.
- Forty-eight percent of visitors were ages 41-70 years and 35% were ages 30 years or younger.
- Seventy-three percent of visitors visited the park once in their lifetime.
- Prior to this visit, visitor groups most often obtained information about Lava Beds National Monument through maps and brochures (44%), the park website (41%), and friends/relatives/word of mouth (34%). Nine percent of visitor groups did not obtain any information about the park prior to their visit.
- Of those visitor groups who spent less than 24 hours at the park, 33% percent stayed up to six hours. Of those that spent more than 24 hours in the park, 41% stayed for two days. The average length of stay was 14.4 hours.
- Regarding lodging that visitor groups used during their stay, 82% stayed in a campground or RV trailer park inside the park, and 71% stayed in a lodge, hotel, motel, or cabin outside the park.
- Most visitor groups (95%) were able to obtain needed support services from communities in the area (within 60 miles of the park). Over one-half (60%) obtained services in Klamath Falls.
- Regarding use, importance, and quality of visitor services and facilities, it is important to note the number of visitor groups that responded to each question. The most used services/facilities included restrooms (91%), the visitor center (91%), and the park brochure/map (90%). The services/facilities that received the highest combined proportions of “extremely important” and “very important” ratings included campgrounds (92%, N=41) and restrooms (90%, N=179). The services/facilities that received the highest combined proportions of “very good” and “good” quality ratings were assistance from park staff (93%, N=134) and the visitor center (93% N=174).
- The average group expenditure within and outside the park (within 60 miles of the park) was \$206, with a median (50% paid more and 50% paid less) of \$113. Average total expenditure per person was \$71.
- Most visitor groups (93%) rated the overall quality of services, facilities, and recreational opportunities at Lava Beds National Monument as “very good” or “good.” Less than 1% of visitor 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>.



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## INTRODUCTION

This report describes the results of a visitor study at Lava Beds NM during May 25 – June 8, 2007 by the National Park Service (NPS) Visitor Services Project (VSP), part of the Park Studies Unit (PSU) at the University of Idaho.

### **Organization of the report**

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The report is organized into three sections.

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

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

#### **Section 3: Appendices**

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

Appendix 2: *Additional Analysis.* A list of options for cross-references and cross comparisons. These comparisons can be analyzed within park or between parks. Results of additional analyses are not included in this report as they may only be requested after the results of this study have been published.

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 of publications by the PSU. Copies of these reports can be obtained by visiting the website:

<http://www.psu.uidaho.edu/vsp/reports.htm> or contacting the PSU office at (208) 885-7863.

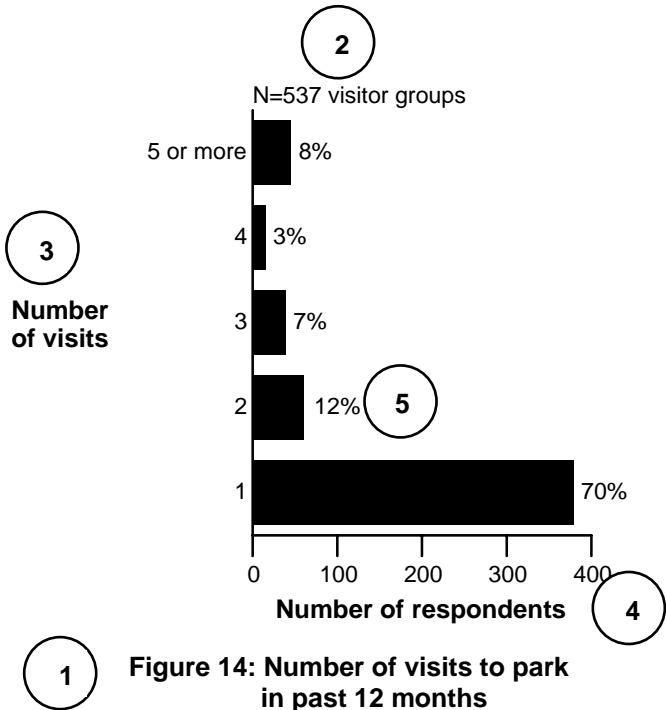
Visitor Comments Appendix: A separate appendix provides visitor responses to open-ended questions. It is bound separately from this report due to its size.

**Presentation of the results**

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

**SAMPLE ONLY**

- 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 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 park in past 12 months**

## METHODS

### Survey Design

#### 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* (2000). Using this methodology, the sample size was calculated based on park visitation statistics of previous years.

Brief interviews were conducted with a systematic, random sample of visitor groups that arrived at Lava Beds National Monument during May 25 – June 8, 2007. During this survey, 354 visitor groups were contacted and 340 of these groups (98.8%) accepted questionnaires. Table 1 presents the locations and numbers of questionnaires distributed at each location. Questionnaires were completed and returned by 223 visitor groups resulting in a 65.6% response rate for this study.

**Table 1: Questionnaire distribution locations**  
N=number of questionnaires distributed

Sampling site	N	Percent of total
Gillems Camp	222	65
Visitor Center	118	35
Total	340	100

#### Questionnaire design

The Lava Beds National Monument questionnaire was developed at a workshop held with park staff to design and prioritize the questions. Some of the questions were comparable with VSP studies conducted at other parks while others were customized for Lava Beds National Monument. 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 Lava Beds National Monument questionnaire. However, all questions followed 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 of age) 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 for their names,

addresses, and telephone numbers in order to mail them 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. 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.

### **Data Analysis**

Returned questionnaires were coded and the information was entered into a computer using custom and standard statistical software applications—Statistical Package for the Social Sciences (SPSS), and a custom designed FileMaker Pro application. Descriptive statistics and cross-tabulations were calculated for the coded data and responses to open-ended questions were categorized and summarized. The data were entered twice—by two independent data entry staff—and validated by a third staff member.

### **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 to the selected sites during the study period of May 25 – June 8, 2007. 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. Inconsistencies arise 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 was mostly warm and sunny. This was typical weather for the area during May and June.

### Checking Non-response Bias

The three variables used to check non-response bias were group type, age of the group member who actually completed the questionnaire, and group size.

Table 2 shows insignificant differences between group types. As shown in Table 3, there are significant differences between respondent and non-respondent ages and insignificant differences between respondent and non-respondent group sizes. See Appendix 3 for more details of the non-response bias checking procedure.

**Table 2: Comparison of respondents and non-respondents  
group type**

Group type	Respondents	Total distributed	Expected value
Alone	21	33	22
Family	138	192	126
Friends	12	28	18
Family and friends	37	62	41
Other	11	20	13
Total	219	335	

Chi-square = 4.065      df = 4      p-value = 0.397

**Table 3: Comparison of respondents and non-respondents  
age and group size**

Variable	Respondent		Non-respondent		p-value (t-test)
	N	Average	N	Average	
Group size	211	3.44	108	3.16	0.552
Age	208	47.53	115	39.34	<0.001

Two out of three tests show insignificant differences between respondents and non-respondents. In addition, a five-year difference in average age in most mail surveys is an expected trend (see Appendix 3). Therefore, the response bias is judged to be insignificant. The data is a good representation of a larger Lava Beds NM visitor population for the duration of the survey period.

## RESULTS

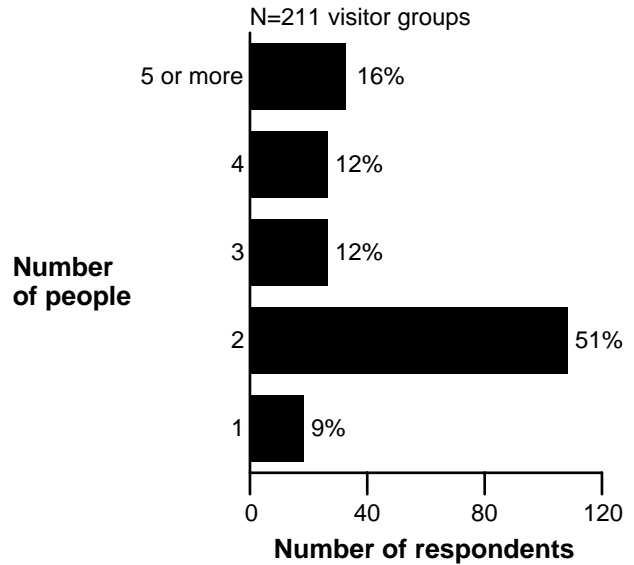
### Demographics

#### Visitor group size

**Question 23a**  
On this visit, how many people were in your personal group, including yourself?

**Results**

- 51% of visitors were in groups of two (see Figure 1).
- 24% were in groups of three or four.
- 16% were in groups of five or more.



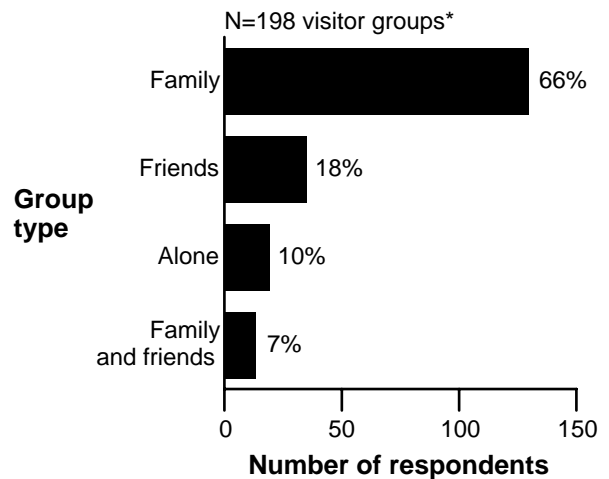
**Figure 1: Visitor group size**

#### Visitor group type

**Question 22**  
On this visit, what kind of personal group (not guided tour/school/other organized group) were you with?

**Results**

- 66% of visitor groups were made up of family members (see Figure 2).
- 18% were with friends.
- 10% were alone.



**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

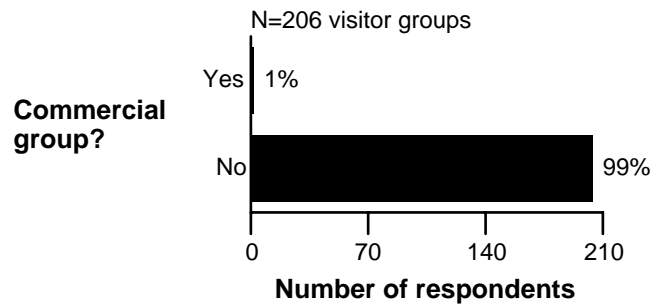
**Visitors with organized groups**

**Question 21a**

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).



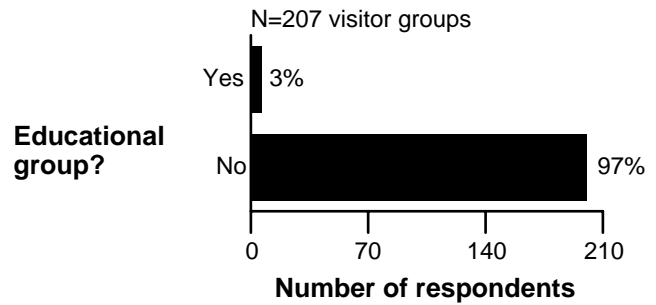
**Figure 3: Visitors with a commercial guided tour group**

**Question 21b**

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

**Results**

- 3% of visitor groups were with a school/educational group (see Figure 4).



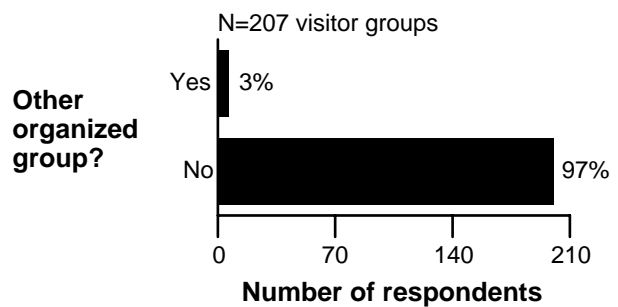
**Figure 4: Visitors with a school/educational group**

**Question 21c**

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

**Results**

- 3% of visitor groups were traveling with an other organized group (see Figure 5).



**Figure 5: Visitors traveling with an other organized group**

\*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 24c

For you and your personal group  
what is your state of residence?

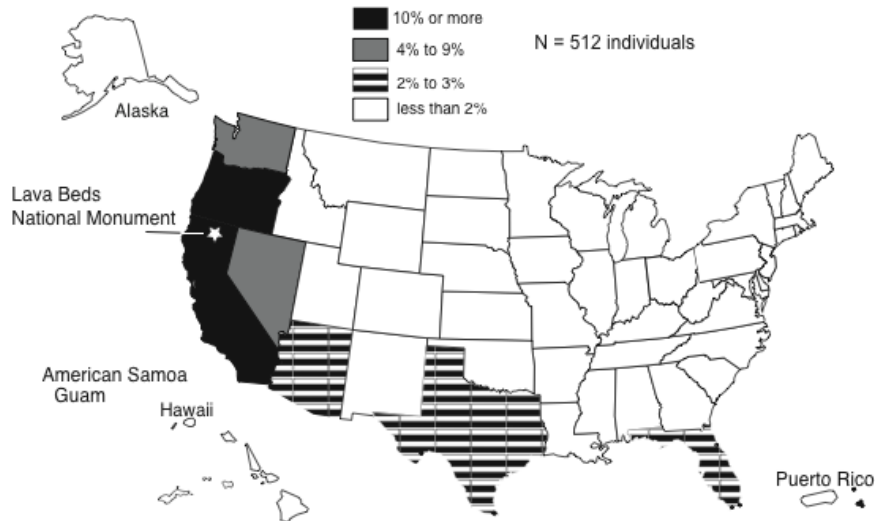
**Table 4: United States visitors by state of residence\***

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

**Results**

- U.S. visitors were from 21 states and comprised 91% of total visitation to the park during the survey period.
- 47% of U.S. visitors came from California (see Table 4 and Map 1).
- 26% came from Oregon and 8% came from Washington.
- The remaining U.S. visitors came from 18 other states.

State	Number of visitors	Percent of U.S. visitors N=512	Percent of total visitors N=565
California	239	47	42
Oregon	132	26	23
Washington	43	8	8
Nevada	24	5	4
Arizona	14	3	2
Texas	9	2	2
Florida	8	2	1
Pennsylvania	6	1	1
Missouri	5	1	1
New York	5	1	1
Idaho	4	1	1
Colorado	3	1	1
Illinois	3	1	1
Maryland	3	1	1
Minnesota	3	1	1
Indiana	2	<1	<1
Nebraska	2	<1	<1
Utah	2	<1	<1
Virginia	2	<1	<1
Wisconsin	2	<1	<1
North Carolina	1	<1	<1



**Map 1: Proportions of 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



## International visitors by country of residence

Question 24c

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

**Table 5: International visitors by country of residence \***

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

### Results

- International visitors were from 13 countries and comprised 9% of total visitation to the park during the survey period.
- 25% of international visitors came from Germany (see Table 5).
- 15% came from the United Kingdom and 11% from the Czech Republic.
- Smaller portions came from 10 other countries

Country	Number of visitors	Percent of international visitors N=53 individuals	Percent of total visitors N=565 individuals
Germany	13	25	2
United Kingdom	8	15	1
Czech Republic	6	11	1
Canada	5	9	<1
India	4	8	<1
Singapore	4	8	<1
Australia	2	4	<1
Austria	2	4	<1
China	2	4	<1
France	2	4	<1
Ireland	2	4	<1
Netherlands	2	4	<1
Italy	1	2	<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 visits to the park**

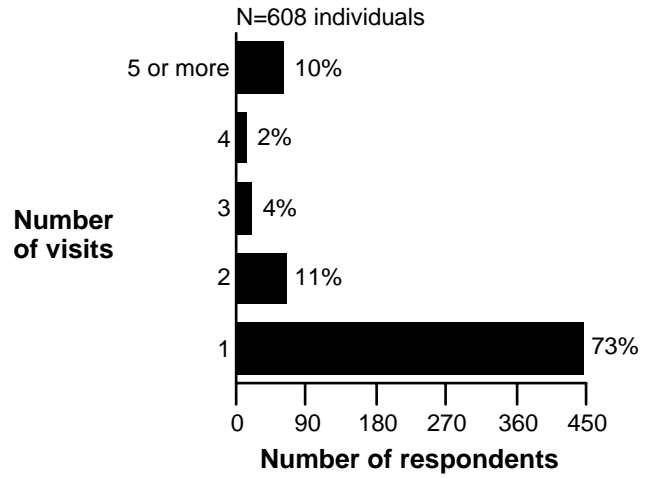
**Question 24d**

For you and your personal group, how many times have you visited Lava Beds NM (including this visit)?

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

**Results**

- 73% of visitors visited the park once in their lifetime (see Figure 6).
- 37% visited two or more times.



**Figure 6: Number of visits to park**

\*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 24b

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

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

Results

- Visitor ages ranged from 1 to 95 years (see Figure 7).
- 34% of visitors were aged 51-70 years.
- 28% were in the 31-50 years age group.
- 17% were 15 years or younger.

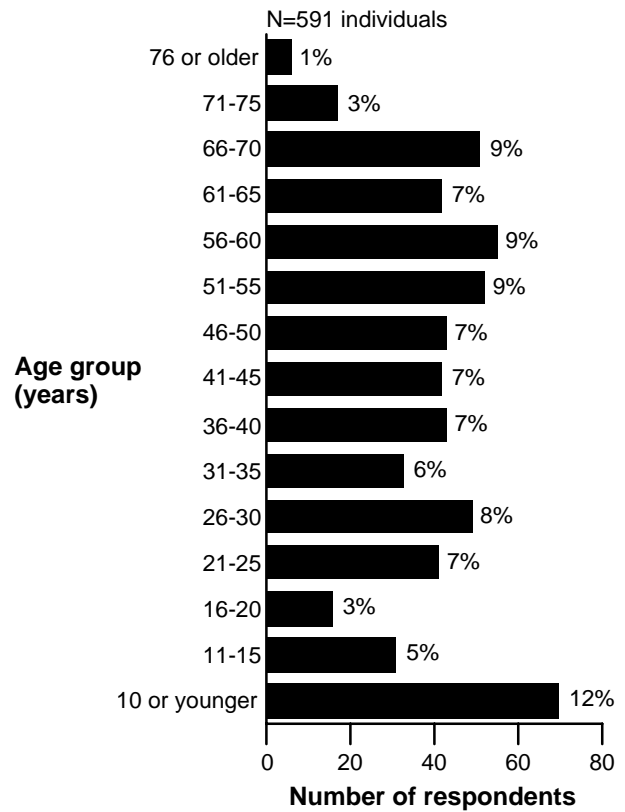


Figure 7: Visitor age

\*total percentages do not equal 100 due to rounding

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

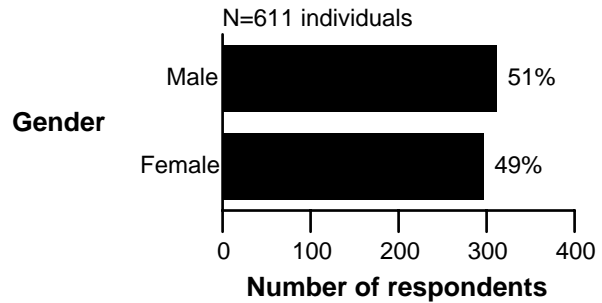
**Visitor gender**

**Question 24a**

For you and your personal group, what is your gender?

**Results**

- 51% of visitors were male (see Figure 8).
- 49% were female.



**Figure 8: Respondent gender**

**Visitor level of education**

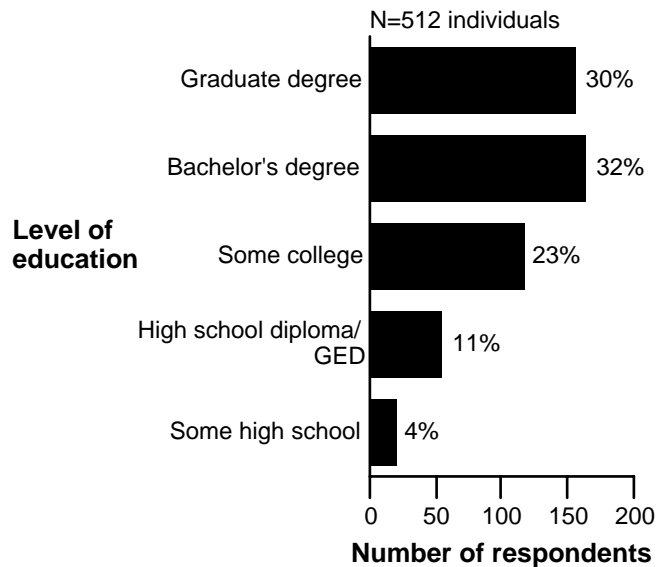
**Question 26**

For you and each member (age 16 or over) in your personal group on this visit, please indicate the highest level of education completed.

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

**Results**

- 32% of visitors had a bachelor's degree (see Figure 9).
- 30% completed a graduate degree.
- 23% attended some college.



**Figure 9: Visitor level of education**

\*total percentages do not equal 100 due to rounding

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

## Preferred languages for speaking and reading

### Question 25a

When visiting an area such as Lava Beds NM, what one language do you and most members of your group prefer to use for speaking? (open-ended)

### Results

- Most visitor groups preferred to speak English (see Table 6).

**Table 6: Preferred language for speaking**

N=213 visitor groups

Language	Number of times mentioned
English	203
German	4
Chinese	3
French	1
Hebrew	1
Japanese	1

### Question 25a

When visiting an area such as Lava Beds NM, what one language do you and most members of your group prefer to use for reading? (open-ended)

### Results

- Most visitor groups preferred to read English (see Table 7).

**Table 7: Preferred language for reading**

N=211 visitor groups

Language	Number of times mentioned
English	204
German	4
Chinese	2
French	1

\*total percentages do not equal 100 due to rounding

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

## Services preferred in other languages

### Question 25b

What services in the park would you like to have provided in languages other than English? (open-ended)

### Results

- Most visitor groups preferred to have services provided in English (see Table 8).

**Table 8: Preferred services**

N=11 comments

Service	Number of times mentioned
Exhibits	2
Park brochures	2
All services bilingual	1
Directional signs	1
Enough to accommodate	1
General information	1
Interpretive signs	1
Maps	1
Outdoor exhibits	1
Visitor center	1

### Question 25c

Which language, other than English, would you like services to be provided in (open-ended)?

### Results

- Most visitor groups preferred to have services provided in Spanish (see Table 9).

**Table 9: Preferred language**

N=17 visitor groups;

some visitor groups listed more than one language.

Language	Number of times mentioned
Spanish	9
German	6
Chinese	3
French	2
Japanese	2
Mandarin	2
Modoc Indian	1
Icelandic	1
Native American	1
None	1

\*total percentages do not equal 100 due to rounding

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

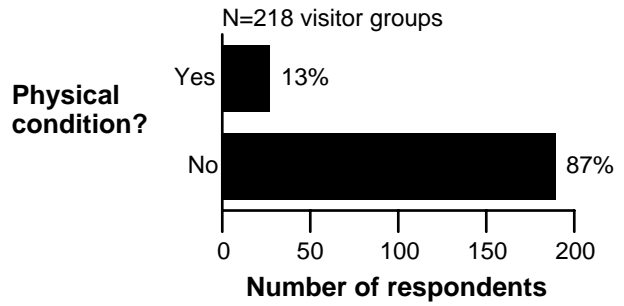
### Visitors with physical conditions/impairments

**Question 27a**

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

**Results**

- 13% of visitor groups had members with physical conditions that made access difficult (see Figure 10).



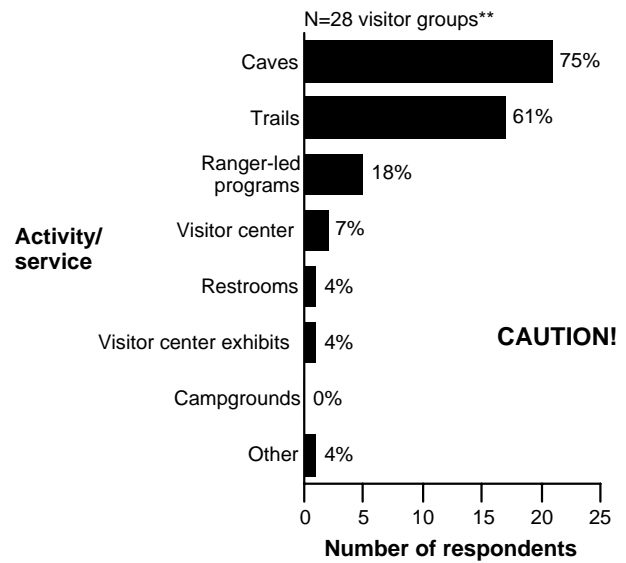
**Figure 10: Visitors with physical conditions**

**Question 27b**

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

**Results - Interpret with CAUTION**

- Not enough groups responded to this question to provide reliable data (see Figure 11).



**Figure 11: Activities/services difficult to participate in/access**

\*total percentages do not equal 100 due to rounding

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

Question 27c

Because of the physical condition, what specific problems did the person(s) have?

Results - Interpret with **CAUTION**

- Not enough groups responded to this question to provide reliable data (see Figure 12).

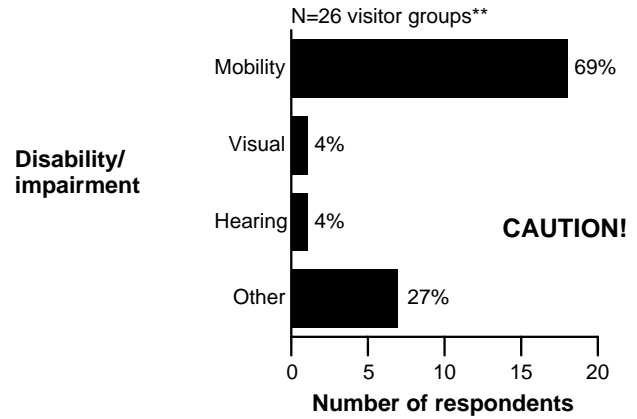


Figure 12: Type of disability/impairment

\*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

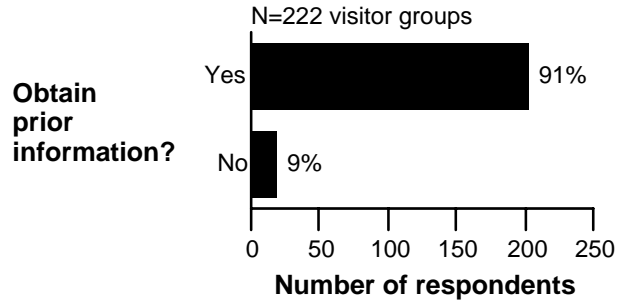
Prior to your visit, how did you and your group obtain information about Lava Beds NM?

Results

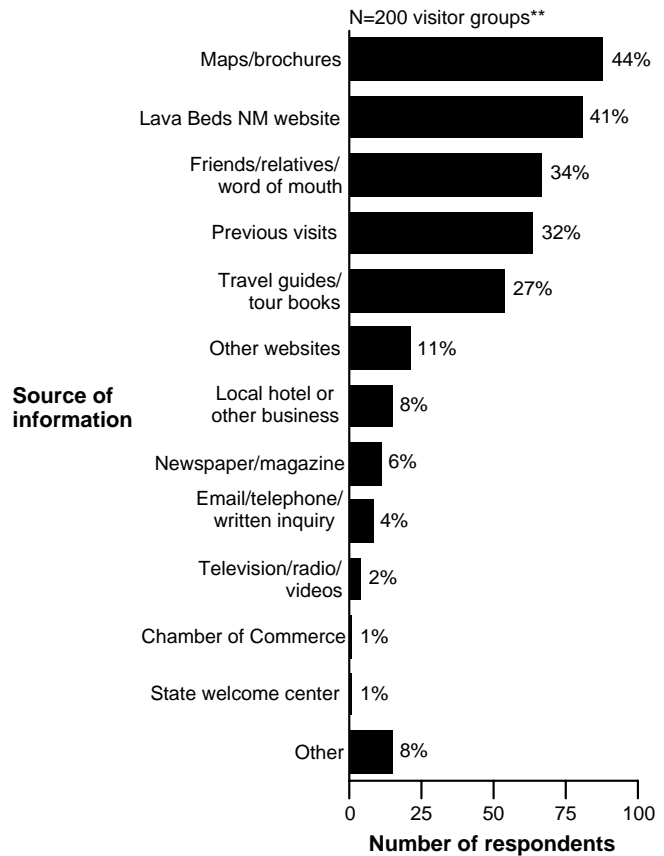
- 91% of visitor groups did obtain information about Lava Beds NM prior to their visit (see Figure 13).
- As shown in Figure 14, of those visitor groups who obtained information about Lava Beds NM prior to their visit (91%), the most common sources were:

- 44% Maps/brochures
- 41% Lava Beds NM website
- 34% Friends/relatives/word of mouth
- 32% Previous visit

- “Other” sources (8%) included:
  - Road signs
  - "Devil's Backbone" (novel)
  - Resident
  - California road map
  - Green Tortoise Bus Company
  - Klamath Falls Visitor Center
  - Local business
  - National Speleological Society



**Figure 13: Visitors who obtained information about Lava Beds NM prior to visit**



**Figure 14: Sources of information used by visitors prior to visit.**

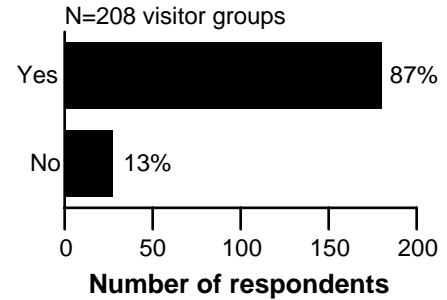
\*total percentages do not equal 100 due to rounding

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

**Question 1c**

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

**Received needed information?**



**Results**

- 87% of visitor groups received the needed information prior to their visit (see Figure 15).

**Figure 15: Visitors who received needed information prior to their visit**

**Question 1d**

If NO, what type of park information did you and your group need that was not available?

**Results**

- Additional information that visitor groups (N=28) needed included:

- More specific information about caves/trails
- More information (general)
- Cave exploration safety/preparedness
- Which entrance to use for help/information
- Road information
- Better signage
- Food availability
- Information on Captain Jack's Stronghold
- Weather information
- Website hard to find

\*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**

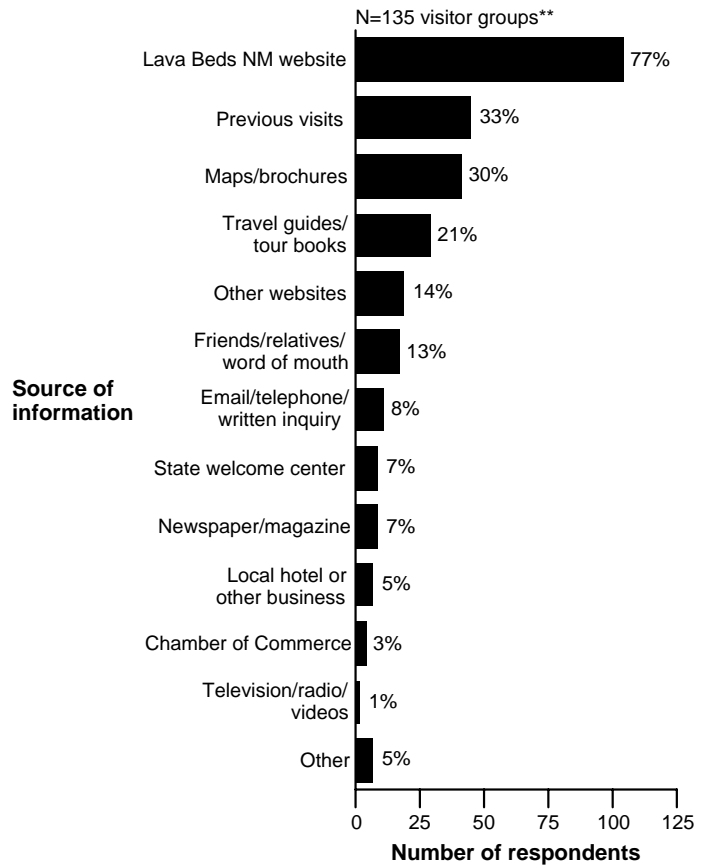
**Question 1b**

Prior to a future visit, how would you and your group prefer to obtain information about Lava Beds NM?

**Results**

- As shown in Figure 16, the most common source of information preferred for a future visit was the park website (77%).
- 33% of visitor groups preferred to obtain information from previous visits.
- 30% of visitor groups preferred to obtain information from maps/brochures.
- “Other” sources of information (5%) included:

- Camp site brochures
- Cave Research Foundation
- NPS booklet
- Road signs



**Figure 16: Sources of information 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

**Length of visit**

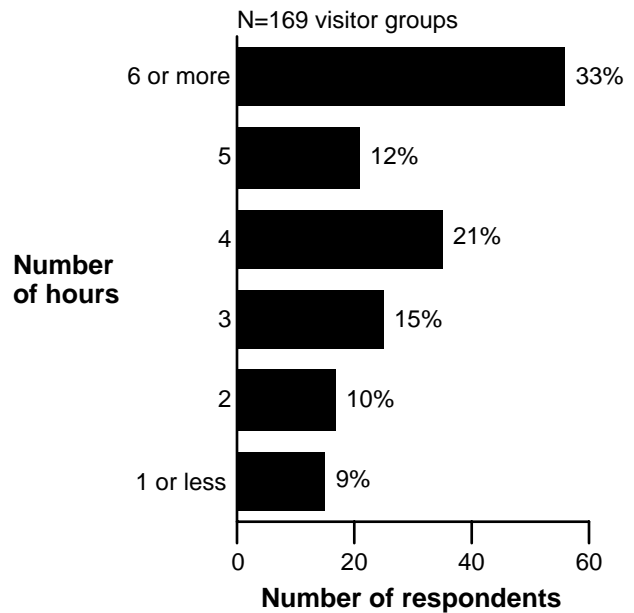
**Question 9**

On this visit to Lava Beds NM, how long did you and your group spend visiting the park?

Number of hours if less than 24

**Results**

- 33% of visitor groups spent six or more hours visiting Lava Beds NM (see Figure 17).
- 21% spent four hours.
- 15% spent three hours.

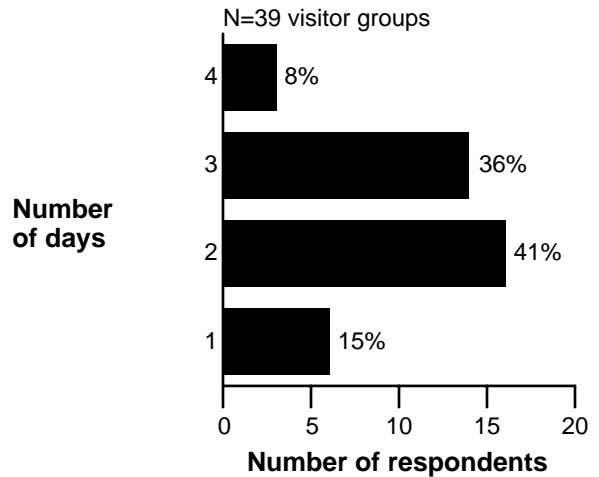


**Figure 17: Number of hours spent visiting the park**

Number of days if more than 24 hours

**Results**

- 41% of visitor groups spent two days at Lava Beds NM (see Figure 18).
- 36% spent three days.
- 15% spent one day.



**Figure 18: Number of days spent visiting 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

## Reasons to stay longer

### Question 14

What would make you and your group stay longer than you did in the Lava Beds NM area?

### Results

78% of visitor groups (N=175) responded to this question. Table 10 shows the reasons visitors listed.

**Table 10: Reasons that would make visitors stay longer**

N=193 visitor comments;  
some visitors made more than one comment.

Reason	Number of times mentioned
Needed more time	59
Nothing	14
Better planning	12
Lodging	11
Availability of showers	10
Better weather conditions	8
Food services	5
Greater variety of activities	5
More information available	4
RV places with hook ups	4
Shaded rest areas	4
Camping facilities	4
Being in better physical condition	3
Support services	2
Age	2
Carpool tour of the area	2
Caves	2
Lodging arrangements	2
More accessible activities for kids	2
More attractions	2
More hiking trails	2
More information on website	2
Older children	2
Swimming pool at campground	2
Other	28

\*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 visit**

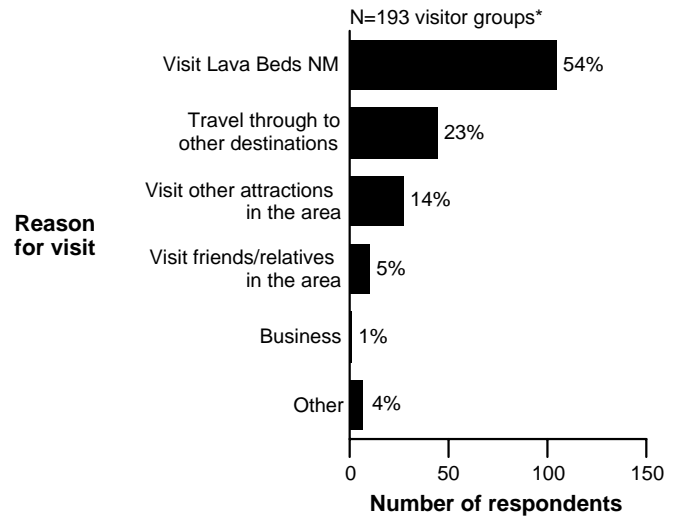
**Question 2**

For this trip, what was the primary reason that you and your group visited the Lava Beds NM area (within 60 miles of the park)?

**Results**

- 54% of visitor groups visited the area primarily to visit Lava Beds NM (see Figure 19).
- 23% were traveling through to other destinations.
- 14% were visiting other attractions in the area.
- “Other” reasons (4%) included:

- Visit national parks
- Annual visit
- Campground with shower
- Cave Research Foundation
- Exploration
- Family trip
- Japanese Internment Camp
- Motorcycle rally
- Nature study
- Road trip
- Studying Modoc War
- Visit northeast California
- Wedding



**Figure 19: Primary reason for visit to the area**

\*total percentages do not equal 100 due to rounding

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

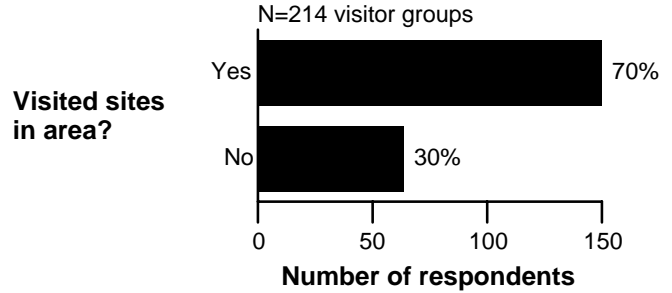
**Sites visited in the area**

**Question 3**

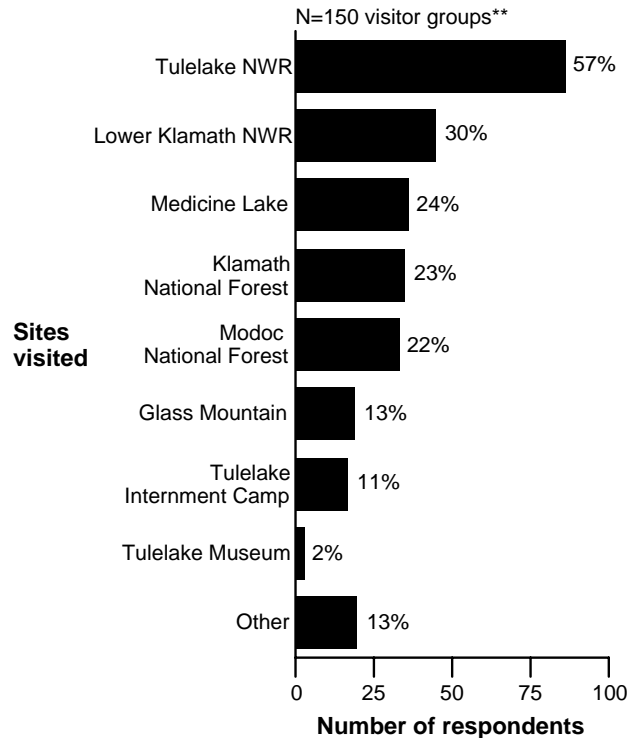
On this trip, which of the following sites in the Lava Beds NM area (within 60 miles of the park) did you and your group visit?

**Results**

- 70% of visitor groups visited sites in the area (see Figure 20).
- 57% of visitor groups visited Tulelake NWR (see Figure 21).
- 30% visited Lower Klamath NWR.
- 24% visited Medicine Lake.
- 23% visited Klamath National Forest.
- “Other” sites (13%) included:
  - Crater Lake National Park
  - Lassen Volcanic National Park
  - Burney Falls State Park
  - Grass Lake
  - Oregon Cave National Monument
  - Redwoods National Park
  - Shasta Caverns



**Figure 20: Visitor groups who visited sites in the area**



**Figure 21: Sites visited in the area**

\*total percentages do not equal 100 due to rounding

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

## Places stayed on night before arrival at Lava Beds NM

### Question 6a

In what town/city did you and your group stay on the night before your arrival at Lava Beds NM? If you stayed at home, please write the name of your home town.

### Results

- As shown in Table 11, the most common cities/towns in which visitor groups spent the night prior to their visit were:

31% Klamath Falls, OR  
5% Mt. Shasta, CA

**Table 11: Places stayed on night before arrival at Lava Beds NM**

N=210 visitor groups

City/Town and State	Number of times mentioned
Klamath Falls, OR	66
Mt Shasta, CA	11
Medford, OR	10
Redding, CA	10
Tulelake, CA	9
Crater Lake National Park, OR	5
Reno, NV	5
Ashland, OR	4
Central Point, OR	4
Malin, OR	4
McCloud, CA	4
Merrill, OR	4
Davis, CA	3
Hat Creek, CA	3
Susanville, CA	3
Weed, CA	3
Alturas, CA	2
Bend, OR	2
Burney, CA	2
Chico, CA	2
Dunsmuir, CA	2
Grants Pass, OR	2
Lassen Volcanic National Park, CA	2
Portland, OR	2
San Francisco, CA	2
San Jose, CA	2
Shasta City, CA	2
Anderson, CA	1
Arcata, CA	1
Bella Vista, CA	1
Bishop, CA	1
Brookings, OR	1
Chemult, OR	1
Chester, CA	1
Chiloquin, OR	1
Diamond Lake, OR	1
Drakesbad, CA	1
El Dorado Hills, CA	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 11: Places stayed on night before  
arrival at Lava Beds NM  
(continued)**

City/Town and State	Number of times mentioned
Elma, WA	1
Fall River Mills, CA	1
Folsom, CA	1
Fort Klamath, OR	1
Gardnerville, NV	1
Goldendale, WA	1
Great Basin National Park, NV	1
Keno, OR	1
LaPine State Park, OR	1
Los Altos Hills, CA	1
Menlo Park, CA	1
Minden, NV	1
Mineral, CA	1
Oak Run, CA	1
Phoenix, OR	1
Port Orford, OR	1
Redwood National Park, CA	1
Rio Linda, CA	1
Rocklin, CA	1
Sacramento, CA	1
San Mateo, CA	1
South San Francisco, CA	1
Tionesta, CA	1
Upper Klamath, OR	1
Vacaville, CA	1
Vancouver, WA	1
Weaverville, CA	1
White City, OR	1
Yreka, CA	1

\*total percentages do not equal 100 due to rounding

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

## Places stayed on night after departure from Lava Beds NM

### Question 6b

In what town/city did you and your group stay on the night after you left Lava Beds NM? If you stayed at home, please write the name of your home town.

### Results

- As shown in Table 12, the most common cities/towns in which visitor groups spent the night after their visit were:

25% Klamath Falls, OR  
6% Crater Lake, OR

**Table 12: Places stayed on night after departure from Lava Beds NM**

N=198 visitor groups

City/Town and State	Number of times mentioned
Klamath Falls, OR	49
Crater Lake National Park, OR	12
Reno, NV	11
Redding, CA	9
Medford, OR	8
Mt Shasta, CA	6
Tulelake, CA	6
Ashland, OR	5
Susanville, CA	5
Bend, OR	4
Chester, CA	4
Davis, CA	3
Malin, OR	3
San Francisco, CA	3
San Jose, CA	3
Alturas, CA	2
Diamond Lake, OR	2
Dorris, CA	2
Dunsmuir, CA	2
Eureka, CA	2
Fall River Mills, CA	2
Merrill, OR	2
Anderson, CA	1
Angels Camp, CA	1
Arcata, CA	1
Bella Vista, CA	1
Blue Lake, CA	1
Brookings, OR	1
Burney, CA	1
Burns, OR	1
Carson City, NV	1
Central Point, OR	1
Chico, CA	1
Chiloquin, OR	1
Collier Memorial State Park, OR	1
Colusa, CA	1
Cupertino, OR	1
Danville, CA	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: Places stayed on night after  
departure from Lava Beds NM  
(continued)**

City/Town and State	Number of times Mentioned
El Dorado Hills, CA	1
Elma, WA	1
Folsom, CA	1
Fort Bragg, CA	1
Fort Klamath, OR	1
Grants Pass, OR	1
Hat Creek, CA	1
Keno, OR	1
Lake Tahoe, CA	1
Lee Vining, CA	1
Los Altos Hills, CA	1
Los Molinos, CA	1
Markleeville, CA	1
McCloud, CA	1
Oregon Caves National Monument, OR	1
Orland, CA	1
Paradise, CA	1
Phoenix, OR	1
Portland, OR	1
Quincy, CA	1
Redmond, OR	1
Richmond, CA	1
Roseburg, OR	1
San Mateo, CA	1
Shasta City, CA	1
South Lake Tahoe, CA	1
San Francisco, CA	1
Springfield, OR	1
Sunny Valley, OR	1
Sunriver, OR	1
Tionesta, CA	1
Weed, CA	1
White City, OR	1
Willow Creek, CA	1
Winnemucca, NV	1
Yreka, CA	1

\*total percentages do not equal 100 due to rounding

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

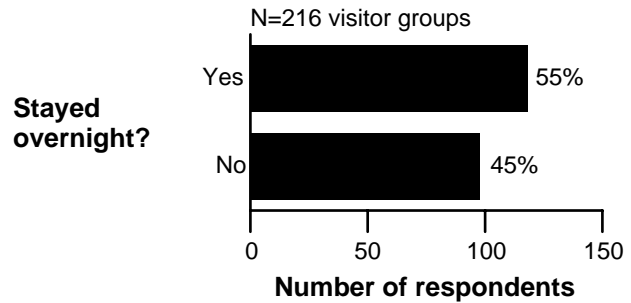
**Overnight stay**

**Question 5a**

On this trip, did you and your group stay overnight away from home inside Lava Beds NM and/or in the area (within 60 miles of the park)?

**Results**

- 55% of visitor groups stayed overnight away from home inside Lava Beds NM and/or in the area (see Figure 22).



**Figure 22: Overnight stay away from home inside and/or in the Lava Beds NM area**

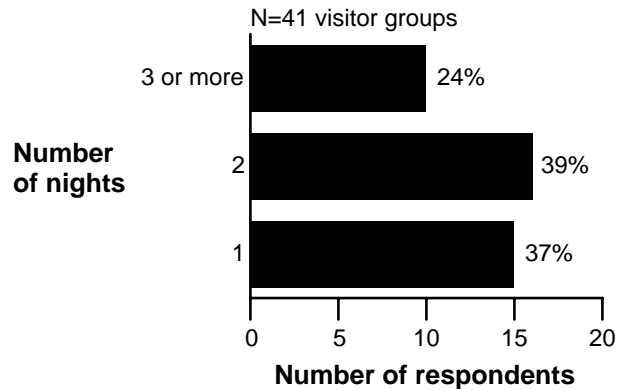
**Question 5b**

If YES, please list the number of nights you and your group stayed inside Lava Beds NM.

Number of nights inside the park

**Results**

- 39% of visitor groups spent two nights inside Lava Beds NM (see Figure 23).
- 37% spent one night.
- 24% spent three or more nights.

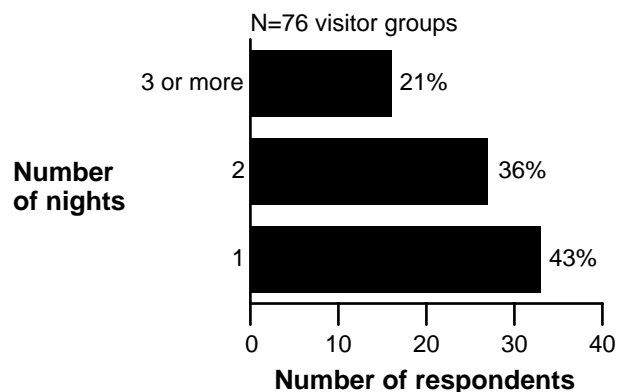


**Figure 23: Number of nights stayed inside Lava Beds NM**

Number of nights in the area

**Results**

- 43% of visitor groups stayed one night in the Lava Beds NM area (see Figure 24).
- 36% spent two nights.
- 21% spent three or more nights.



**Figure 24: Number of nights stayed in Lava Beds NM area**

\*total percentages do not equal 100 due to rounding

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

**Overnight accommodations**

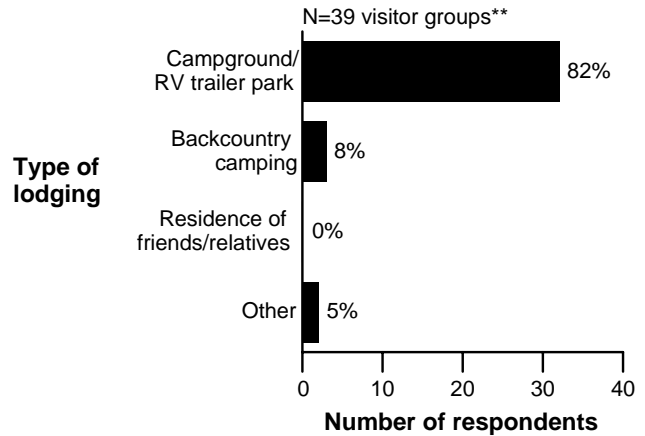
**Question 5c**

In what type of lodging did you and your group spend the night(s) inside the park?

**Results**

- 82% of visitor groups camped in a campground/RV trailer park (see Figure 25).
- 8% camped in the backcountry.
- “Other” types of lodging (5%) included:

Research Center



**Figure 25: Type of lodging inside the park**

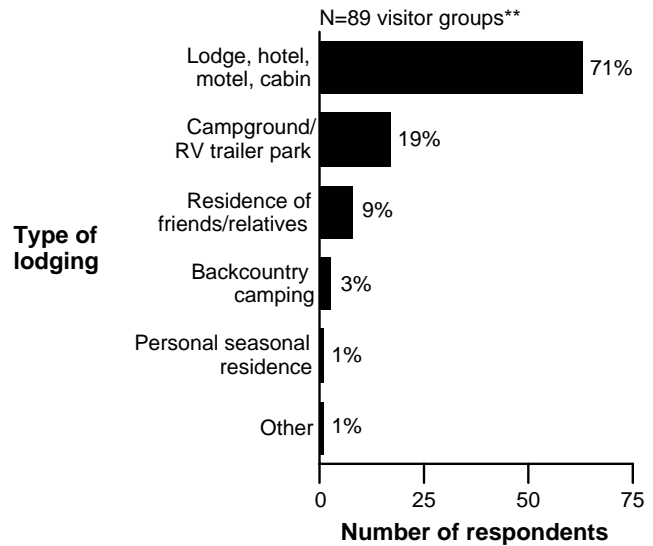
**Question 5d**

In what type of lodging did you and your group spend the night(s) in the area (within 60 miles of the park)?

**Results**

- 71% of visitor groups stayed in a lodge, hotel, motel or cabin (see Figure 26).
- 19% stayed in a campground or RV trailer park.
- 9% stayed with friends or relatives
- “Other” types of lodging (1%) included:

In my truck



**Figure 26: Type of lodging in the area**

\*total percentages do not equal 100 due to rounding

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

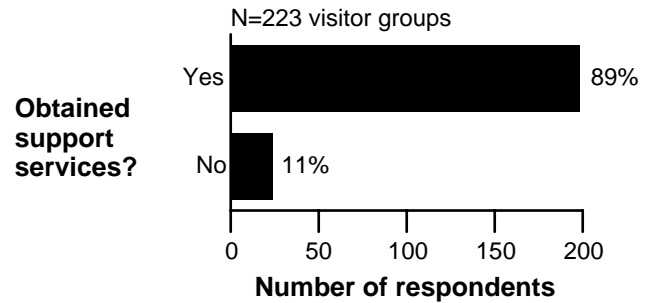
**Community support services**

Question 4a

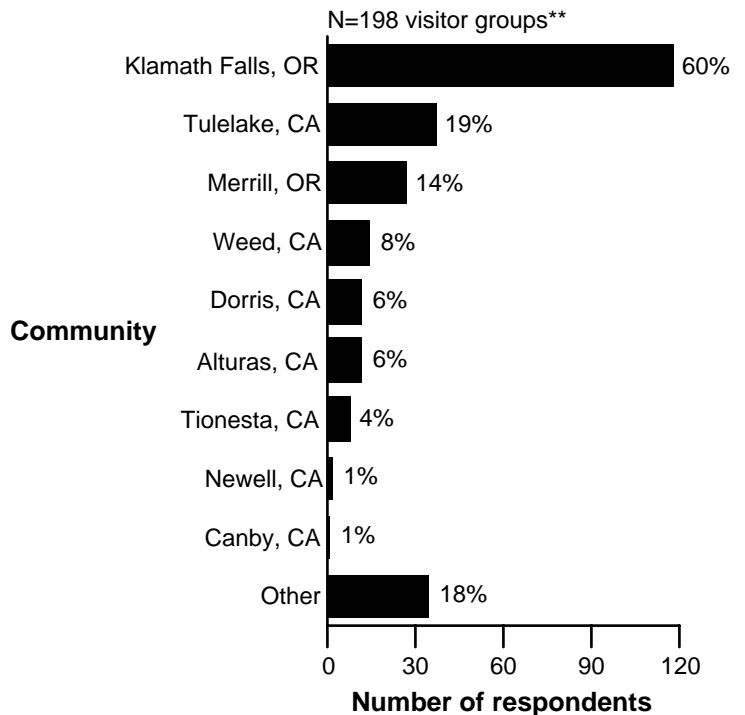
In what community did you obtain support services (e.g. information, gas, food, lodging) for this visit to Lava Beds NM?

Results

- 89% of visitor groups did obtain services form local communities (see Figure 27).
- 60% of visitors obtained services in Klamath Falls, OR (see Figure 28).
- 19% obtained services in Tulelake CA
- 14% obtained services in Merrill, OR
- 14% obtained services in Merrill, OR
- “Other” communities (18%) included:
  - Mount Shasta City, CA
  - Adin, CA
  - Burney, CA
  - Fall River Mills, CA
  - Central Point, OR
  - McCloud, CA
  - Medford, OR
  - Ashland, OR
  - Bend, OR
  - Chiloquin, OR
  - Crater Lake National Park, OR
  - Dunsmire, CA
  - Keno, OR
  - Lookout Junction, CA
  - Malin, OR
  - Red Bluff, CA
  - Susanville, CA
  - White City, OR
  - Worden, OR



**Figure 27: Visitors who used services in surrounding communities**



**Figure 28: Communities where services were obtained**

\*total percentages do not equal 100 due to rounding

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

Question 4b

Were you and your group able to obtain all of the services that you needed in these communities?

Results

- 95% of visitor groups were able to obtain needed services from surrounding communities (see Figure 29).

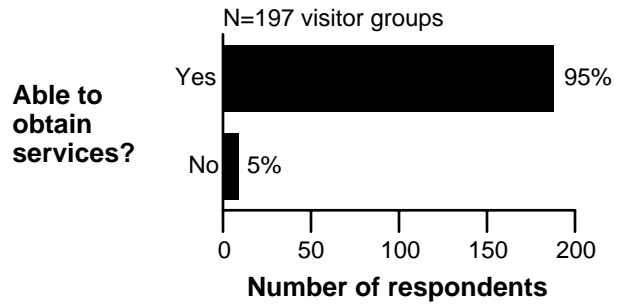


Figure 29: Visitors who were able to obtain needed services in surrounding communities

Question 4c

If NO, what services did you and your group need that were not available?

Results

- Table 13 shows visitor comments about services they were not able to obtain. Interpret with **CAUTION**. Not enough visitors responded to this question to provide reliable data.

Table 13: Comments on services visitors were unable to obtain  
N=12 comments **CAUTION!**

Service	Comment
Food	Hard to find food Need fresher products
Lodging	Need more motels
24-hour convenience store	No comment
24-hour medical service	No comment
Coffee	Free coffee
Gas station open late at night	No comment
Gas stations	Travel information
Information	Travel information
Pediatric allergy medicine	Couldn't find type needed
Restaurants	Need more restaurants

\*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 park entries**

Question 23c

On this visit, how many times did you and your personal group enter Lava Beds NM during your stay in the area?

Results

- 79% of visitor groups entered the park one time (see Figure 30).
- 17% entered twice.
- 4% entered three or more times.

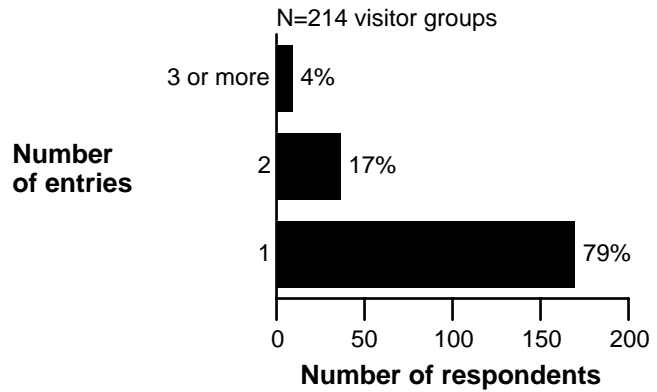


Figure 30: Number of entries to the park

**Number of vehicles**

Question 23b

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

Results

- 91% of visitors used one vehicle to enter the park (see Figure 31).
- 7% used two vehicles.
- 2% used three or more vehicles.

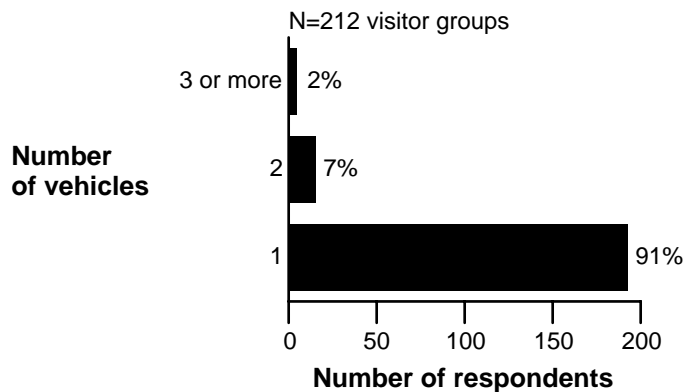


Figure 31: Number of vehicles used to enter the park

\*total percentages do not equal 100 due to rounding

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



## Adequacy of directional signs

### Question 7a

On this visit, were the signs directing you and your group to and inside Lava Beds NM adequate?

### Results

- 45% of visitor groups found interstate signs to be adequate (see Figure 32).
- 78% felt that state highway signs were adequate (see Figure 33).
- 50% indicated that city street signs were adequate (see Figure 34).
- 92% reported that signs within Lava Beds NM were adequate (see Figure 35).

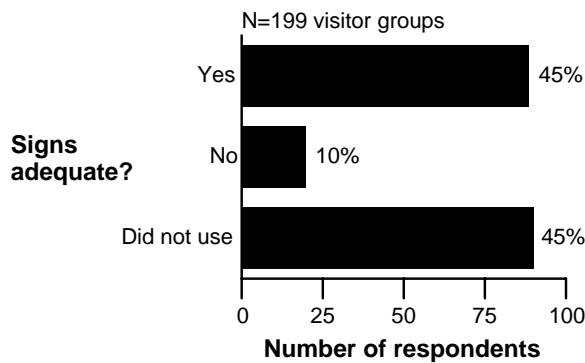


Figure 32: Adequacy of interstate signs

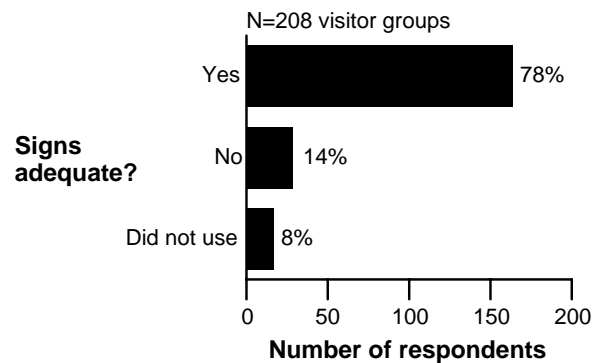


Figure 33: Adequacy of state highway signs

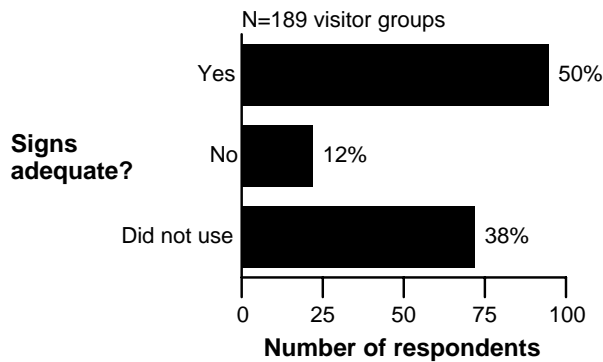


Figure 34: Adequacy of city streets in communities

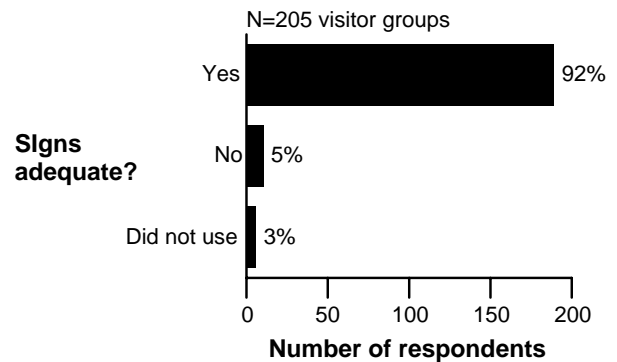


Figure 35: Adequacy of signs in Lava Beds NM

\*total percentages do not equal 100 due to rounding

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

## Question 7b

If you answered NO for any of the above, please explain.

## Results

- Table 14 shows visitor comments on directional signs.

**Table 14: Comments on directional signs**

N=47 comments

Sign location	Comment
Interstates	Did not see any signs. (7 comments)
State highways	Inadequate mile markers. Oregon border- Upper Klamath: not enough pointing us in the right direction from border. Signs too small, easy to miss. Forest Service highways and signs not adequate. Missed the turn south at Malone onto Hill Road. On 139 S, sign after RR should say "Visitor Center and LBNM Entrance." Visitor signage from Tulelake/139 could be better. Had to read the North California road map to access park. No mileage listed on 161. Add more signs on Rt 39 between Merrill and Tulelake. Only one sign off of Hwy 39 – too small. No sign on Hwy 39 E. of Merrill at Malone Rd. (becomes Hill Rd.) Sign at Klamath Falls - didn't see sign pointing south. No signs on SR 89 North or NFS 15 or 45.
U.S. Highway 97	From Hwy 140 it isn't clear which way to reach Hwy 97. No mileage listed. Northbound - no sign observed.
City streets, unspecified	Didn't see any signs. (2 comments) Signs too small - easy to miss.
City streets, Merrill, CA	Not adequate sign from 39 to park in Merrill. Stopped in Merrill, and was told of road that was shorter than the signed route.
City streets, Redding, CA	Signs from Redding could be improved.
City streets, Tulelake, CA	No signs in Tulelake
City streets, Weed, CA	No sign observed – not in obvious locations.
Tulelake NWR	Indicate Lava Beds on the East/West highway turn-off from 139. Should have sign on Hill Rd. Sign says "Wildlife Refuge;" should also say "Lava Beds."
Within Lava Beds NM	Needed to be more specific. Not clearly marked inside forest (roads). Not marked "impassable" until you get to where it's impassable. On highways it was not clear where to turn. Google maps were not very helpful. Sign too close to entrance. The point of interest signs were too close to make decision to stop.

\*total percentages do not equal 100 due to rounding

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

**Activities**

**Question 8a**

As you were planning your trip, what activities did you and your group expect to include on this visit?

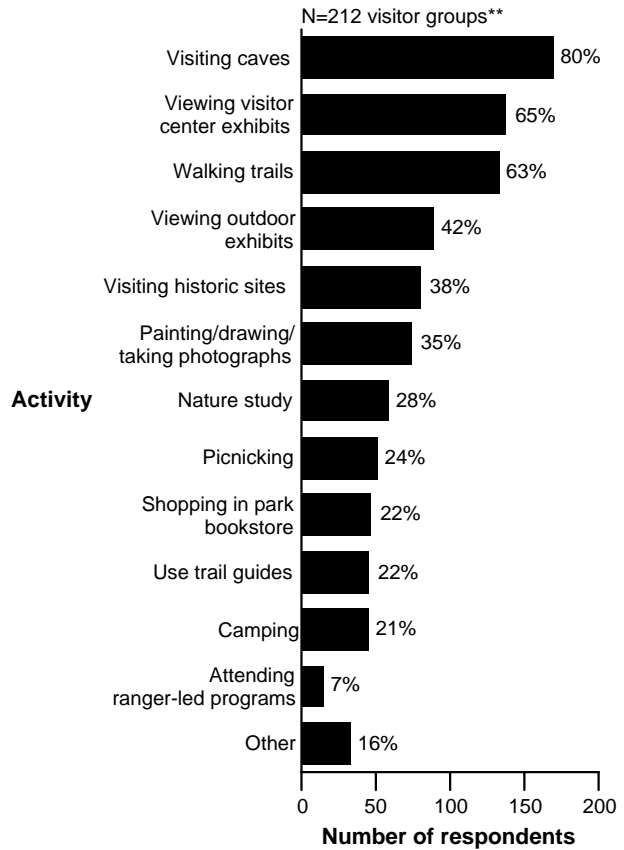
**Results**

- As shown in Figure 36, the most common activities visitor groups expected to include were:

- 80% Visiting caves
- 65% Viewing visitor center exhibits
- 63% Walking trails

- “Other” activities (16%) included:

- Fishing
- Driving through
- Volcanism
- Biking
- Campfire program
- Get National Park stamp
- Nature viewing
- Relaxing
- Road trip
- Visit friends
- Visit Medicine Lake



**Figure 36: Activities in which visitors expected to participate**

\*total percentages do not equal 100 due to rounding

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

Question 8b

On this visit, what activities did you and your group participate in within Lava Beds NM?

Results

- As shown in Figure 37, the most common activities visitor groups participated in were:

83% Visiting caves  
 73% Viewing visitor center exhibits  
 65% Walking trails

- “Other” activities (9%) included:

Viewing volcanism  
 Driving through  
 Biking  
 Attending campfire program  
 Fishing  
 Viewing lava tubes  
 Viewing wildflowers  
 Viewing wildlife outside park  
 Visiting friends

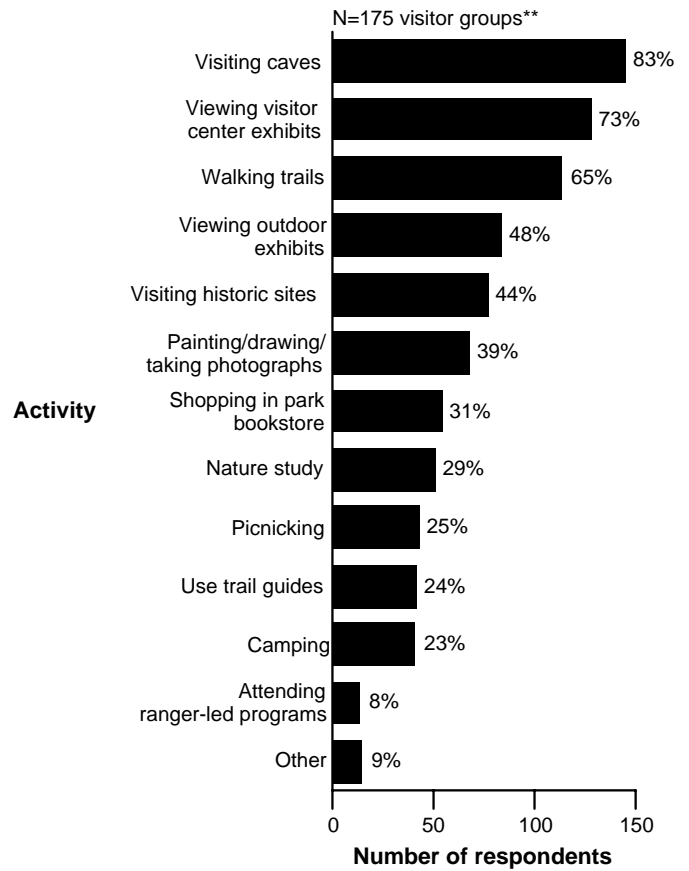


Figure 37: Visitor activities on this visit

\*total percentages do not equal 100 due to rounding

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

Question 8c

Which one of the above activities was the primary reason you and your group visited Lava Beds NM on this visit?

Results

- As shown in Figure 38, the most common reasons for visiting Lava Beds NM were:

83% Visiting caves  
 73% Viewing visitor center exhibits  
 65% Walking trails

- “Other” primary reasons (11%) included:

Fishing  
 Driving through  
 Viewing volcanism  
 Biking  
 Attending campfire program  
 Getting National Park stamp  
 Nature viewing  
 Relaxing  
 Taking road trip  
 Visiting friends  
 Visiting Medicine Lake

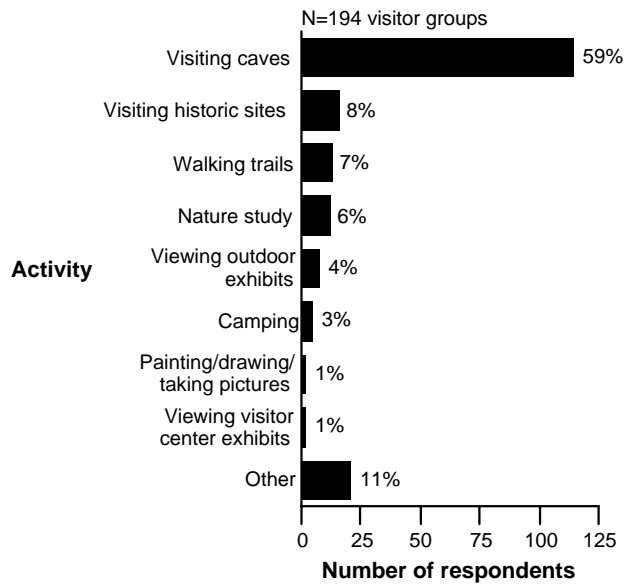


Figure 38: Primary reason for visit

\*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**

**Question 10**

For this trip, please list the order in which you and your group visited the following sites in Lava Beds NM.

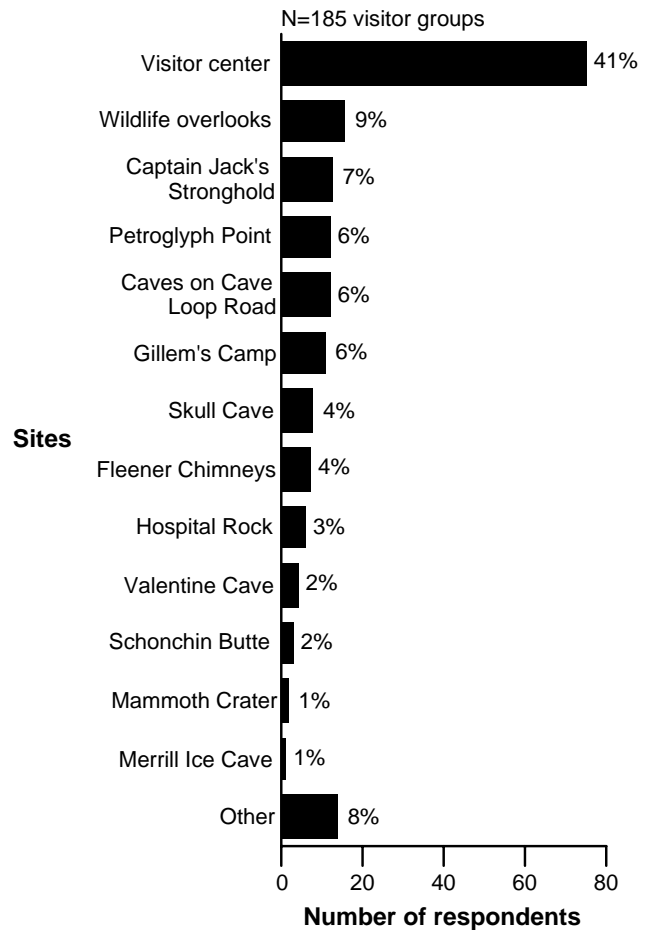
**Results**

- As shown in Figure 39, the sites that most visitor groups visited first were:

- 41% Visitor center
- 9% Wildlife overlooks
- 7% Captain Jack’s Stronghold

- “Other” sites visited first (8%) included:

- Devil’s Homestead
- Black Crater
- Mushpot Cave
- Symbol Bridge
- Painted Cave
- Boulevard/Balcony Caves
- Campground
- Canby’s Cross
- Lava Flow Overlook
- Three Sisters Trail
- Benchgrass Trail



**Figure 39: Sites visited first**

\*total percentages do not equal 100 due to rounding

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

- As shown in Figure 40, the most visited sites were:

83% Visitor center  
 70% Caves on Cave Loop Road  
 38% Captain Jack’s Stronghold

- “Other” sites visited (22%) included:

Devil's Homestead  
 Black Crater  
 Mushpot Cave  
 Symbol Bridge  
 Painted Cave  
 Boulevard/Balcony Caves  
 Campground  
 Canby's Cross  
 Lava Flow Overlook  
 Three Sisters Trail  
 Benchgrass Trail

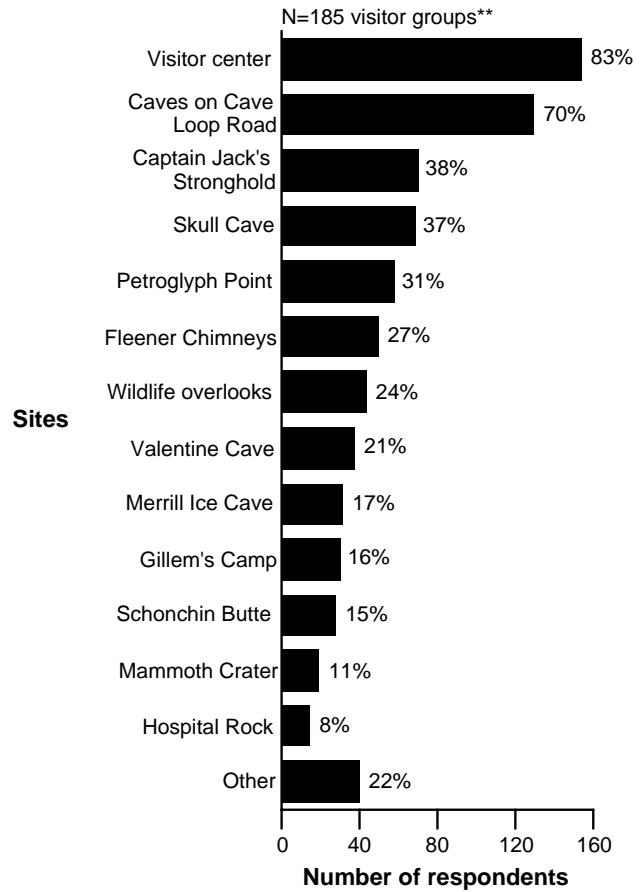


Figure 40: Sites visited in the park

\*total percentages do not equal 100 due to rounding

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

## Reasons for visiting the visitor center

### Question 11

On this visit, what were the reasons that you and your group visited the Lava Beds NM visitor center?

### Results

- 90% of visitor groups visited the visitor center (see Figure 41).
- As shown in Figure 42, the most common reasons for visiting the visitor center were:

87% Obtain information  
65% View exhibits

- “Other” reasons (31%) included:
  - Get flashlights/hats
  - Use restrooms
  - Pay park fee
  - Food and water
  - Picnicking
  - Get directions
  - Get park passport stamp
  - Area mileage chart
  - Camping
  - Curiosity
  - Destination for cycling
  - Get to Medicine Lake
  - Just to see it
  - Modoc National Forest map
  - Talk to rangers
  - Watch movie

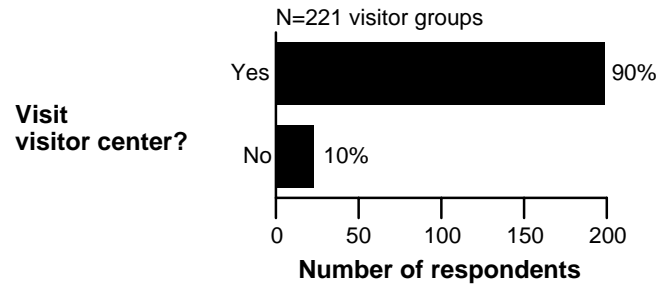


Figure 41: Visitors who visited the visitor center

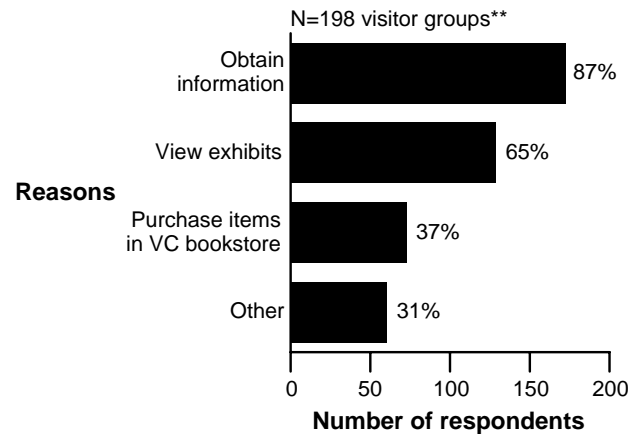


Figure 42: Reasons for visiting the visitor center

\*total percentages do not equal 100 due to rounding

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



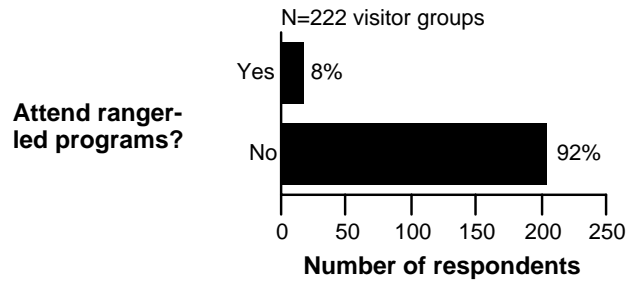
**Attendance of ranger-led activities/programs**

Question 12a

On this visit, did you and your group attend any ranger-led activities/programs at Lava Beds NM?

Results

- 92% of visitor groups did not attend ranger-led activities, and 8% did attend (see Figure 43).



**Figure 43: Visitors who attended ranger-led activities/programs**

Question 12b

If YES, which activities/programs did you and your group attend?

Results

- Visitor groups attended the following activities/programs:

- Valentine Cave tour
- Campfire program
- Cave tour
- Bat talk
- Evening program
- Golden Dome Cave tour
- Guided tour
- Ranger talk

Question 12c

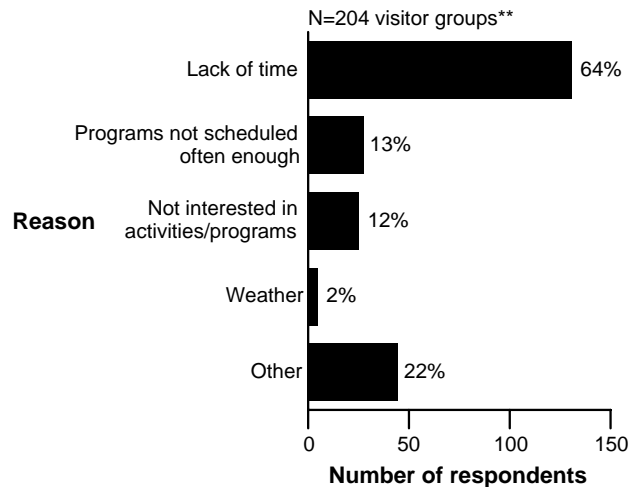
If NO, why not?

Results

- As shown in Figure 44, the most common reasons for not attending ranger-led programs/activities were:

- 64% Lack of time
- 13% Programs not scheduled often enough
- 12% Not interested in activities/programs

- Other reasons (22%) included:
  - Unaware of activities/programs
  - Preferred being independent
  - Just driving through the park
  - Small kids/pets
  - Disabilities
  - Interested in hiking
  - Lack of rangers
  - Regular visitor
  - Pre-existing knowledge
  - With a school group
  - Sickness



**Figure 44: Reasons visitors did not attend ranger-led activities/program**

\*total percentages do not equal 100 due to rounding

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

Question 12d

What would encourage you to attend a ranger-led activity/program in the future?

Results

- 32% of visitor groups would attend a program if they were scheduled more often (see Figure 45).
- 9% would attend if there were greater variety of program topics.
- Other reasons (33%) included:

- More time
- Availability of information
- Better timing allowed
- Better planning
- Accessibility
- Fern Cave Tour
- Weather
- Wildlife
- More advertising
- Better guides
- Smaller group
- Wildlife photography

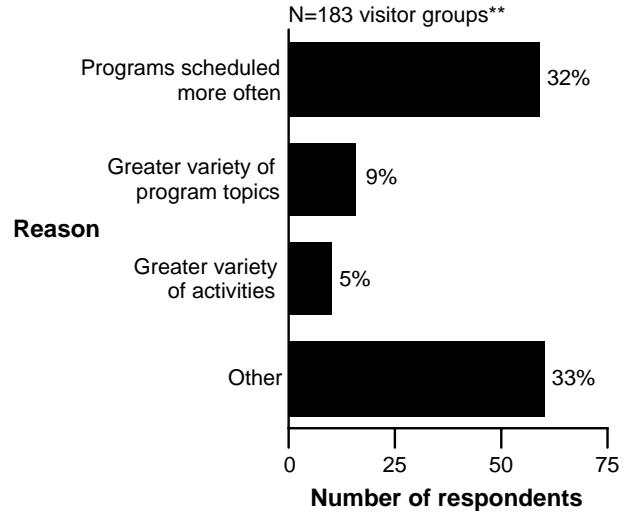


Figure 45: Reasons to attend ranger-led activities in the future

\*total percentages do not equal 100 due to rounding

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

**Topics learned**

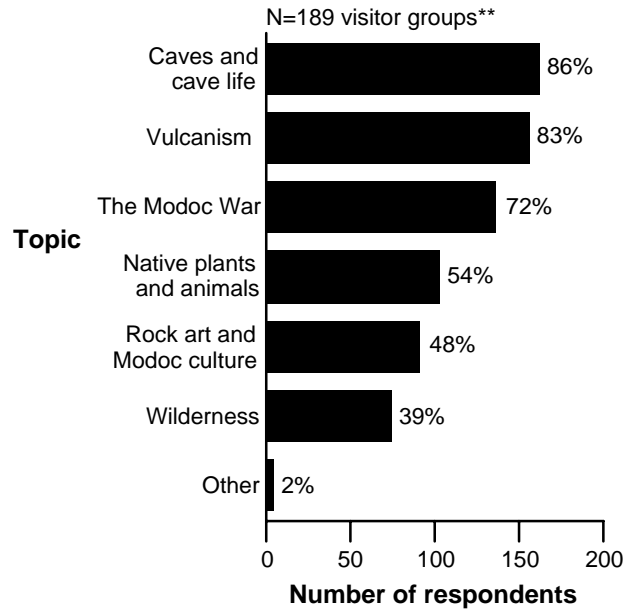
**Question 13a**

During your visit to Lava Beds NM, did you and your group learn about the following topics?

**Results**

- 86% of visitor groups learned about caves and cave life (see Figure 46) .
- 83% learned about vulcanism.
- 72% learned about the Modoc War.
- “Other” topics (2%) included:

J/A Internment camp  
 More details on Modoc War  
 Tulelake Internment



**Figure 46: Topics learned on this visit**

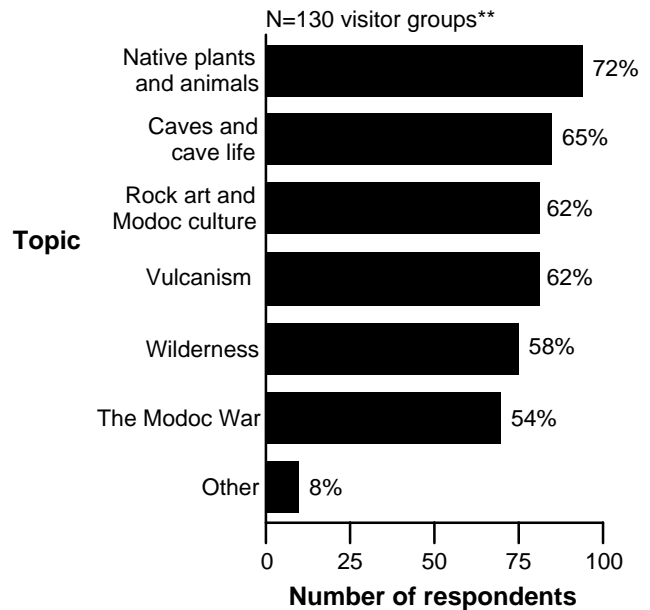
**Question 13b**

Next, whether or not you checked YES or NO for this visit, please indicate all topics that you are interested in learning about on a future visit to Lava Beds NM.

**Results**

- 72% of visitor groups would like to learn about native plants and animals (see Figure 47).
- 65% were interested in learning about caves and cave life
- 62% indicated rock art and Modoc culture.
- “Other” topics (8%) included:

CCC/POW camp  
 Controlled fires  
 Everything available  
 Regional geology  
 Snakes  
 Yellow color on lower Klamath Lake



**Figure 47: Topics to learn about on 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

Question 29

On a future visit, how would you and your group prefer to learn about cultural and natural history/features of Lava Beds NM?

Results

- As shown in Figure 48, the most preferred methods of learning about the park on a future visit were:

- 62% Printed materials
- 58% Self-guided tours
- 56% Outdoor exhibits
- 47% Ranger programs

- “Other” methods (8%) included:

- Bird list
- Hiking alone
- More information at visitor center

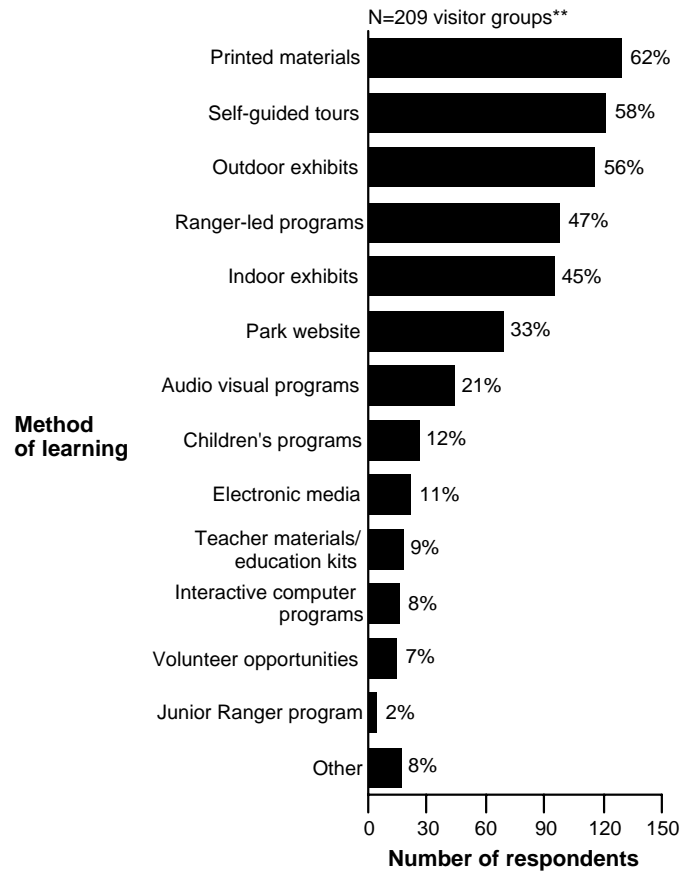


Figure 48: Preferred methods of learning about park topics on a future visit

\*total percentages do not equal 100 due to rounding

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

**Ratings of Visitor Services, Facilities, Elements, Attributes and Resources**

**Visitor services and facilities used**

**Question 16a**

Please indicate all of the visitor services and facilities that you and your group used during this visit to Lava Beds NM.

**Results**

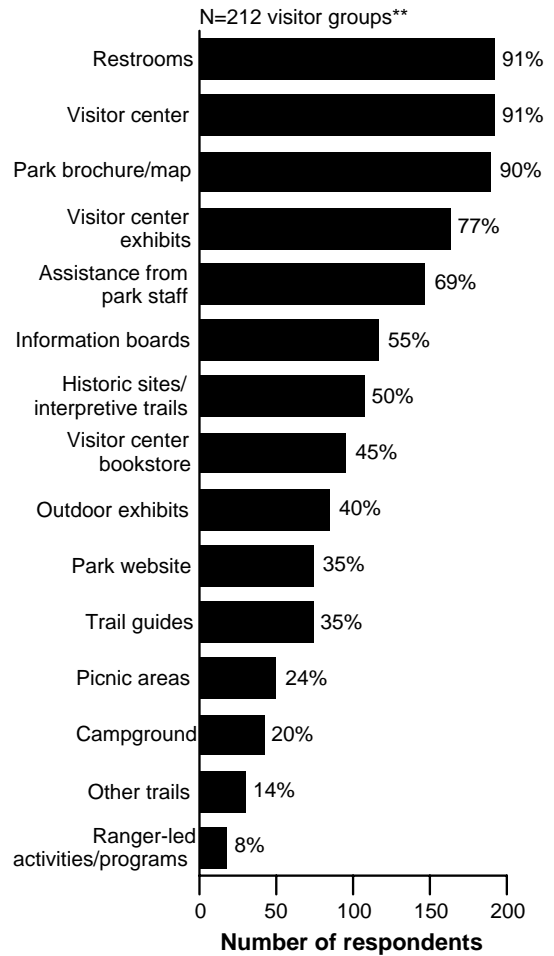
- As shown in Figure 49, the most commonly used visitor services and facilities included:

- 91% Restrooms
- 91% Visitor center
- 90% Park brochure/map

- The least used service/facility was:

- 8% Ranger-led activities/programs

**Service/  
facility**



**Figure 49: 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

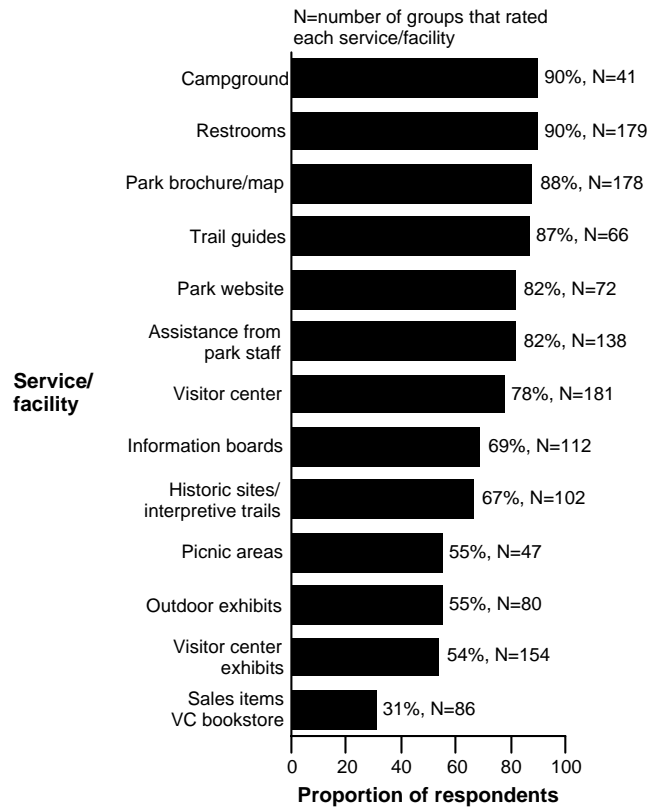
### Question 16b

Next for only the services and facilities that you or your group used, please rate their importance from 1 to 5.

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

### Results

- Figure 50 shows the combined proportions of “extremely important” and “very important” ratings for visitor services and facilities that were rated by 30 or more visitor groups.
- The services/facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:
  - 90% Campground
  - 90% Restrooms
  - 88% Park brochure/map
  - 87% Trail guides
- Figures 51 to 64 show the importance ratings for each service/facility.
- The service/facility receiving the highest “not important” rating was:
  - 14% Sales items in visitor center bookstore



**Figure 50: Combined proportions of “extremely important” and “very important” ratings for visitor services/facilities**

\*total percentages do not equal 100 due to rounding

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

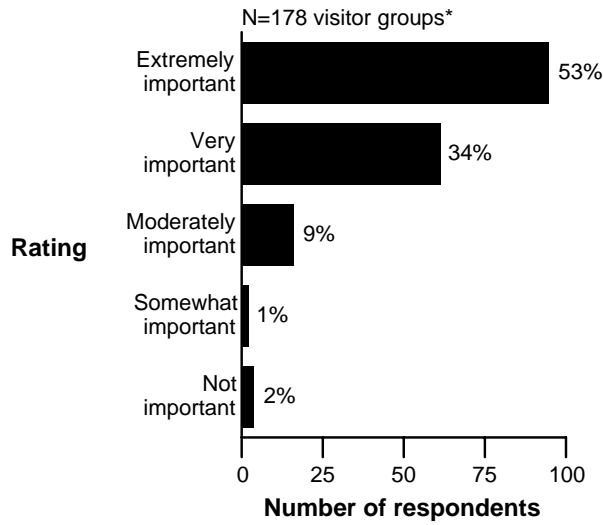


Figure 51: Importance of park brochure/map

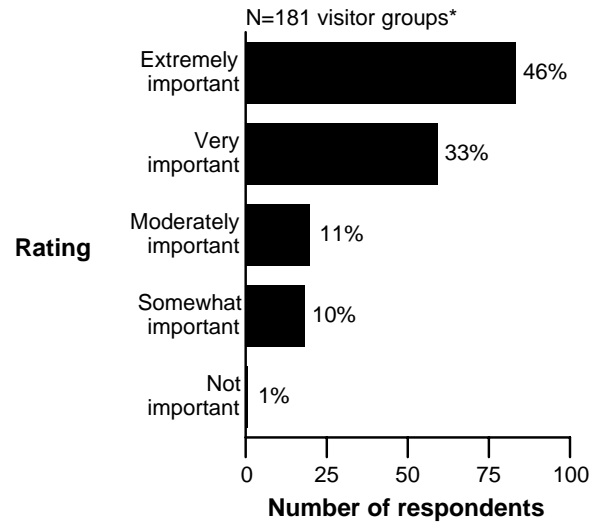


Figure 52: Importance of visitor center

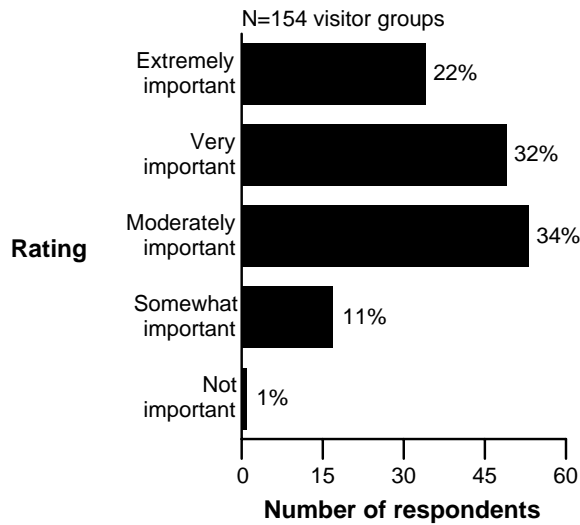


Figure 53: Importance of visitor center exhibits

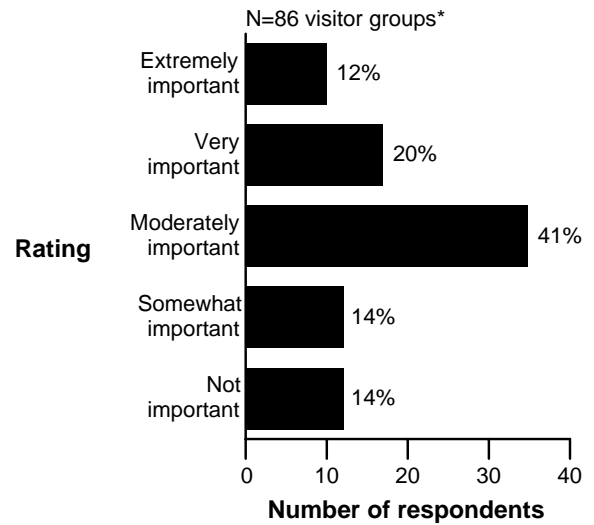


Figure 54: Importance of sales items in visitor center bookstore

\*total percentages do not equal 100 due to rounding

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

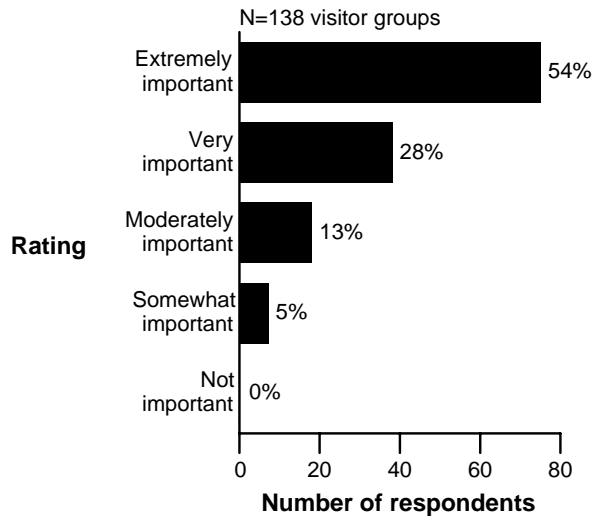


Figure 55: Importance of assistance from park staff

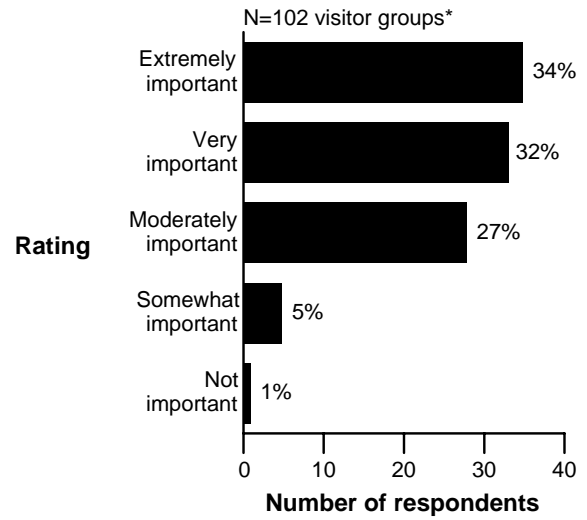


Figure 56: Importance of historic sites/interpretive trails

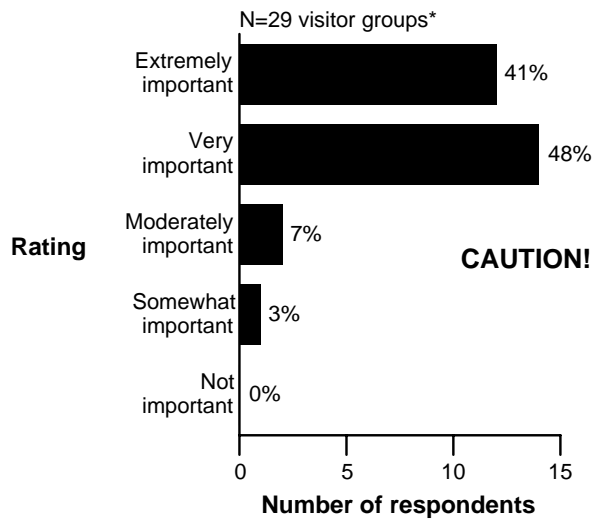


Figure 57: Importance of other trails

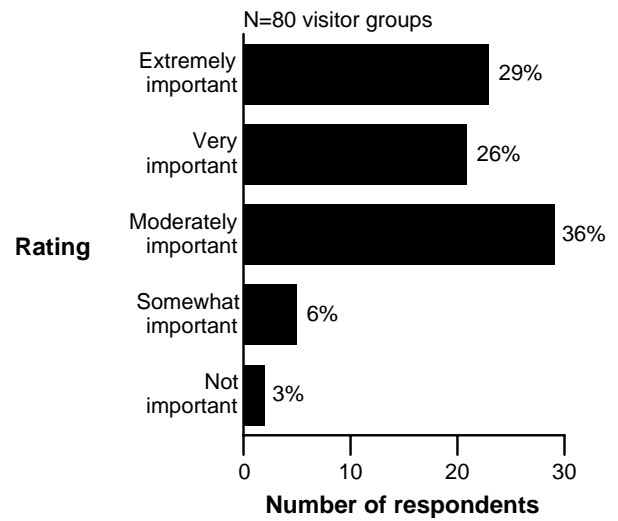


Figure 58: Importance of outdoor exhibits

\*total percentages do not equal 100 due to rounding

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



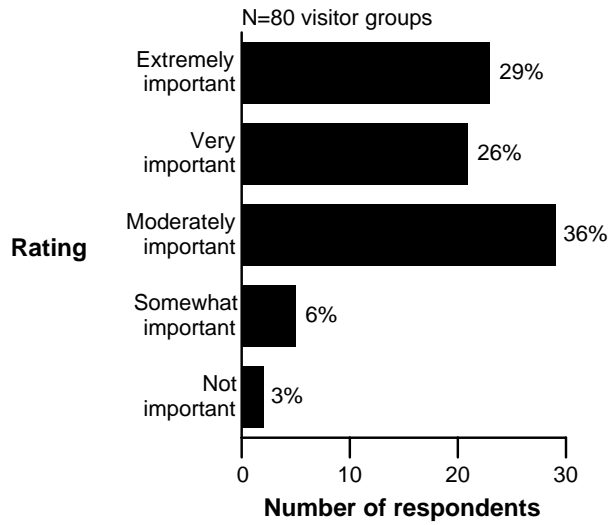


Figure 59: Importance of information boards

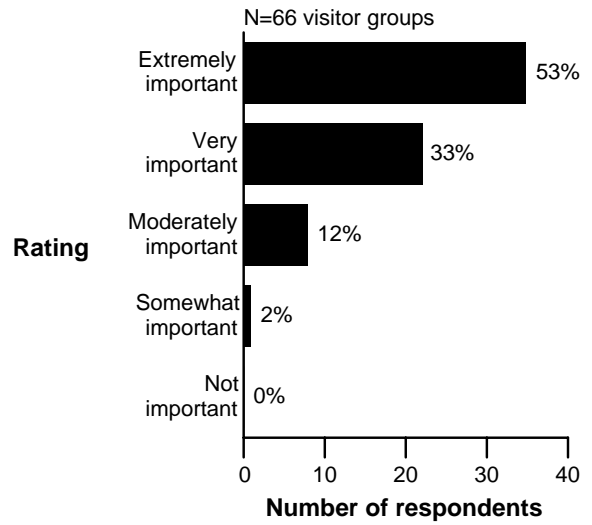


Figure 60: Importance of trail guides

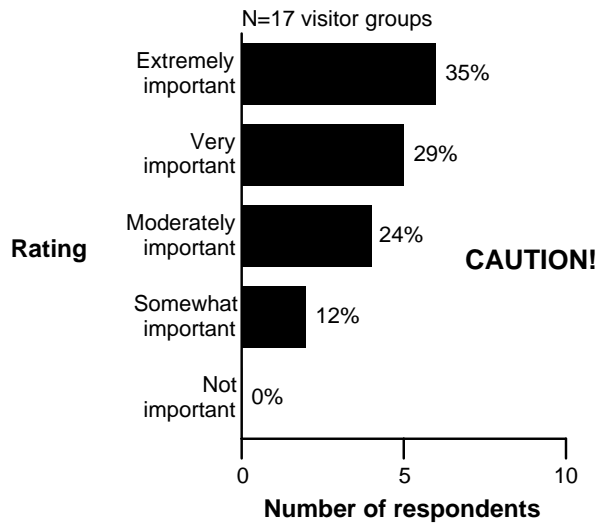


Figure 61: Importance of ranger-led activities/programs

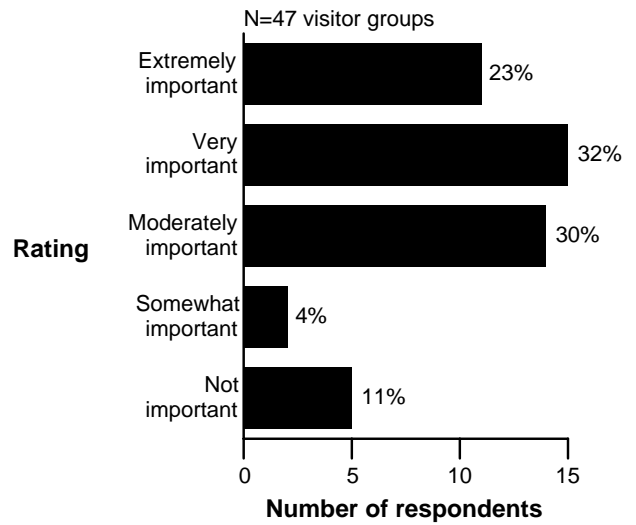


Figure 62: Importance of picnic areas

\*total percentages do not equal 100 due to rounding

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

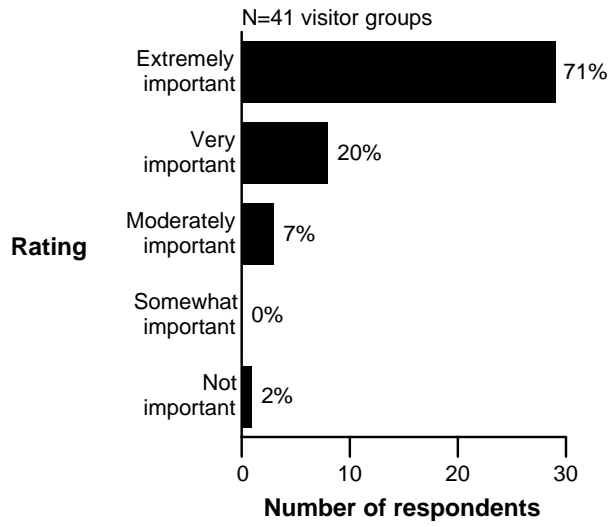


Figure 63: Importance of campground

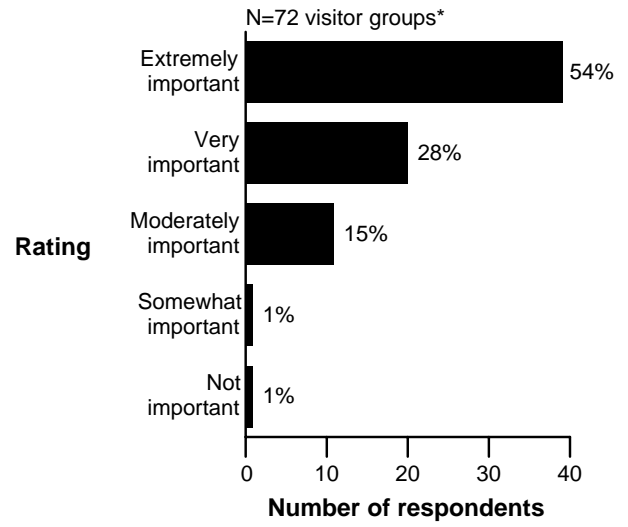


Figure 64: Importance of park website (used before or during visit)

\*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

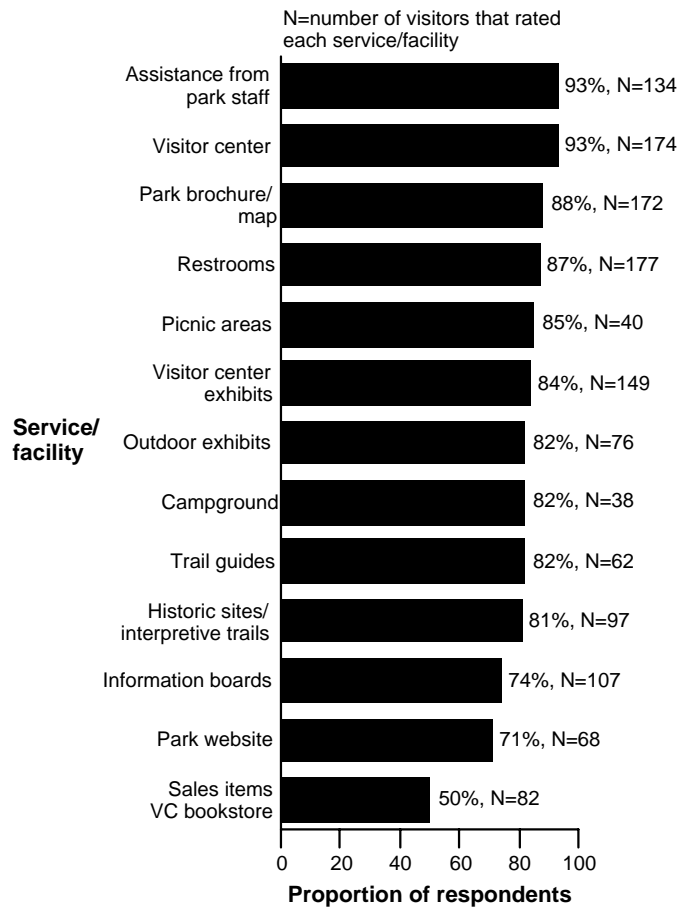
### Question 16c

For only those services and facilities that you and your group used, please rate their quality from 1-5.

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

### Results

- Figure 65 shows the combined proportions of “very good” and “good” quality ratings for visitor services/facilities that were rated by 30 or more visitor groups.
- The services/facilities that received the highest combined proportions of “very good” and “good” quality ratings were:
  - 93% Assistance from park staff
  - 93% Visitor center
  - 88% Park brochure/map
  - 87% Restrooms
- Figures 66 to 80 show the quality ratings for each service/facility.
- The service/facility receiving the highest “very poor” quality rating was:
  - 3% Park website



**Figure 65: Combined proportions of “very good” and “good” quality ratings for visitor services/facilities**

\*total percentages do not equal 100 due to rounding

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

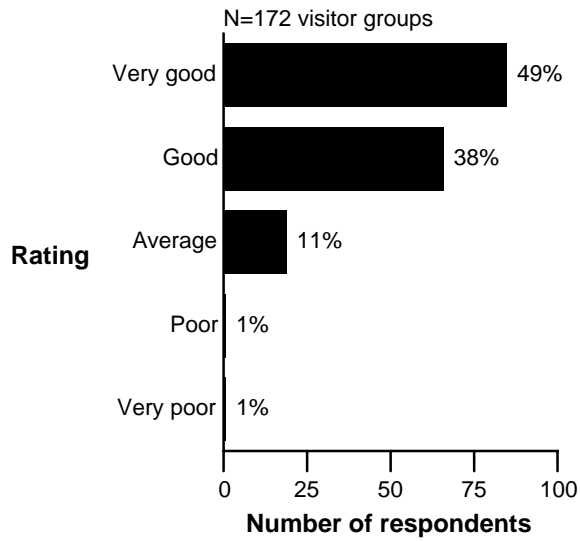


Figure 66: Quality of park brochure

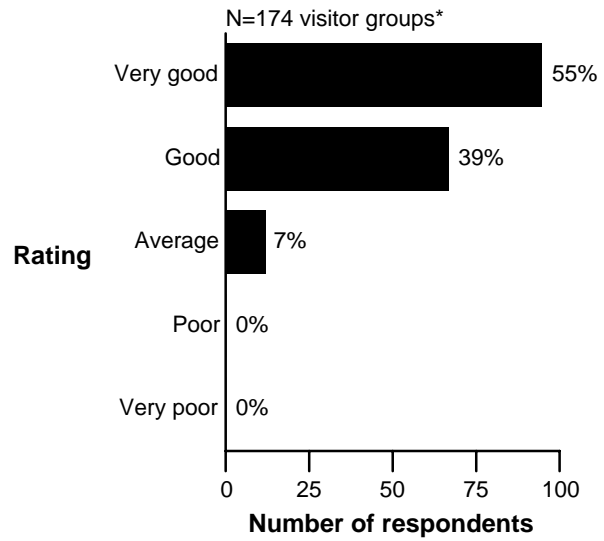


Figure 67: Quality of visitor center

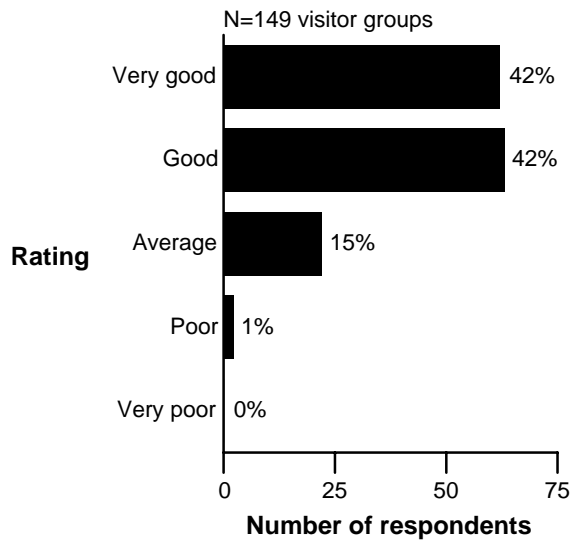


Figure 68: Quality of visitor center exhibits

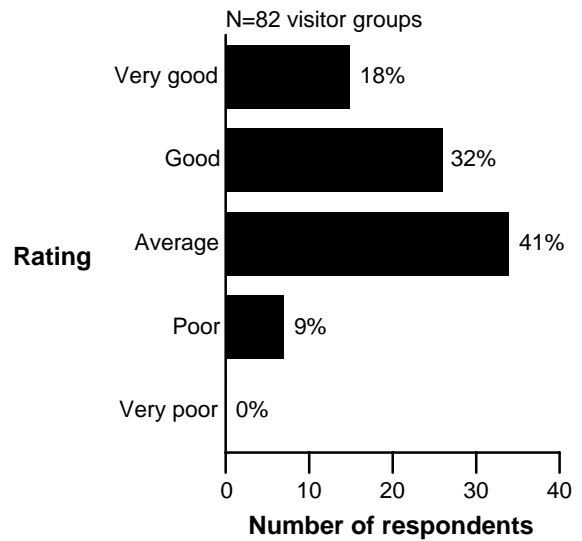


Figure 69: Quality of sales items in visitor center bookstore

\*total percentages do not equal 100 due to rounding

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

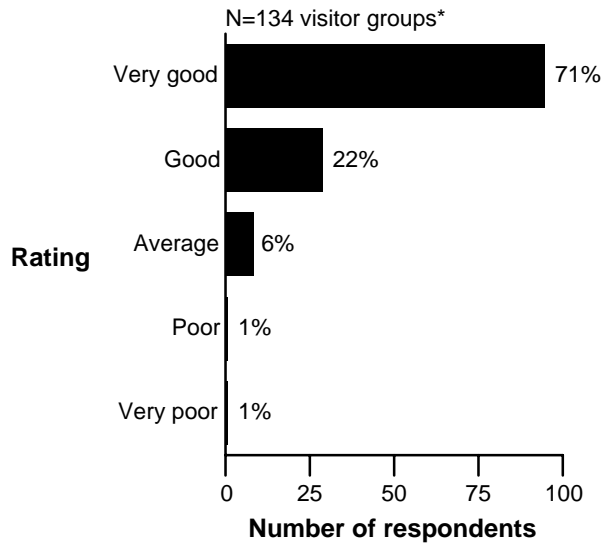


Figure 70: Quality of assistance from park staff

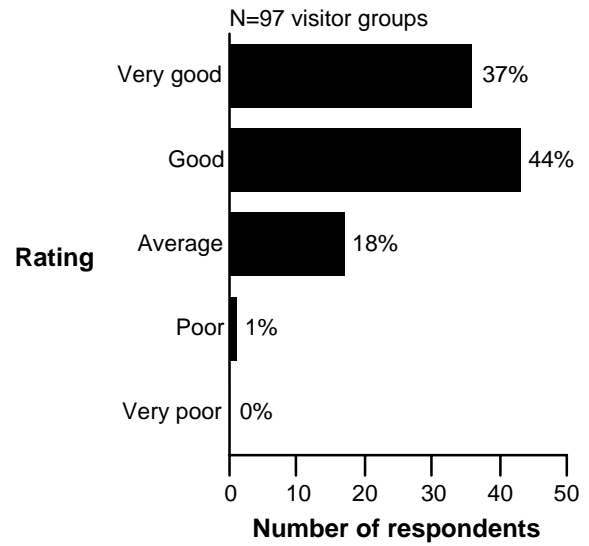


Figure 71: Quality of historic sites/interpretive trails

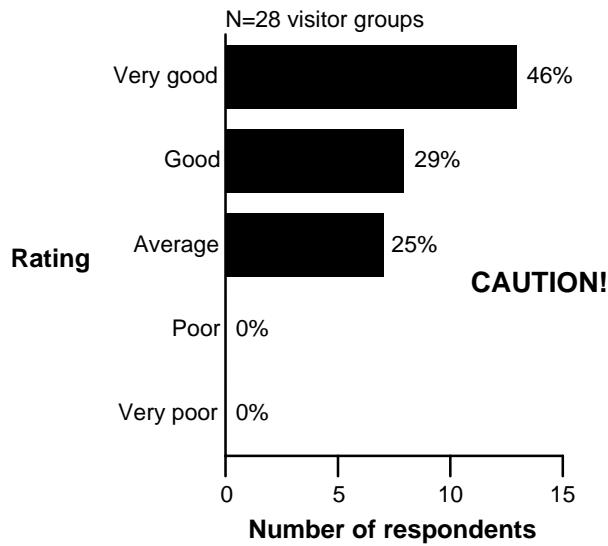


Figure 72: Quality of other trails

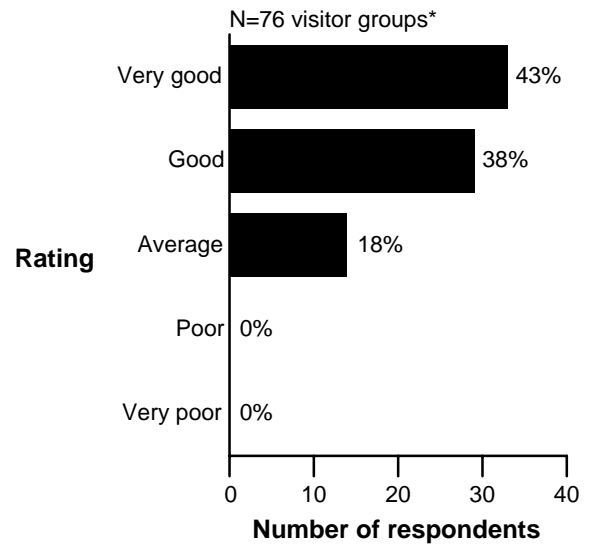


Figure 73: Quality of outdoor exhibits

\*total percentages do not equal 100 due to rounding

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

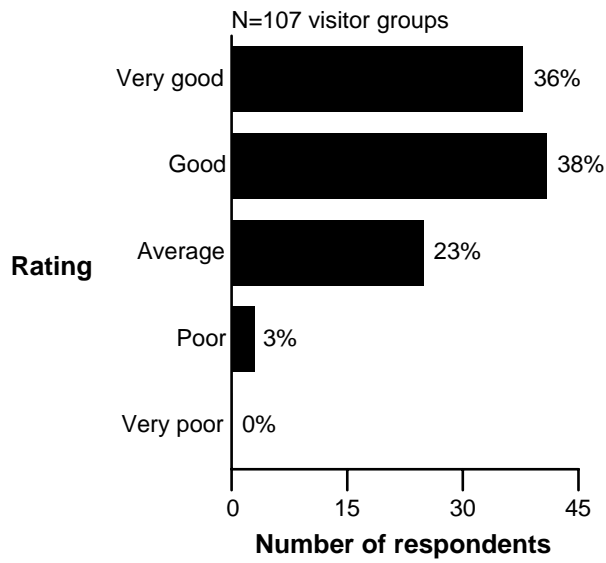


Figure 74: Quality of information boards

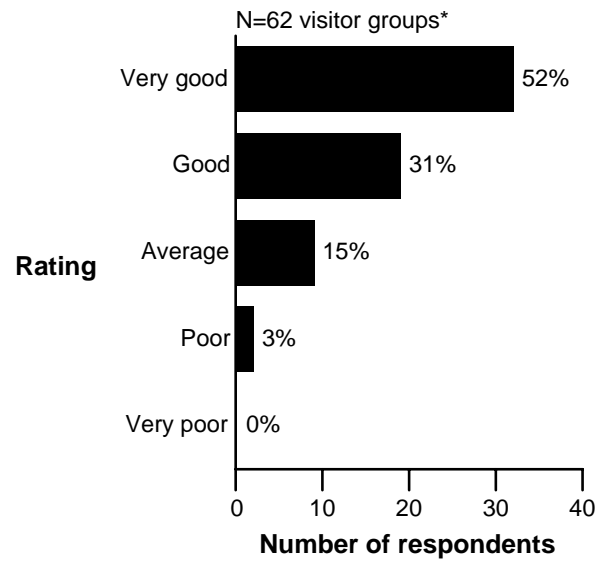


Figure 75: Quality of trail guides

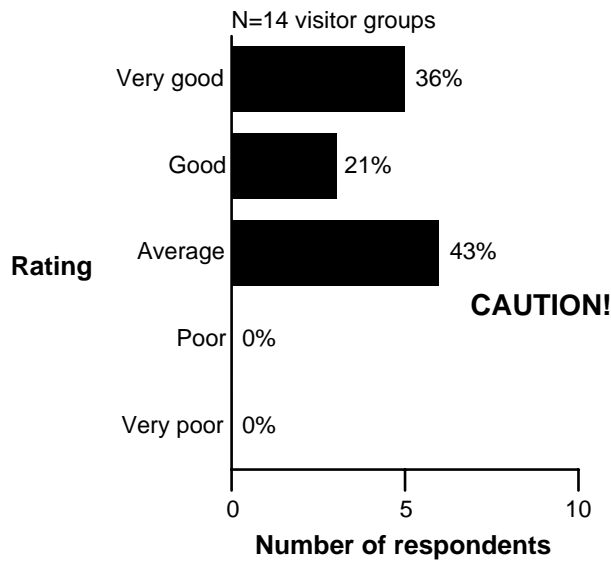


Figure 76: Quality of ranger-led activities/programs

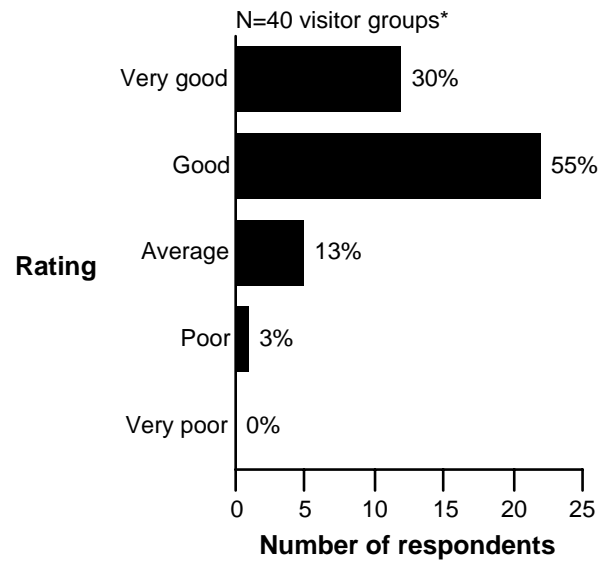


Figure 77: Quality of picnic areas

\*total percentages do not equal 100 due to rounding

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

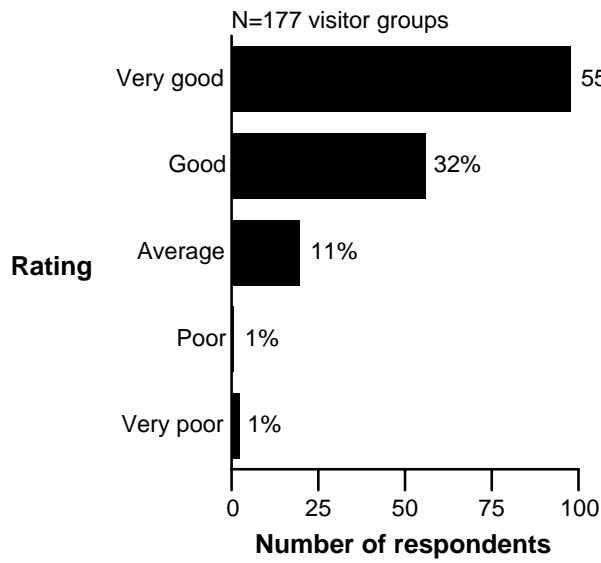


Figure 78: Quality of restrooms

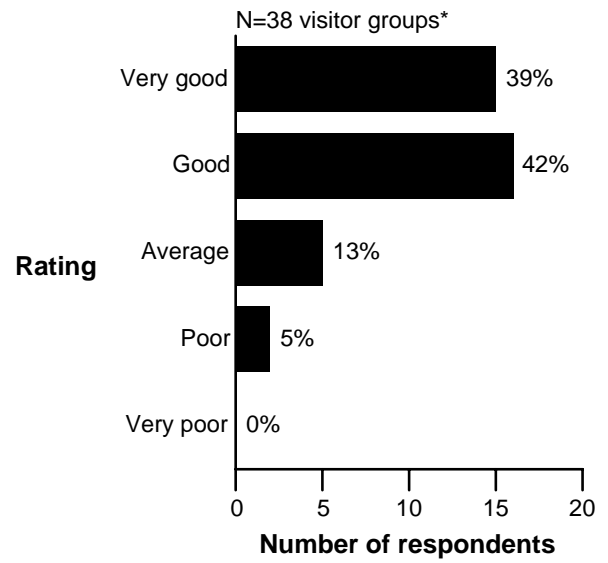


Figure 79: Quality of campground

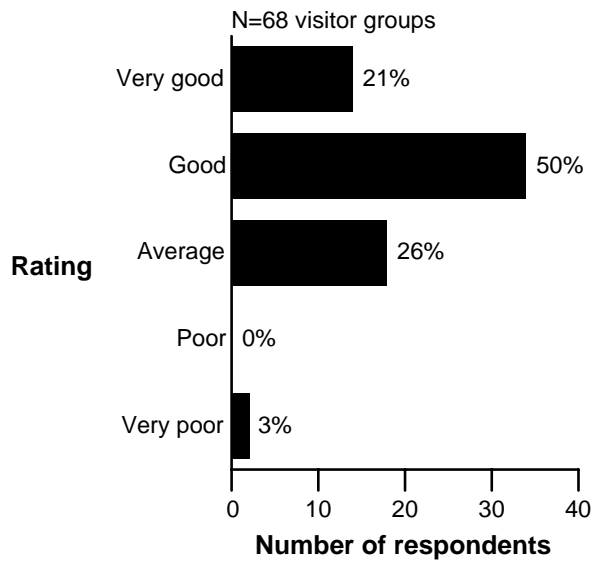


Figure 80: Quality of park website (used before or during visit)

\*total percentages do not equal 100 due to rounding

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

## Question 16d

If you rated the quality of any services/facilities as 1 or 2, please explain why.

## Results

- Table 15 shows a summary of visitor comments. A complete copy of handwritten comments is available in the Visitor Comments Appendix.

**Table 15: Comments on services/facilities that received  
“very poor” or “poor” quality ratings**  
N=30 comments

Service/facility	Comment
Assistance from park staff	Employee seemed disinterested in informing us about tours. Not helpful.
Campground	Need showers - but very clean bathrooms. Rude campers. Need RV hook-ups.
Cave Loop	Many caves closed
Information boards	Limited information available. Page covers cracked and grazed. Hard to read. Poor signage to park.
Park brochure/map	Map should include interesting places outside the park. Not enough data.
Park website	More information on cave accessibility, time needed, etc. Not enough data
Picnic areas	Not needed.
Restrooms	Need sinks. Smell horrible. Too hot.
Trail guides	Fading/illegible. Limited information available.
Visitor center bookstore	Better souvenirs or postcards. Hard hats hard to find. Better snacks. Didn't need them. Do not need it - but enjoy having it. Needs to be larger and carry more supplies for campers. Not a lot of choices of souvenirs or snacks. Limited selection of books on Lava Beds area and history. Cold drinks would be nice.
Visitor center exhibits	Missed Canby's Cross. Movie was good but there were too few.

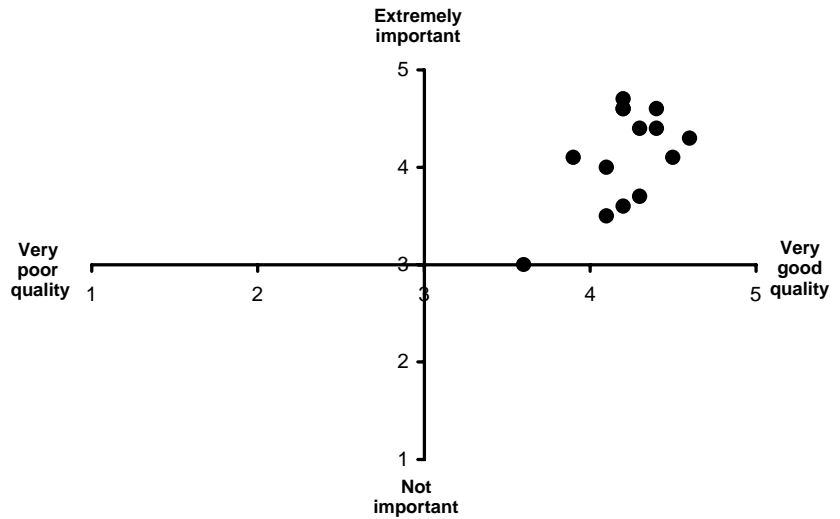
\*total percentages do not equal 100 due to rounding

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

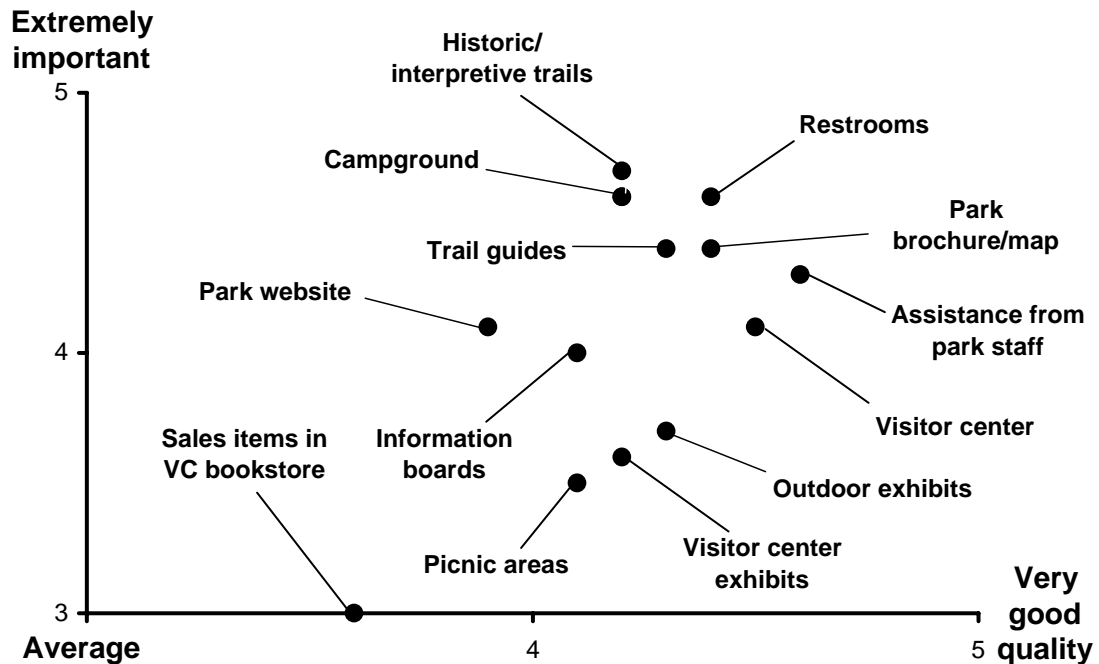


**Mean scores of importance and quality ratings**

- Figures 81 and 82 show the mean scores of importance and quality ratings for all visitor services/facilities that were rated by 30 or more visitor groups.
- All visitor services/facilities were rated above average in importance and quality except sales items in the visitor center bookstore, which received an average rating in importance.



**Figure 81: Mean scores of importance and quality ratings for visitor services/facilities**



**Figure 82: Detail of Figure 80**

\*total percentages do not equal 100 due to rounding

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

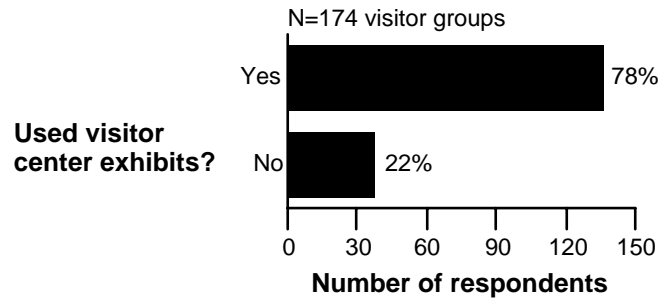
**What visitors liked most/least about visitor center exhibits**

Question 17a

Did you and your group use the visitor center exhibits?

Results

- 78% of visitor groups used the visitor center exhibits (see Figure 83)



**Figure 83: Visitor groups that used the visitor center exhibits.**

Question 17b

What did you and your group like most about Lava Beds NM visitor center exhibits?

Results

- 77% of visitor groups (N=134) responded to this question.
- Table 16 shows a summary of visitor comments. A complete copy of handwritten comments is available in the Visitor Comments Appendix.

**Table 16: What visitors liked most about the Lava Beds NM visitor center exhibits**

N=185 comments;

some visitors made more than one comment.

Element	Number of times mentioned
Visitor center movie	27
Exhibits (general)	17
Exhibits were interesting/informative	16
History information	14
Staff was helpful/friendly	12
Free flashlights	8
Comfortable atmosphere	7
History of Modoc War	7
The amount and quality of information	7
Presentations	6
Everything	4
Clean environment	4
Geology information	4
Information about caves	4
Information about volcanoes	4
Pictures/photographs	4

\*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: What visitors liked most about the Lava Beds NM visitor center exhibits**  
(continued)

Liked most	Number of times mentioned
Books	3
Natural history	3
The talking phone	3
Virtual cave tour	3
Artifacts	2
Floating rock	2
Presentations	2
Rock samples	2
Services	2
Viewing spots	2
Other	16

Question 17c

What did you and your group like least about Lava Beds NM visitor center exhibits?

Results

- 34% of visitor groups (N=58) responded to this question.
- Table 17 shows a summary of visitor comments. A complete copy of handwritten comments is available in the Visitor Comments Appendix.

**Table 17: What visitors liked least about the Lava Beds NM visitor center exhibits**  
N=58 comments

Element	Number of times mentioned
Nothing to dislike	9
More detailed exhibits	5
Small size	4
Movie	3
Need more	3
Post cards	3
Native plants	2
Need drinks and coffee	2
Other	27

\*total percentages do not equal 100 due to rounding

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

**What visitors liked most/least about outdoor exhibits**

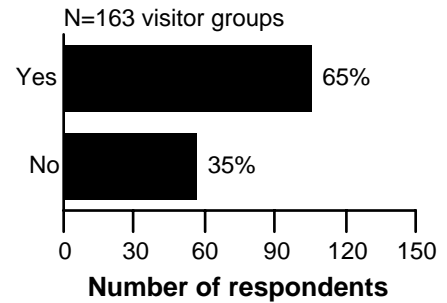
Question 17d

Did you and your group use the outdoor exhibits?

Results

- 65% of visitor groups used the outdoor exhibits (see Figure 84).

**Used outdoor exhibits?**



**Figure 84: Visitor groups that used the outdoor exhibits.**

Question 17e

What did you and your group like most about Lava Beds NM outdoor exhibits?

Results

- 64% of visitor groups (N=104) responded to this question
- Table 18 shows a summary of visitor comments. A complete copy of handwritten comments is available in the Visitor Comments Appendix.

**Table 18: What visitors liked most about the Lava Beds NM outdoor exhibits**

N=105 comments;  
some visitors made more than one comment.

Element	Number of times mentioned
Good information/explanations	25
Caves	23
Captain Jack's Stronghold	7
Fleener Chimneys	6
Labels/descriptions on rocks	5
Trails/hikes	5
History of caves	3
Brochure	2
Gillem's Camp	2
History of area	2
Lava flow	2
Lighted exhibits at Mushpot	2
Modoc/Native American history	2
Mushpot cave	2
Other	17

\*total percentages do not equal 100 due to rounding

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

## Question 17f

What did you and your group like least about Lava Beds NM outdoor exhibits?

## Results

- 22% of visitor groups (N=36) responded to this question.
- Table 19 shows a summary of visitor comments. A complete copy of handwritten comments is available in the Visitor Comments Appendix.

**Table 19: What visitors liked least about the Lava Beds NM outdoor exhibits**

N= 36 comments

Element	Number of times mentioned
Need repair/up-dating	6
Hard to find	5
Nothing to dislike	4
More in-depth information	3
More in-depth information on wildlife	3
Need more	3
Not for small children	2
Other	10

\*total percentages do not equal 100 due to rounding

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

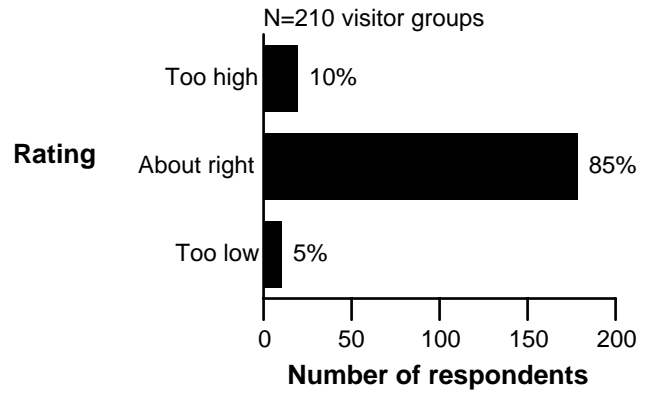
**Entrance fees**

**Question 15**

In your opinion, how appropriate is the amount of the current entrance fee (\$10/vehicle for 7 days) that you paid on this visit to Lava Beds NM?

**Results**

- 85% of visitors felt that the current entrance fee was “about right” (see Figure 85).
- 10% felt the entrance fee was “too high.”



**Figure 85: Appropriateness of entrance fee**

\*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 of park attributes/resources/experiences**

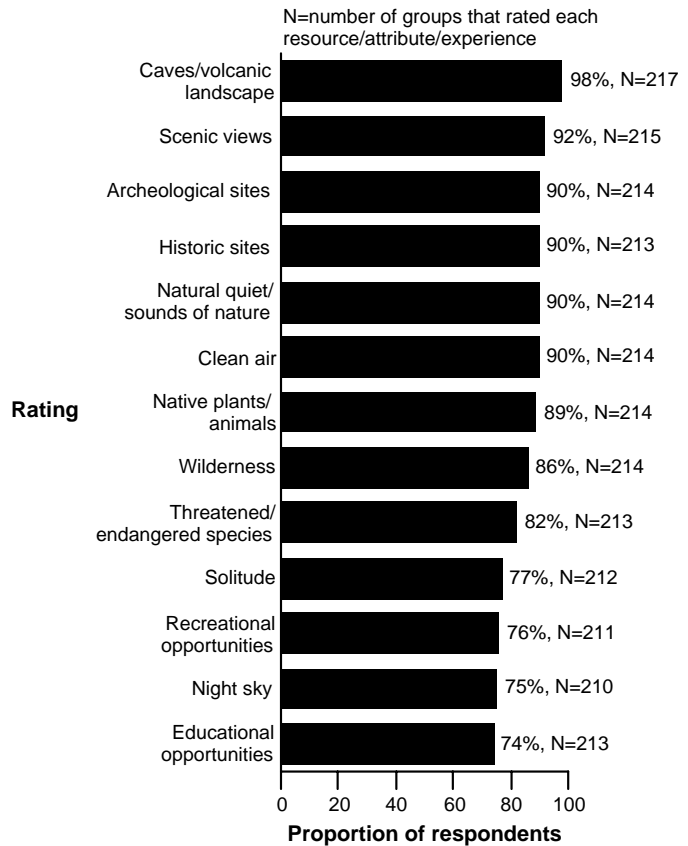
**Question 18**

It is the National Park Service's responsibility to protect Lava Bed NM natural and cultural resources/attributes and visitor experiences that depend on them. How important is protection of the following to you and your group?

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

**Results**

- As shown in Figure 86, the highest combined proportions of “extremely important” and “very important” ratings included:
  - 98% Caves/volcanic landscape
  - 92% Scenic views
- The attribute/resource/experience that received the highest “not important” rating was:
  - 5% Night sky (star gazing)
- Table 20 shows the importance ratings for natural and attributes/resources/experiences as rated by visitor groups.



**Figure 86: Proportions of visitors who rated the importance of park attributes/resources/experiences**

\*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: Importance of protecting of park attributes/resources/experiences**

N=number of visitor groups who rated each attribute

Attribute/resource/experience	N	Rating (%)					
		Not rated	Extremely important	Very important	Moderately important	Somewhat important	Not important
Caves/volcanic landscape	217	6	70	28	1	<1	<1
Clean air	214	9	63	27	8	1	<1
Scenic views	215	8	64	27	7	1	<1
Natural quiet/sounds of nature	214	8	63	27	8	1	<1
Night sky (star gazing)	210	13	50	25	16	5	5
Solitude	212	11	45	32	16	5	2
Threatened/endangered species	213	10	63	19	12	4	2
Historic sites/cultural resources	213	10	57	32	8	2	0
Archeological sites	214	9	59	31	7	2	<1
Native plants/animals	214	9	64	25	9	2	0
Recreational opportunities	211	12	42	35	18	4	1
Educational opportunities	213	10	37	38	20	5	1
Wilderness	214	9	57	29	9	4	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 Lava Beds NM**

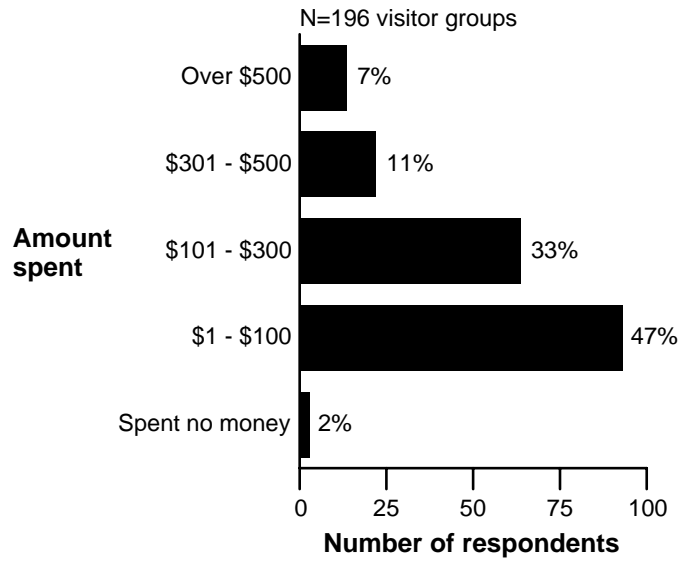
**Question 20**

For you and your group, please report all expenditures during this visit to Lava Beds NM and the surrounding area (within 60 miles).

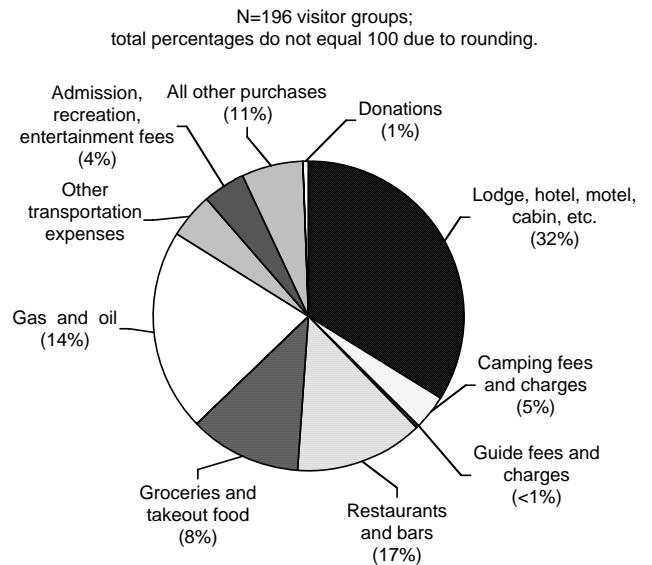
**Results:**

- 49% of visitor groups spent \$100 or less (see Figure 87).
- 33% spent \$101 to \$300.
- 18% spent \$301 or more.
- The average visitor group expenditure was \$206.
- The median group expenditure (50% of groups spent more and 50% of groups spent less) was \$113.
- Average total expenditure per person (per capita) was \$71.
- As shown in Figure 88, the largest proportions of total expenditures inside and outside the park were:

32% Lodge, hotel, motel, cabin.  
 17% Restaurants and bars  
 14% Gas and oil



**Figure 87: Total expenditures in and outside the park**



**Figure 88: Proportions of total expenditures in and outside of 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

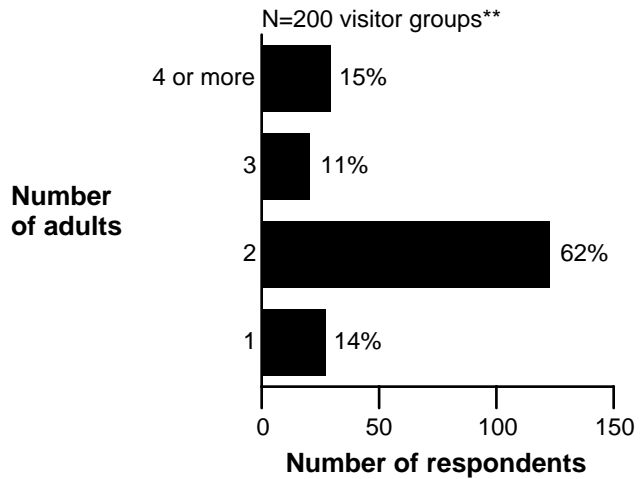
**Number of adults covered by expenditures**

Question 20c

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

Results

- 62% of visitor groups had two adults covered by expenditures (see Figure 89).
- 15% had four or more adults.
- 14% had one adult.



**Figure 89: Number of adults covered by expenditures**

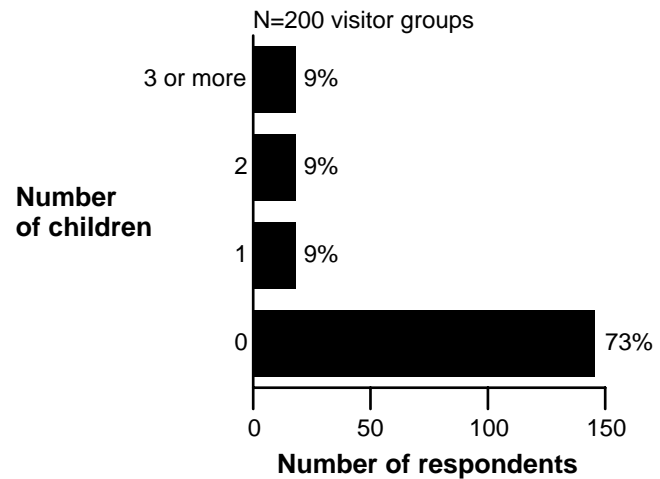
**Number of children covered by expenditures**

Question 20c

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

Results

- 73% of visitor groups had no children covered by expenditures (see Figure 90).
- 18% had one or two children covered by expenditures.
- 9% had three or more children covered by expenditures.



**Figure 90: 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 20a

Please list your group's total expenditures inside Lava Beds NM.

Note: Surrounding area residents should only include expenditures that were directly related to this visit to Lava Beds NM.

### Results

- 63% of visitor groups spent less than \$20 in the park (see Figure 91).
- 22% spent between \$21 and \$40.
- The average visitor group expenditure inside the park was \$27.
- The median expenditure (50% of groups spent more and 50% of groups spent less) was \$16.
- Average total expenditure per person (per capita) was \$10.
- As shown in Figure 92, the largest proportion of total expenditures were:

40% All other purchases  
27% Admission, recreation, entertainment fees

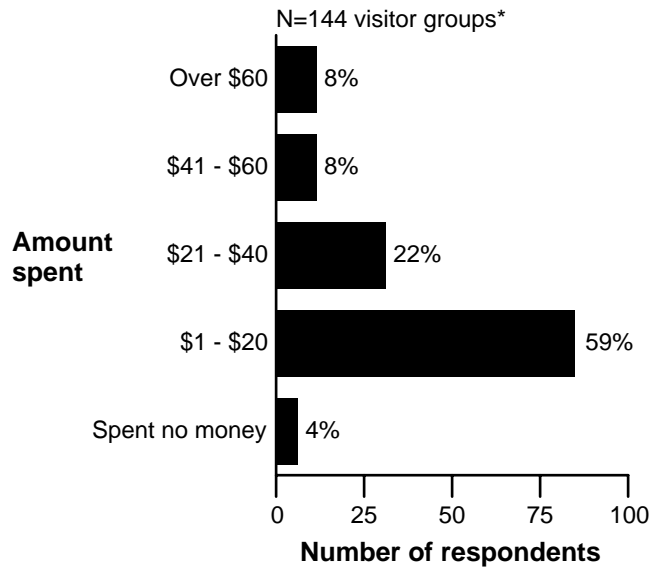


Figure 91: Total expenditures inside the park

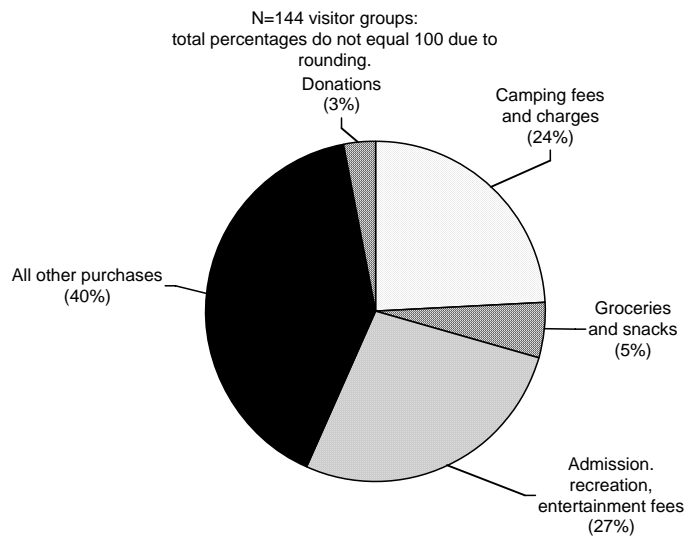


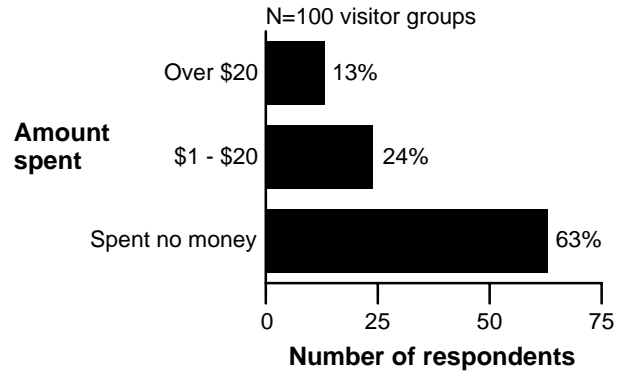
Figure 92: Proportions of total expenditures inside the park

\*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

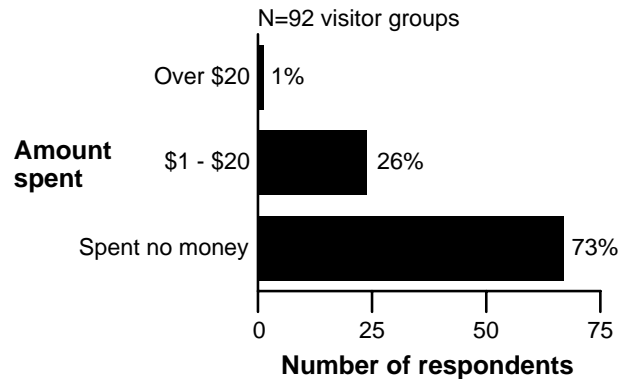
- 63% of visitor groups did not spend any money for camping fees and charges inside the park (see Figure 93).
- 24% spent \$1 to \$20.



**Figure 93: Expenditures for camping fees and charges inside the park**

Groceries and snacks

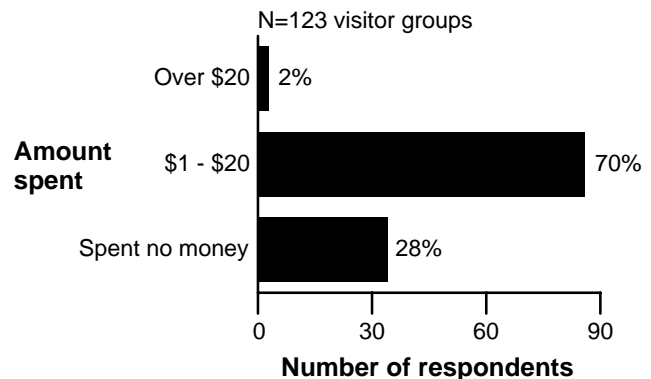
- 73% of visitor groups did not spend any money on groceries and snacks in the park (see Figure 94).
- 26% spent \$1 to \$20.



**Figure 94: Expenditures for all other purchases inside the park**

Admission, recreation, entertainment fees

- 28% of visitor groups spent no money on admission, recreation or entertainment fees in the park (see Figure 95).
- 70% spent \$1 to \$20.



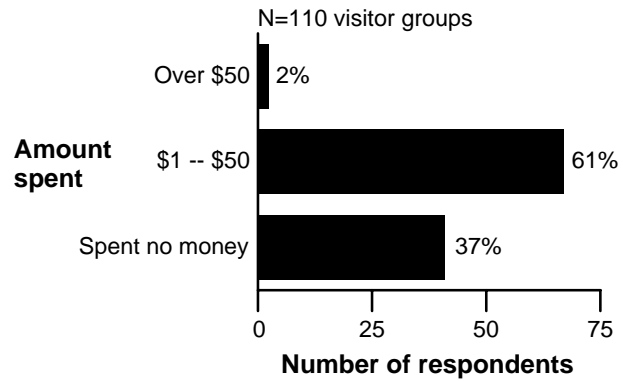
**Figure 95: Expenditures for admission, recreation, entertainment fees inside the park**

\*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

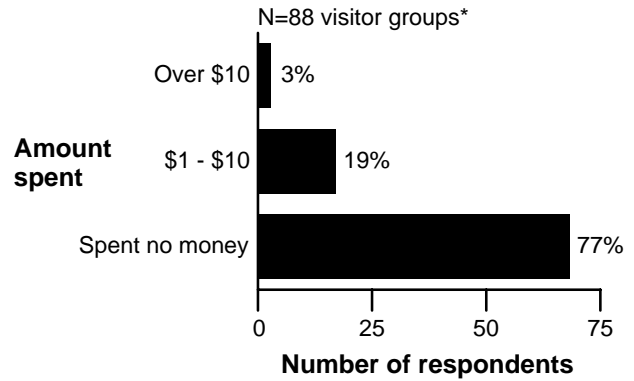
- 37% of visitor groups spent no money on other purchases such as souvenirs, books, sporting goods, clothes, etc., inside the park (see Figure 96).
- 61% spent up to \$50.



**Figure 96: Expenditures for other purchases inside the park**

Donations

- 77% of visitor groups did not spend any money on donations in the park (see Figure 97).
- 19% spent \$1 to \$10.



**Figure 97: 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 20b

Please list your group's total expenditures in the surrounding area outside the park (within 60 miles of Lava Beds NM.)

Note: Surrounding area residents should only include expenditures that were directly related to this visit to Lava Beds NM.

### Results

- 43% of visitor groups spent \$100 or less in the park (see Figure 98).
- 22% spent between \$101 and \$200.
- The average visitor group expenditure outside the park was \$220.
- The median expenditure (50% of groups spent more and 50% of groups spent less) was \$134.
- Average total expenditure per person (per capita) was \$75.
- As shown in Figure 99, the largest proportion of total expenditures outside the park was:

34% on lodging  
21% on gas and oil

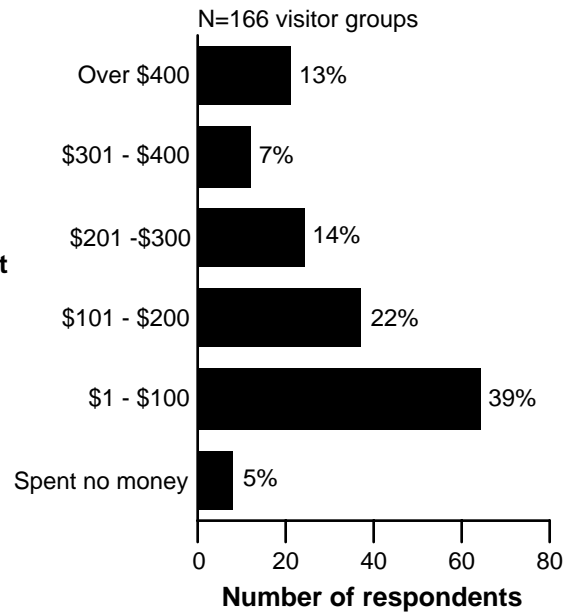


Figure 98: Total expenditures outside the park

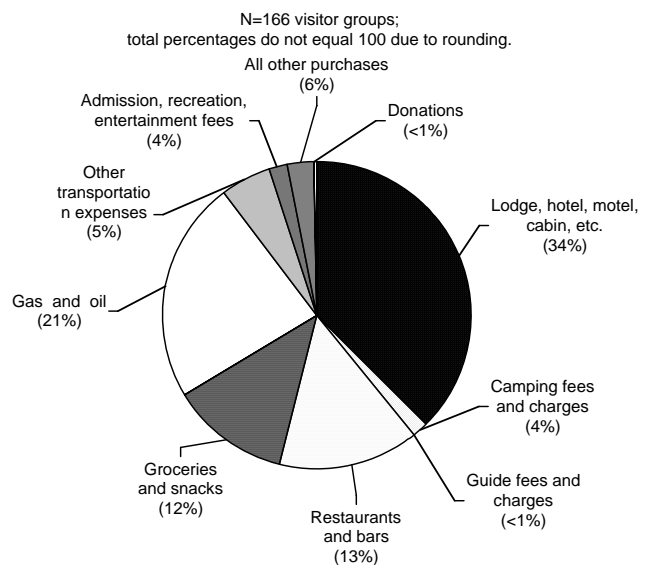


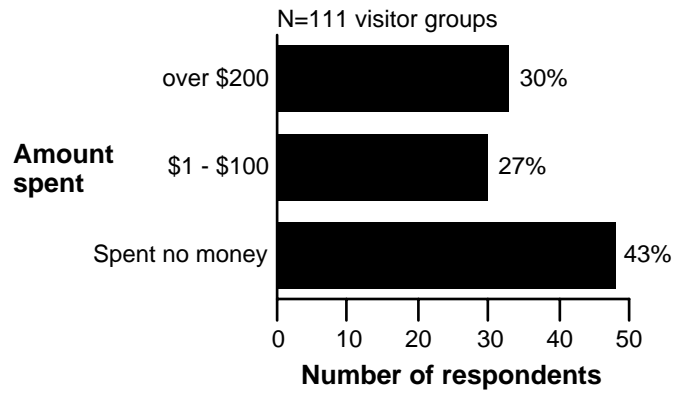
Figure 99: Proportions of total expenditures outside the park

\*total percentages do not equal 100 due to rounding

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

Lodge, hotel, motel, cabin, etc.

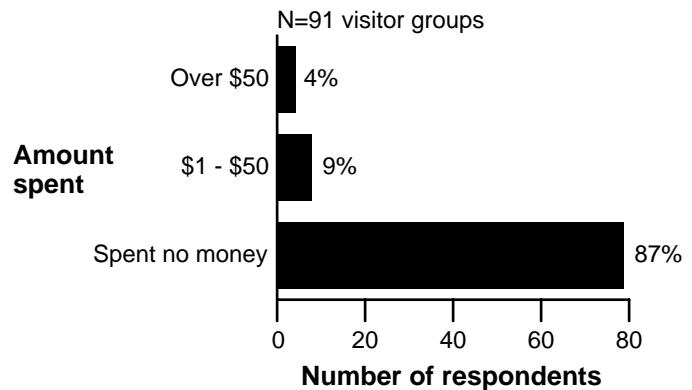
- 43% of visitor groups did not spend any money on lodging outside the park (see Figure 100).
- 30% spent over \$200.
- 27% spent \$1 to \$100.



**Figure 100: Expenditures for lodging outside the park**

Camping fees and charges

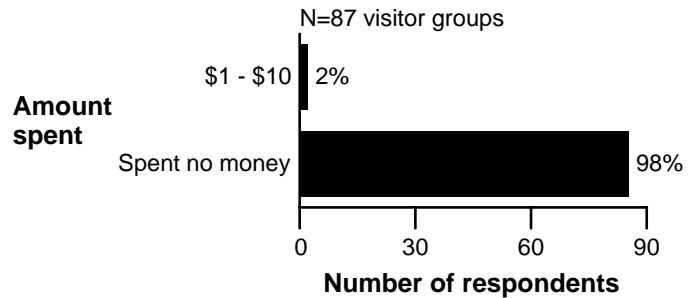
- 87% of visitor groups did not spend any money on camping outside the park (see Figure 101).
- 9% spent \$1 to \$50.



**Figure 101: Expenditures for camping fees and charges outside the park**

Guide fees and charges

- 98% of visitor groups did not spend any money on guide fees (see Figure 102).



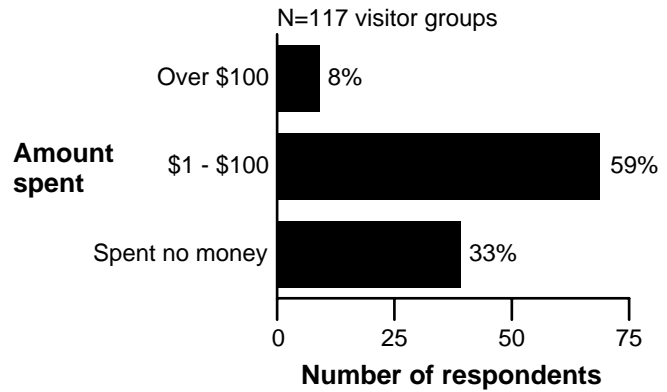
**Figure 102: Expenditures for guide fees and charges outside the park**

\*total percentages do not equal 100 due to rounding

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

Restaurants and bars

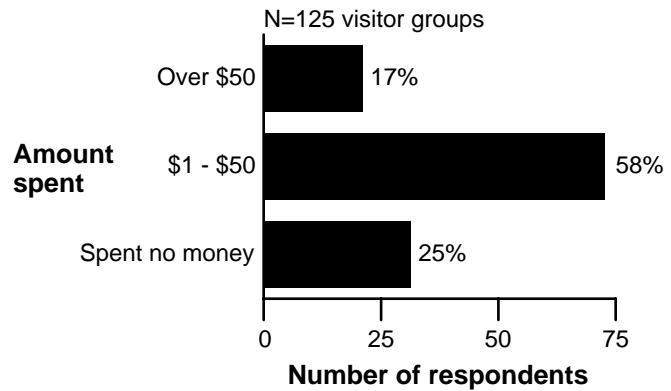
- 33% of visitor groups did not spend any money on restaurants and bars outside the park (see Figure 103).
- 59% spent \$1 to \$100.



**Figure 103: Expenditures for restaurants and bars outside the park**

Groceries and snacks

- 25% of visitor groups did not spend any money on groceries and snacks (see Figure 104).
- 58% spent \$1 to \$50.



**Figure 104: Expenditures for groceries and snacks outside the park**

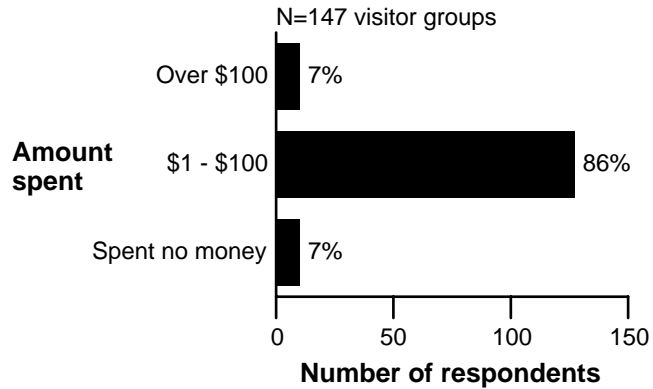
\*total percentages do not equal 100 due to rounding

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



Gas and oil

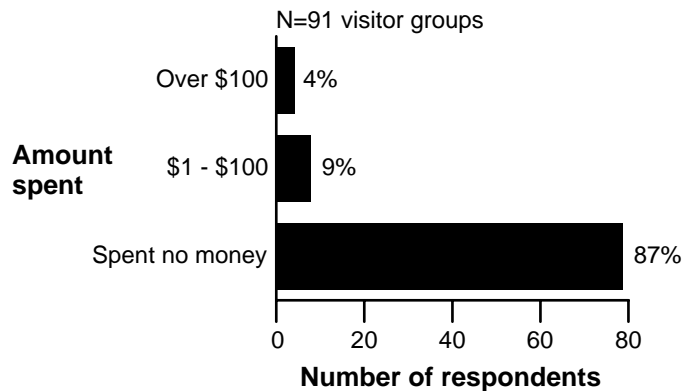
- 7% of visitor groups spent no money on gas and oil outside the park (See Figure 105).
- 86% spent \$1 to \$100.



**Figure 105: Expenditures for gas and oil outside the park**

Other transportation expenses

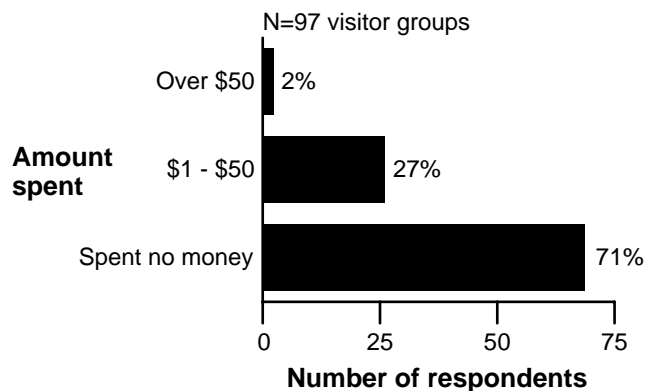
- 87% spent no money on other transportation outside the park (see Figure 104).
- 9% spent up to \$100.



**Figure 106: Expenditures for other transportation expenses outside the park**

Admission, recreation, and entertainment fees

- 71% of visitor groups did not spend any money on admission fee outside the park (see Figure 107).
- 27% spent \$1 to \$50.



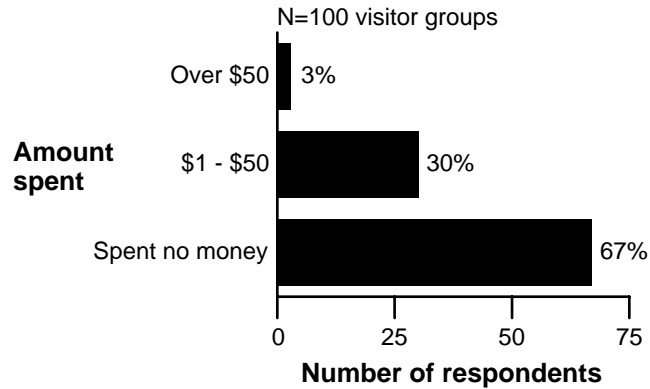
**Figure 107: Expenditures for admission/recreation fees outside the park**

\*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, books, clothing, etc.)

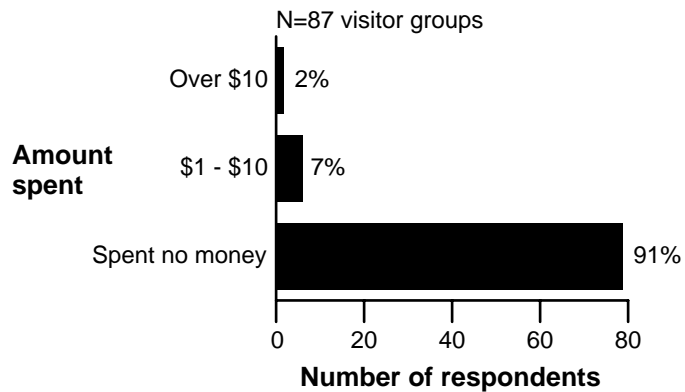
- 67% of visitor groups did not spend any money on “other” purchases outside the park (see Figure 108).
- 30% spent \$1 to \$50.



**Figure 108: Expenditures for all other purchases outside the park**

Donations

- 91% of visitor groups did not spend any money on donations outside the park (see Figure 109).
- 7% spent up to \$10.



**Figure 109: 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

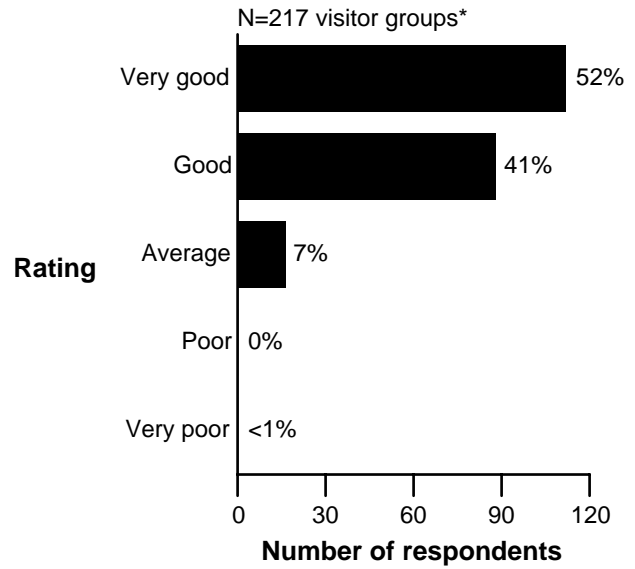
**Overall quality rating of visitor services/facilities**

**Question 19**

Overall, how would you rate the quality of the visitor facilities, services, and recreational opportunities provided to your and your group at Lava Beds NM during this visit?

**Results**

- 93% of visitors rated the overall quality of visitor services, services, and recreational opportunities as “good” or “very good” (see Figure 110).



**Figure 110: Overall quality rating of visitor services, facilities 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 Comments**

**What visitors liked most**

Question 28a

What did you and your group like most about your visit to Lava Beds NM?

Results

- 92% of visitor groups (N=206) responded to this question.
- Table 21 shows a summary of visitor comments. A complete copy of hand-written comments is included in the Visitor Comments Appendix.

**Table 21: What visitors liked most**  
N=278 comments;  
some visitor groups made more than one comment.

Comment	Number of times mentioned
<b>PERSONNEL</b>	
Rangers helpful and informative	4
Other comments	1
<b>INTERPRETIVE SERVICES</b>	
Good information	11
Learning experience/opportunity	5
Cave/visitor center exhibits	2
Other comments	2
<b>POLICIES/MANAGEMENT</b>	
Uncrowded conditions	11
Cave management	3
Quiet	3
<b>FACILITIES/MAINTENANCE</b>	
Cleanliness	3
Other comments	2
<b>RESOURCE MANAGEMENT</b>	
Caves	93
Geologic features	31
Wildlife	7
Mushpot Cave	3
Petroglyph Point	3
Petroglyphs	3
Fleener Chimneys	2
Skull Ice Cave	2
Clean air	2
Plants/wildflowers	2
Wilderness	2

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**Table 21: What visitors liked most  
(continued)**

Comment	Number of times mentioned
<b>GENERAL COMMENTS</b>	
Natural/scenic beauty	35
History	14
Hiking	6
Enjoyed visit	5
Trails	5
Explore independently	3
Camping	2
Captain Jack's Stronghold	2
Proximity to home	2
Three Sisters	2
Other comments	5

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## What visitors liked least

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### Question 28b

What did you and your group like least about your visit to Lava Beds NM?

### Results

- 66% of visitor groups (N=144) responded to this question.
- Table 22 shows a summary of visitor comments. A complete copy of hand-written comments is included in the Visitor Comments Appendix.

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**Table 22: What visitors liked least**  
N=144 comments;  
some visitor groups made more than one comment.

Comment	Number of times mentioned
<b>INTERPRETIVE SERVICES</b>	
Comments	8
<b>FACILITIES/MAINTENANCE</b>	
No hot showers	6
Rough roads	4
Better restrooms	3
No RV dumpsite	2
Difficulty of trails	2
Roads in National Forest need repair	2
Trails need maintenance/repair	2
Unpaved roads	2
Better/more restrooms	2
Other comments	1
<b>CONCESSIONS</b>	
Lack of food services	2
Other comments	2
<b>POLICY/MANAGEMENT</b>	
Signage to park	5
Crowded caves	4
Entrance fee	4
No maps at N. entrance	3
Noisy campsites	3
More electric lights than previously	2
Need more signs in caves	2
Unattended entrance station	2
Other comments	5

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**Table 22: What visitors liked least  
(continued)**

Comment	Number of times mentioned
<b>GENERAL COMMENTS</b>	
Nothing to dislike	25
Lack of time	21
Weather - heat	6
Too far away	5
Distances	2
Need more shade	2
Not appropriate for young children	2
Other comments	13

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## Planning for the future

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### Question 30

If you were a manager planning for the future of Lava Beds NM, what would you propose?

### Results

- 65% of visitor groups (N=145) responded to this question.
- Table 23 shows a summary of visitor comments. A complete copy of handwritten comments is included in the Visitor Comments Appendix.

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**Table 23: Planning for the future**  
N=222 comments;  
some visitor groups made more than one comment.

Comment	Number of times mentioned
<b>INTERPRETIVE SERVICES</b>	
Advertise the park	11
Need more information on caves - maps, distances, etc.	10
More ranger talks/guides	8
More/improved VC exhibits	6
Interpret Modoc culture/history	5
More ranger talks	3
Promote awareness of Modoc culture	3
Sales area – needs more items	3
Provide more information on activities	2
Interpret Japanese internment camps	2
More geologic exhibits	2
More natural history interpretation	2
Other comments	9
<b>RESOURCE MANAGEMENT</b>	
Comments	3
<b>FACILITIES/MAINTENANCE</b>	
Better road access	8
Pave roads	7
Improve signage to park	5
Better/more signage	3
Improve trails	3
Showers	2
Expand campground	2
Expand RV sites	2
More restrooms	2
Bike paths	3
Other comments	4

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**Table 21: Planning for the future  
(continued)**

Comment	Number of times mentioned
<b>POLICIES/MANAGEMENT</b>	
Keep it natural - don't over-develop	13
Protect the resource	10
Reduce/eliminate entrance fees	9
Change status to NP	8
Control expenses	7
Do not restrict use of facilities	6
Enforce fee payment	6
Enforce quiet time in campground	6
Handicap-accessible cave	6
Protect the resource	4
Reduce/eliminate entrance fees	4
Other comments	7
<b>GENERAL COMMENTS</b>	
No changes	8
Food services	7
Need lodging in park/nearby	3
Enjoyable visit	2
Need alternative activities to caving	2
Lighted caves	2
Shorter survey	2

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## Additional comments

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### Question 31

Is there anything else you and your group would like to tell us about your visit to Lava Beds NM?

### Results

- 52% of visitor groups (N=116) responded to this question.
- Table 24 shows a summary of visitor comments. A complete copy of handwritten comments is included in the Visitor Comments Appendix.

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**Table 24: Additional comments**  
N=125 comments;  
some visitor groups made more than one comment.

Comment	Number of times mentioned
<b>PERSONNEL</b>	
Friendly/helpful staff	6
<b>INTERPRETIVE SERVICES</b>	
Educational visit	9
Provide accurate native history	3
Other comments	5
<b>POLICIES/MANAGEMENT</b>	
Comments	7
<b>FACILITIES/MAINTANANCE</b>	
Liked new facilities/exhibits	2
Other comments	8
<b>RESOURCE MANAGEMENT</b>	
Comments	2
<b>GENERAL COMMENTS</b>	
Enjoyable visit	45
Great park	7
Plan to return	7
Thank you	5
Keep up the good work	4
Advertise the park	2
Noisy water-drilling work	2
Appreciate feedback opportunity	2
Other comments	9

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## **APPENDICES**

<b>Appendix 1: The Questionnaire</b>
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## Appendix 2: Additional Analysis

The Visitor Services Project (VSP) offers the opportunity to learn more from VSP visitor study data. Additional analysis can be done using the park's VSP visitor study data that was collected and entered into the computer. Two-way and three-way cross tabulations can be made of any of the characteristics listed below. Be as specific as possible—you may select a single program/service/facility instead of all that were listed in the questionnaire. Include your name, address and phone number in the request.

- Sources of information used prior to visit
- Sources of information preferred prior to future visits
- Received needed information
- Primary reason for visiting area
- Sites visited in area
- In which community were support services obtained?
- Able to obtain support services?
- Stay overnight away from home?
- Number of nights inside park
- Number of nights in park area
- Type of lodging used inside park
- Type of lodging used in park area
- Adequacy of directional signs – interstate, state highway, communities, inside park
- Expected activities
- Activities on this visit
- Numbers of hours spent in park
- Number of days spent in park
- Order of sites visited
- Visit the visitor center?
- Reasons for visiting visitor center
- Attend ranger-led activities?
- If you did not attend ranger-led activities, why not?
- What would encourage attendance?
- Topics learned on this visit
- Topics to learn about on future visit
- Entrance fee appropriate?
- Services/facilities used
- Importance of service/facility
- Quality of service/facility
- Used visitor center exhibits?
- Used outdoor exhibits?
- Importance of resource/attribute/experience
- Overall quality
- Expenditures inside the park
- Expenditures outside the park
- Number of adults/children included in expenditures
- With commercial guided tour group?
- With school/educational group?
- With other organized group
- Group type
- Group size
- Number of vehicles
- Number of entries
- Visitor gender
- Visitor age
- State of residence
- Country of residence
- Number of visits
- Highest level of education
- Physical condition that limits access?
- Have difficulty accessing activities/services?
- Type of physical condition
- Preferred method for future learning

For more information please contact:  
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### 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 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

Table 2 shows no significant difference in group type.

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. Thus, non-response bias for group size is judged to be insignificant. However, 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, Filion 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 preserve. Thus, a 5-year difference in average age between respondents and non-respondents is an acceptable justification. Therefore, non-response bias is judged to be insignificant.

*References*

- Filion F. L. (Winter 1975-Winter 1976) Estimating Bias due to Non-response in Mail Surveys. *Public Opinion Quarterly*, Vol 39 (4): 482-492.
- Dey, E.L. (1997) Working with Low Survey Response Rates: The Efficacy of Weighting Adjustment. *Research in Higher Education*, 38(2): 215-227.
- Dillman D. A. (2000) *Mail and Internet Surveys: The Tailored Design Method*, 2<sup>nd</sup> Edition, New York: John Wiley and Sons, Inc.
- Dillman D. A. (2007) *Mail and Internet Surveys: The Tailored Design Method, Updated version with New Internet, Visual, and Mixed-Mode Guide*, 2<sup>nd</sup> Edition, New York: John Wiley and Sons, Inc.
- Dillman D. A. and Carley-Baxter L. R. (2000) *Structural determinants of survey response rate over a 12-year period, 1988-1999*, Proceedings of the section on survey research methods, 394-399, American Statistical Association, Washington, D.C.
- Goudy, W. J. (1976) Non-response Effect on Relationships Between Variables. *Public Opinion Quarterly*. Vol 40 (3): 360-369.
- Mayer C. S. and Pratt Jr. R. W. (Winter 1966-Winter 1967) A Note on Non-response in a Mail Survey. *Public Opinion Quarterly*. Vol 30 (4): 637-646.
- 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

Reports 1-6 (pilot studies) are available from the University of Idaho Park Studies Unit. All other VSP reports listed are available from the parks where the studies were conducted or from the UI PSU. 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 Preserve (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 Farm 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 (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)
- 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 (summer & fall)

**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 & Preserve (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. Lava Beds National Monument (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
- 132. Dry Tortugas National Park
- 133. Pinnacles National Monument
- 134. Great Sand Dunes National Monument & 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

**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

**2003 (continued)**

- 149. Fort Stanwix National Monument
- 150. Arches National Park
- 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
- 164. San Francisco Maritime National Historical Park
- 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) (spring)
- 185. Hawai'i Volcanoes National Park (spring)
- 186.1 Glen Canyon National Recreation Area (spring)
- 186.2 Glen Canyon National Recreation Area (summer)
- 187. Lava Beds National Monument

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

**Visitor Comments Appendix**

This section contains complete visitor comments of all open-ended questions and is bound separately from this report due to its size.

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