



# Fossil Butte National Monument Visitor Study

*Summer 2010*

Natural Resource Report NPS/NRSS/SSD/NRR—2011/174/107815



**ON THE COVER**

Rock outcropping at Fossil Butte National Monument  
Photo courtesy Fossil Butte National Monument

# **Fossil Butte National Monument Visitor Study**

*Summer 2010*

Natural Resource Report NPS/NRSS/SSD/NRR—2011/174/107815

William F. Boyd & Steven J. Hollenhorst

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

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## Executive Summary

This visitor study report profiles a systematic random sample of Fossil Butte National Monument visitors during August 1-8, 2010. A total of 340 questionnaires was distributed to visitor groups. Of those, 247 questionnaires were returned resulting in a 72.7% response rate.

<b>Group size and type</b>	Forty-five percent of visitor groups were in groups of two, 31% were in groups of four or more, and 14% were in groups of three. Seventy-two percent of visitor groups were in family groups.
<b>State or country of residence</b>	United States visitors comprised 92% of total visitation during the survey period, with 13% from Utah and smaller proportions from 40 other states. International visitors comprised 8% of total visitation during the survey period, with 19% from the United Kingdom and smaller proportions from 9 other countries.
<b>Frequency of visits</b>	Eighty-seven percent of visitors were visiting the park for the first time in their lifetime, while 92% were visiting for the first time in the past 5 years.
<b>Age</b>	Twenty-eight percent of visitors were ages 51-65 years, 23% were ages 15 years or younger, and 12% were ages 66 years or older.
<b>Physical conditions</b>	Five percent of visitor groups had members with physical conditions affecting their ability to access or participate in activities and services.
<b>Information sources</b>	Most visitor groups (78%) obtained information about the park prior to their visit through maps/brochures (38%) and the park website (36%). Most (92%) received the information they needed. To obtain information for a future visit, 73% of visitor groups would use the park website.
<b>Park website</b>	Thirty-four percent of visitor groups obtained information from the park website.
<b>Reason for visiting park area</b>	For 46% of non-resident visitor groups, the primary reason for visiting the park area (within 30 miles) was traveling through/unplanned visit, and for 31%, the primary reason for visiting the area was to visit the park.
<b>Services used in nearby communities</b>	Seventy-eight percent of visitor groups used support services in nearby communities, and most (95%) were able to obtain needed services. The community most commonly used to obtain support services was Kemmerer/Diamondville, WY.
<b>Overnight stays</b>	Forty-four percent of visitor groups stayed overnight away from their permanent residence within 30 miles of the park. Of those groups, 60% stayed one night within 30 miles of the park.
<b>Length of visit in park</b>	Forty percent of visitor groups spent up to one hour visiting the park and 38% spent two hours. The average length of visit was 1.8 hours.
<b>Sites visited in the park</b>	The most commonly visited sites were the visitor center (98%), the 7.5 mile scenic drive (26%), and hiking trails (21%).

**Executive summary** (continued)

<b>Activities on this visit</b>	The most common activities were visiting the visitor center (91%) and viewing visitor center exhibits (87%). The most important activity was viewing visitor center exhibits (40%).
<b>Ranger-led talks/ programs</b>	Seven percent of visitor groups participated in the ranger-led talks/ programs. The most common reason that prevented visitor groups from participating in ranger-led talks/programs was they did not have time (63%).
<b>Topics learned on visit</b>	Sixty-five percent of visitor groups learned about topics related to geology and fossils. The topics visitor groups most commonly learned about were reasons for the variety of fossils (85%) and reasons fossils are so abundant in the park (83%).
<b>Visitor services and facilities</b>	The visitor services and facilities most commonly used were visitor center exhibits (90%), restrooms (80%), assistance from park staff (65%), and directional signs inside the park (64%).
<b>Importance of protecting park attributes and resources</b>	The attributes/resources that received the highest combined proportions of “extremely important” and “very important” ratings were fossils (98%), clean water (92%), and clean air (88%). Recreational opportunities (12%) received the highest “not important” rating by visitor groups.
<b>Expenditures</b>	The average visitor group expenditure (inside and outside the park within 30 miles) was \$187. The median group expenditure (50% of groups spent more and 50% of groups spent less) was \$84, and the average total expenditure per person (per capita) was \$75.
<b>Future visits</b>	Seventy-six percent of visitor groups would consider visiting the park again in the future, and 92% would recommend visiting the park to their friends/relatives. However, 76% would like to have additional facilities available, such as an expanded visitor center and nearby camping facilities.
<b>Campgrounds</b>	For 52% of visitor groups, campgrounds are a needed near the park. Thirty-three percent would be likely to use campgrounds on a future visit.
<b>Learning methods in future</b>	Most (97%) visitor groups were interested in learning about cultural and natural history/features in the future. Visitor groups would most prefer to learn through outdoor exhibits (63%) and self-guided tours (61%).
<b>Overall quality</b>	Most visitor groups (92%) rated the overall quality of facilities, services, and recreational opportunities at Fossil Butte National Monument as “very good” or “good.” One percent 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 <a href="http://www.psu.uidaho.edu">http://www.psu.uidaho.edu</a> .
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## **Acknowledgements**

We thank Martha Siebe for overseeing the fieldwork and the staff and volunteers of Fossil Butte National Monument for assisting with the survey, and David Vollmer and Matthew Strawn for data processing.

## **About the Authors**

William Boyd is a Research Assistant with the Visitor Services Project. Dr. Steven Hollenhorst is the Director of the Park Studies Unit, Department of Conservation Social Sciences, University of Idaho.



## Introduction

This report describes the results of a visitor study at Fossil Butte National Monument near Kemmerer, WY conducted August 1-8, 2010 by the National Park Service (NPS) Visitor Services Project (VSP), part of the Park Studies Unit (PSU) at the University of Idaho.

The National Park Service website for Fossil Butte National Monument describes the park: "Some of the world's best preserved fossils are found in the flat-topped ridges of southwestern Wyoming's cold sagebrush desert. Fossilized fish, insects, plants, reptiles, birds, and mammals are exceptional for their abundance, variety, and detail of preservation. Most remarkable is the story they tell of ancient life in a sub-tropical landscape" ([www.nps.gov/fobu](http://www.nps.gov/fobu), retrieved April, 2011).

### Organization of the Report

The report is organized into three sections.

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

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

### Section 3: **Appendices**

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

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

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

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

## Presentation of the Results

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

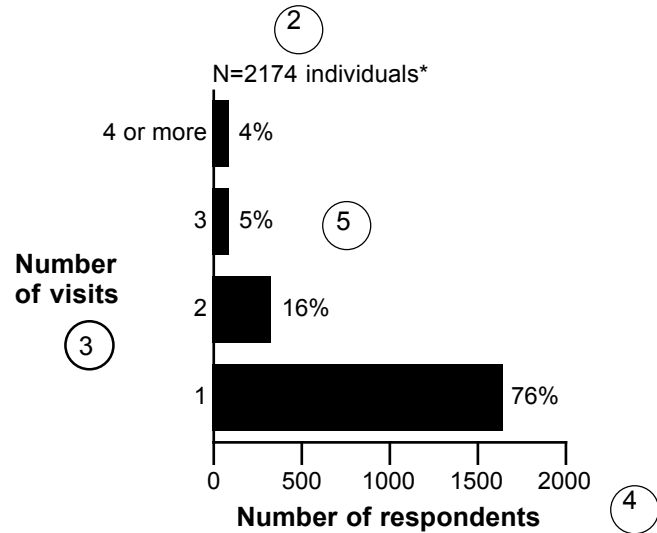
### SAMPLE

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

\* appears when 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.



1 **Figure 14.** Number of visits to the 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* (2007). Using this method, the sample size was calculated based on the park visitation statistics of previous years.

Brief interviews were conducted with a systematic, random sample of visitor groups that arrived at the visitor center during August 1-8, 2010. Visitors were surveyed between the hours of 9:00 a.m. and 5:30 p.m. During this survey, 364 visitor groups were contacted and 340 of these groups (93.4%) accepted questionnaires. (The average acceptance rate for 228 VSP visitor studies conducted from 1988 through 2010 is 91.5%.) Questionnaires were completed and returned by 247 visitor groups, resulting in a 72.7% response rate for this study. (The average response rate for the 228 VSP visitor studies is 72.6%.)

#### ***Questionnaire design***

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The Fossil Butte 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 Fossil Butte 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 Fossil Butte National Monument questionnaire. However, all questions followed Office of Management and Budget (OMB) guidelines and/or were used in previous surveys; thus, the clarity and consistency of the survey instrument have been tested and supported.

## ***Survey procedure***

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Visitor groups were greeted, briefly introduced to the purpose of the study, and asked to participate. If visitors agreed, they were asked which member (at least 16 years old) had the next birthday. The individual with the next birthday was selected to complete the questionnaire for the group. An interview, lasting approximately two minutes, was conducted with that person to determine group size, group type, and the age of the member completing the questionnaire. These individuals were asked for their names, addresses, and telephone numbers or email addresses 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 who provided a valid mailing address (see Table 1). Replacement questionnaires were mailed to participants who had not returned their questionnaires four weeks after the survey. Seven weeks after the survey, a second round of replacement questionnaires was mailed to visitors who had not returned their questionnaires.

**Table 1.** Follow-up mailing distribution

<b>Mailing</b>	<b>Date</b>	<b>U.S.</b>	<b>International</b>	<b>Total</b>
Postcards	August 23, 2010	317	21	338
1 <sup>st</sup> Replacement	September 7, 2010	149	9	158
2 <sup>nd</sup> Replacement	September 28, 2010	113	0	113

## ***Data analysis***

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

## ***Limitations***

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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 August 1-8, 2010. The results present a 'snapshot in time' and do not necessarily apply to visitors during other times of the year.
3. Caution is advised when interpreting any data with a sample size of less than 30, as the results may be unreliable. Whenever the sample size is less than 30, the word "CAUTION!" is included in the graph, figure, table, or text.
4. Occasionally, there may be inconsistencies in the results. 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 during the survey period was partly cloudy, with occasional breezy periods. No special events occurred in the area that would have affected the type and the amount of visitation to the park.

### ***Checking non-response bias***

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Three variables were used to check non-response bias: respondents' age, group size, and group type. There are potential non-response biases toward respondents at higher age range. However, group types and group sizes were insignificantly different between respondents and non-respondents (see Tables 2 and 3). Discrepancy in ages is a common non-response bias in mail-back surveys. In addition, occasionally the person that responded to the survey was not the same person who accepted the questionnaire. Based on these evidences, the non-response bias is judged to be insignificant. See Appendix 3 for more details on the non-response bias checking procedures.

**Table 2.** Comparison of respondents and non-respondents in average age and group size

<b>Variable</b>	<b>Respondents</b>	<b>Non-respondents</b>	<b>p-value (t-test)</b>
Age (years)	52.37 (N=247)	45.26 (N=92)	<0.001
Group size	2.89 (N=244)	3.69 (N=93)	0.084

**Table 3:** Comparison of respondents and non-respondents in group type

<b>Group type</b>	<b>Respondents</b>	<b>Non-respondents</b>	<b>p-value</b>
Alone	28	7	
Family	179	63	
Friends	23	13	
Family and friends	11	7	
Other	6	3	
			0.417



# Results

## Group and Visitor Characteristics

### Visitor group size

**Question 23b**

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

**Results**

- 45% of visitor groups consisted of two people (see Figure 1).
- 31% were in groups of four or more.
- 14% were in groups of three.

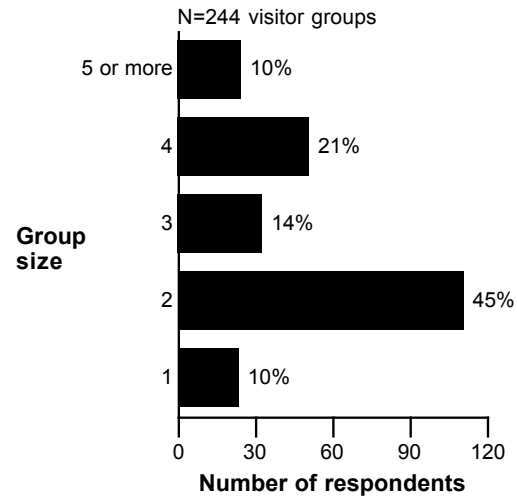


Figure 1. Visitor group size

### Visitor group type

**Question 23a**

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

**Results**

- 72% of visitor groups consisted of family members (see Figure 2).
- 11% were alone.
- “Other” group (2%) was:  
University field work

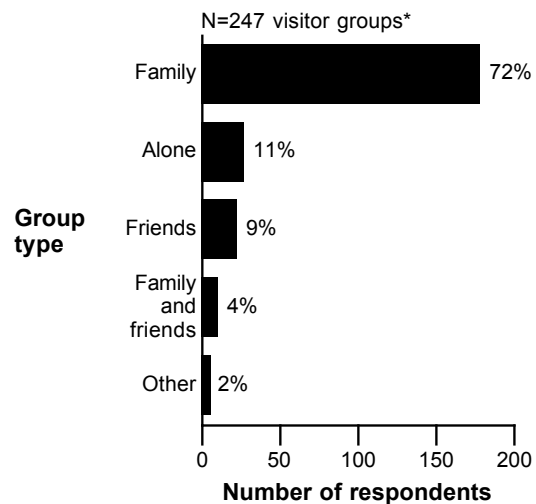


Figure 2. Visitor group type

\*total percentages do not equal 100 due to rounding

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

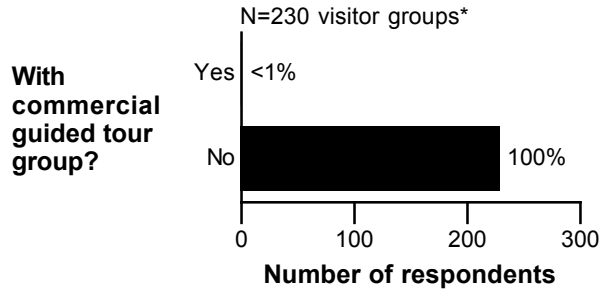
**Visitors with organized groups**

**Question 22a**

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

**Results**

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



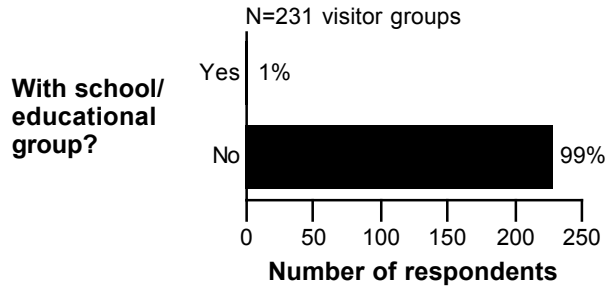
**Figure 3.** Visitor groups with a commercial guided tour group

**Question 22b**

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

**Results**

- 1% of visitor groups were with a school/educational group (see Figure 4).



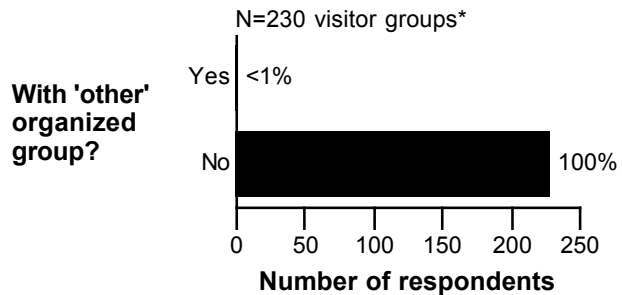
**Figure 4.** Visitor groups with a school/ educational group

**Question 22c**

On this visit, were you and your personal group with an organized group (scouts, work, church, etc.)?

**Results**

- Less than 1% of visitor groups were with an “other” organized group (see Figure 5).



**Figure 5.** Visitor groups with an “other” organized group

\*total percentages do not equal 100 due to rounding

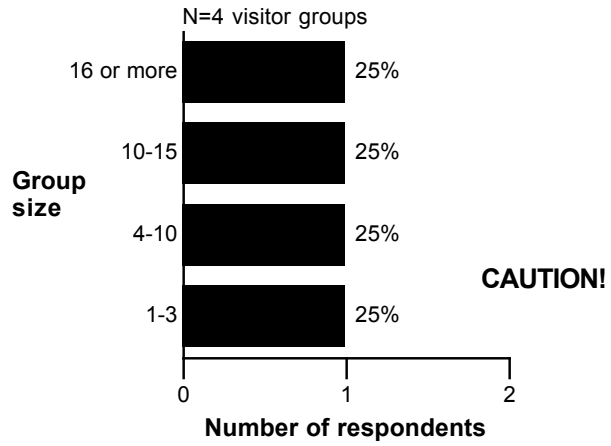
\*\*total percentages do not equal 100 because visitors could select more than one answer

**Question 22d**

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

Results – Interpret with **CAUTION!**

- Not enough visitor groups responded to this question to provide reliable results (see Figure 6).



**Figure 6.** Organized group size

\*total percentages do not equal 100 due to rounding

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

**United States visitors by state of residence**

**Question 24b**

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

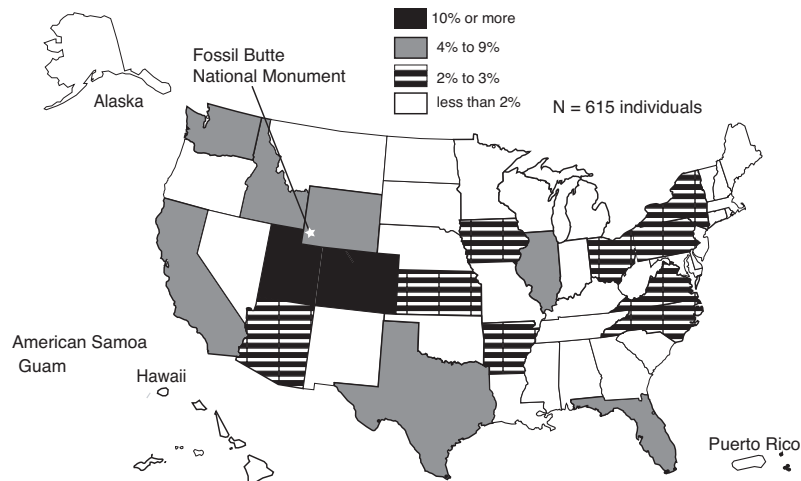
Note: Response was limited to seven members from each visitor group.

**Results**

- U.S. visitors were from 41 states and Washington, D.C. and comprised 92% of total visitation to the park during the survey period.
- 13% of U.S. visitors came from Utah (see Table 4 and Figure 7).
- 12% came from Colorado.
- Smaller proportions of U.S. visitors came from 39 other states and Washington, D.C.

**Table 4.** United States visitors by state of residence

State	Number of visitors	Percent of U.S. visitors N=615 individuals*	Percent of total visitors N=668 individuals
Utah	81	13	12
Colorado	72	12	11
California	54	9	8
Wyoming	53	9	8
Illinois	36	6	5
Texas	31	5	5
Florida	28	5	4
Washington	24	4	4
Idaho	23	4	3
Arizona	17	3	3
North Carolina	17	3	3
Kansas	16	3	2
New York	15	2	2
Pennsylvania	13	2	2
Ohio	12	2	2
Virginia	12	2	2
Iowa	11	2	2
Arkansas	10	2	2
Alabama	8	1	1
Oklahoma	8	1	1
Oregon	7	1	1
20 other states and Washington, D.C.	67	11	10



**Figure 7.** 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

### ***Visitors from Wyoming and adjacent states by county of residence***

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

- Visitors from Wyoming and adjacent states were from 45 counties and comprised 39% of the total U.S. visitation to the park during the survey period.
- 10% came from Salt Lake County, UT (see Table 5).
- 8% came from Utah County, UT.
- 6% came from Cache County, UT, and 6% came from Denver County, CO.
- Smaller proportions came from 41 other counties.

**Table 5.** Visitors from Wyoming and adjacent states by county of residence

County, State	Number of visitors	
	N=240 individuals	Percent*
Salt Lake, UT	25	10
Utah, UT	20	8
Cache, UT	14	6
Denver, CO	14	6
Lincoln, WY	11	5
Sweetwater, WY	11	5
Boulder, CO	9	4
Larimer, CO	9	4
Arapahoe, CO	8	3
Jefferson, CO	8	3
Moffat, CO	7	3
Park, WY	7	3
Davis, UT	6	3
Jefferson, ID	6	3
Weber, UT	6	3
Ada, ID	5	2
Buffalo, NE	5	2
Uinta, WY	5	2
Adams, CO	4	2
Laramie, WY	4	2
Lewis and Clark, MT	4	2
Natrona, WY	4	2
Twin Falls, ID	4	2
Weld, CO	4	2
Albany, WY	3	1
Bannock, ID	3	1
Box Elder, UT	3	1
Grand, UT	3	1
Teton, WY	3	1
16 other counties	25	10

\*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 24b**

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

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

#### **Results**

- International visitors were from 10 countries and comprised 8% of total visitation to the park during the survey period.
- 19% of international visitors came from United Kingdom (see Table 6).
- 13% came from Canada.
- 11% came from Belgium, and 11% came from Israel.
- Smaller proportions of international visitors came from 6 other countries.

**Table 6.** International visitors by country of residence

Country	Number of visitors	Percent of International visitors N=53 Individuals*	Percent of total visitors N=668 individuals
United Kingdom	10	19	2
Canada	7	13	1
Belgium	6	11	1
Israel	6	11	1
Finland	5	9	1
Japan	5	9	1
Netherlands	5	9	1
Italy	4	8	1
New Zealand	3	6	<1
Germany	2	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

**Number of visits in past 5 years**

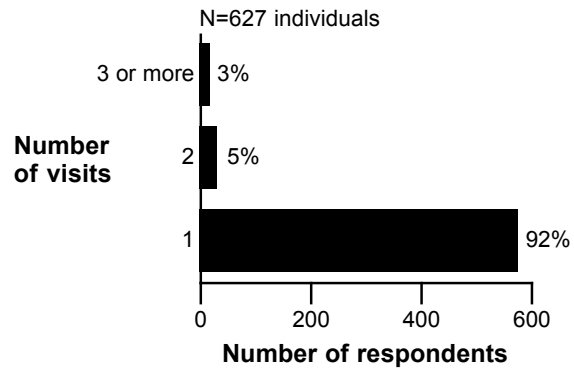
**Question 24c**

For you and your personal group on this visit, how many times have you visited Fossil Butte National Monument in the past 5 years (including this visit)?

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

**Results**

- 92% of visitors were visiting the park for the first time in the past 5 years (see Figure 8).



**Figure 8.** Number of visits to park in past 5 years

**Number of lifetime visits**

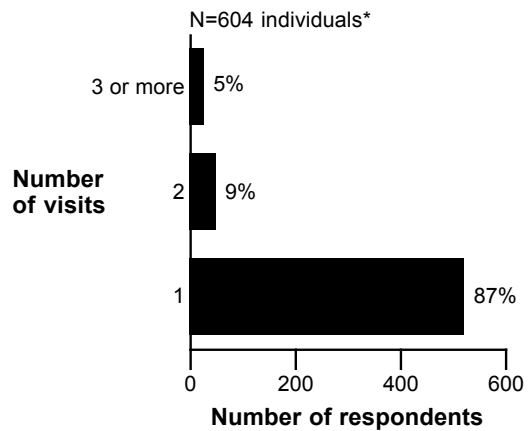
**Question 24d**

For you and your personal group on this visit, how many times have you visited Fossil Butte National Monument in your lifetime (including this visit)?

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

**Results**

- 87% of visitors were visiting the park for the first time in their lifetime (see Figure 9).
- 9% had visited twice.



**Figure 9.** Number of visits to park in lifetime

\*total percentages do not equal 100 due to rounding

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

**Visitor age**

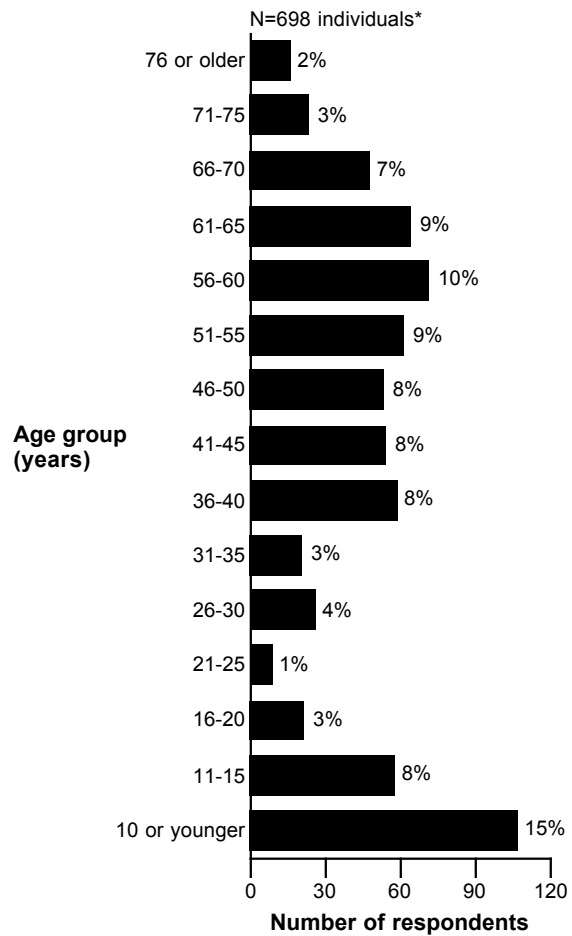
**Question 24a**

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

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

**Results**

- Visitor ages ranged from 1 to 86 years.
- 28% of visitors were 51 to 65 years old (see Figure 10).
- 23% of visitors were in the 15 years or younger age group.
- 12% were 66 years or older.



**Figure 10.** Visitor age

\*total percentages do not equal 100 due to rounding

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



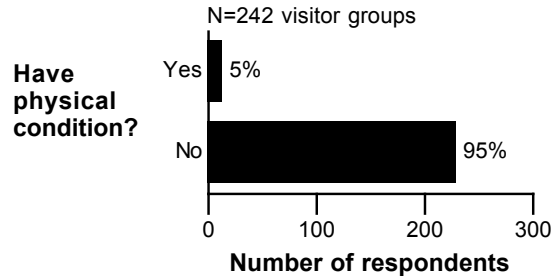
**Visitors with physical conditions**

**Question 21a**

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

**Results**

- 5% of visitor groups had a physical condition (see Figure 11).



**Figure 11.** Visitor groups that had members with physical conditions

**Question 21b**

If YES, what services or activities were difficult to access/participate in? (Open-ended)

**Results – Interpret with CAUTION!**

- 9 visitor groups found services or activities that were difficult to access or participate in (see Table 7).

**Table 7.** Services or activities that were difficult to access/participate in (N=11 comments; some visitor groups made more than one comment.) **CAUTION!**

Service or activity	Number of times mentioned
Walking	5
Hiking	4
Getting to fossil viewing areas	1
Access to visitor center bookstore	1

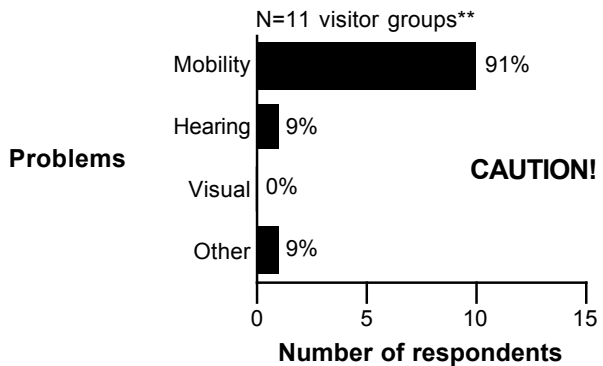
**Question 21c**

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

**Results – Interpret with CAUTION!**

- Not enough visitor groups responded to this question to provide reliable results (Figure 12).
- “Other” condition (9%) was:

Asthma



**Figure 12.** Specific problems related to physical conditions

\*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

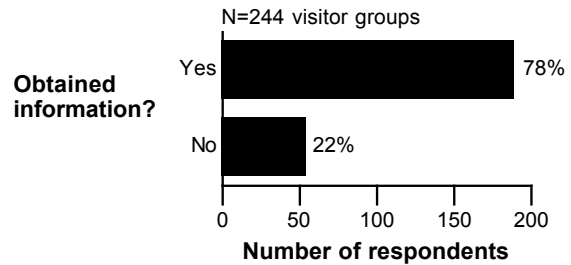
### Information sources prior to visit

#### Question 1a

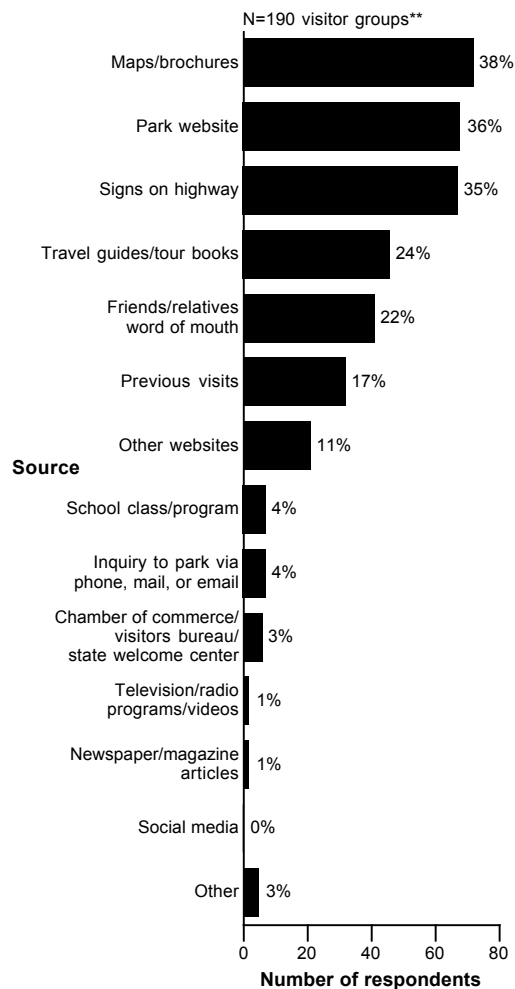
Prior to your visit, how did you and your personal group obtain information about Fossil Butte National Monument?

#### Results

- 78% of visitor groups obtained information about Fossil Butte National Monument prior to their visit (see Figure 13).
- As shown in Figure 14, among those visitor groups that obtained information about Fossil Butte National Monument prior to their visit, the most common sources were:
  - 38% Maps/brochures
  - 36% Park website
  - 35% Signs on highway
- “Other” sources (3%) were:
  - National Park Passport
  - Audiobook
  - Drove by
  - Rock shop in Kemmerer



**Figure 13.** Visitor groups that obtained information about Fossil Butte National Monument prior to visit



**Figure 14.** Sources of information used prior to visit

\*total percentages do not equal 100 due to rounding

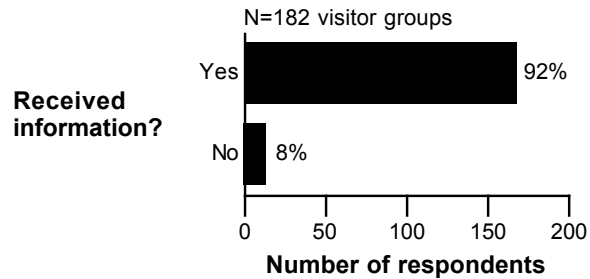
\*\*total percentages do not equal 100 because visitors could select more than one answer

**Question 1c**

Did you and your personal group receive the type of information about the park that you needed?

**Results**

- 92% of visitor groups received needed information prior to their visit (see Figure 15).



**Figure 15.** Visitor groups that received needed information prior to their visit

**Question 1d**

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

**Results – Interpret with CAUTION!**

- 13 visitor groups listed information they needed but was not available (see Table 8).

**Table 8.** Needed information

(N=17 comments; some visitor groups made more than one comment.) **CAUTION!**

Type of information	Number of times mentioned
Activities/events	2
3D imagery of ancient lake	1
Access for 40-foot motor home	1
Brochure	1
Details of exhibition	1
Did not know about park web site	1
Did not know how limited the park is	1
Entrance fee	1
Fees	1
High resolution photos of fossils	1
Hours of operation	1
Information about seeing fossils in the field	1
Literature about birds	1
More detailed information	1
Only information was sign on Interstate 80	1
Visitor center facilities	1

\*total percentages do not equal 100 due to rounding

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

**Information sources for future visit**

**Question 1b**

If you were to visit Fossil Butte National Monument in the future, how would you and your personal group prefer to obtain information about the park?

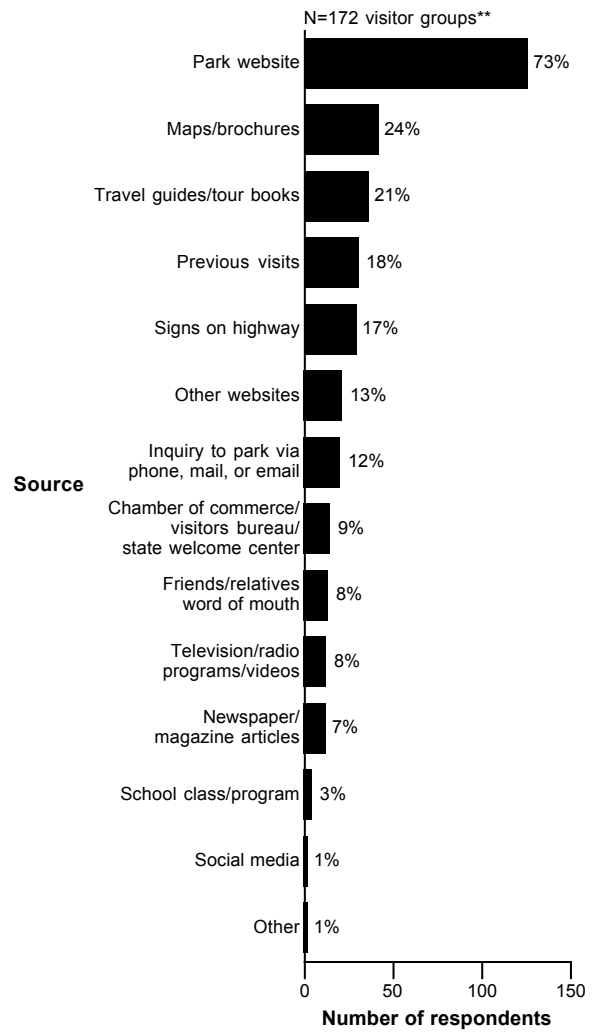
**Results**

- As shown in Figure 16, visitor groups' most preferred sources of information for a future visit were:

- 73% Park website
- 24% Maps/brochures
- 21% Travel guides/tour books

- "Other" source of information (1%) was:

- References from other national parks/monuments



**Figure 16.** Sources of information to use for a future visit

\*total percentages do not equal 100 due to rounding

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

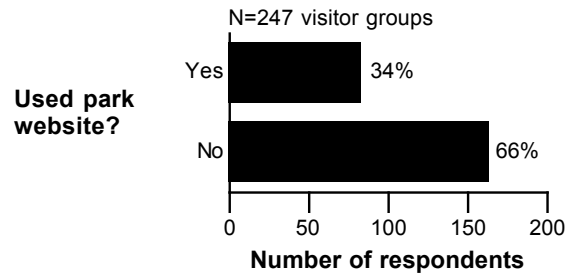
**Park website**

**Question 19d**

If you used the park website [www.nps.gov/fobu](http://www.nps.gov/fobu), was there any information that you and your personal group needed that was not available?

**Results**

- 34% of visitor groups used the park website prior to this visit (see Figure 17).
- 21 visitor groups listed information they needed but was not available (see Table 9).



**Figure 17.** Visitor groups that obtained information from the park website

**Table 9.** Needed information on the park website (N=27 comments; some visitors made more than one comment.) **CAUTION!**

Type of information	Number of times mentioned
Indication that fossil viewing is in visitor center only	2
More general information	2
More information on activities	2
Campground	1
Daily schedules	1
Directions	1
Directions to fossil sites	1
Fees	1
Food services in Kemmerer	1
Indication that there is no fossil digging	1
Link to chamber of commerce is invalid	1
Lodging	1
More detailed map	1
More information on exhibits	1
More information on fossil species	1
Online bookstore/gift shop	1
Online junior/senior ranger booklet	1
Phone number hard to find	1
Photos	1
Provide chamber of commerce phone number	1
Schedule of digging	1
Time required for visit/activities	1
Timeline as displayed in park	1
Visitor center hours	1

\*total percentages do not equal 100 due to rounding

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

**Primary reason for visiting park area**

**Question 2**

On this trip, what was the primary reason that you and your personal group came to the Fossil Butte National Monument area (within 30 miles of the park)?

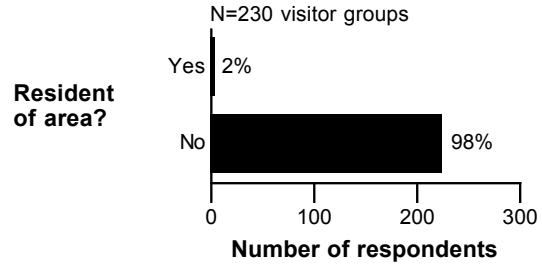
**Results**

- 2% of visitor groups were residents of the area (see Figure 18).
- As shown in Figure 19, the primary reasons for visiting the area (within 30 miles) of Fossil Butte National Monument among non-resident visitor groups were:

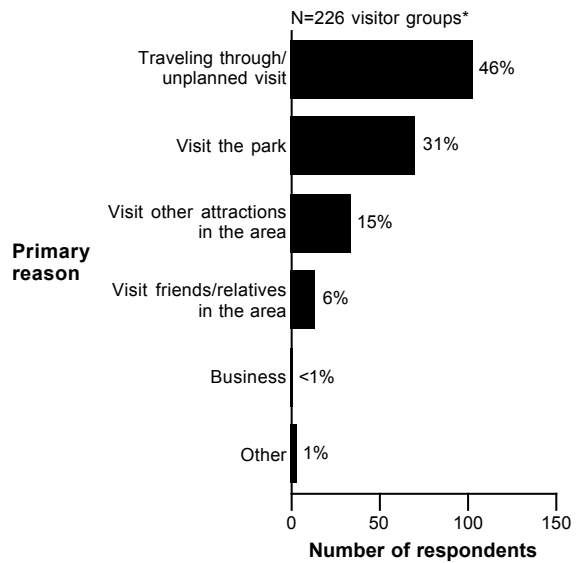
46% Traveling through/  
unplanned visit  
31% Visit the park

- “Other” primary reasons (1%) were:

Fossil dig/collection  
Cache Valley Star Party  
Oyster Ridge Music Festival  
Utah Rock Art Association field trip  
Vacation in the western U.S.



**Figure 18.** Residents of the area (within 30 miles of Fossil Butte National Monument)



**Figure 19.** Primary reason for visiting the Fossil Butte National Monument area (within 30 miles)

\*total percentages do not equal 100 due to rounding

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

***Place stayed night before visit*****Question 4a**

On this trip, where did you and your personal group stay on the night before visiting Fossil Butte National Monument?

**Results**

- Table 10 shows the locations (N=83) in which visitor groups (N=239) stayed on the night before visiting Fossil Butte National Monument.

**Table 10.** Locations in which visitor groups stayed on the night before their visit (N=239 comments)

<b>Location</b>	<b>Number of times mentioned</b>	<b>Percent*</b>
Kemmerer, WY	35	15
Rock Springs, WY	21	9
Jackson, WY	17	7
Salt Lake City, UT	8	3
Diamondville, WY	7	3
Evanston, WY	7	3
Garden City, UT	7	3
Logan, UT	7	3
Rawlins, WY	7	3
Grand Teton National Park, WY	6	3
Green River, WY	6	3
Laramie, WY	6	3
Ogden, UT	6	3
Park City, UT	5	2
Boise, ID	4	2
Pocatello, ID	4	2
Vernal, UT	4	2
Montpelier, ID	3	1
Pinedale, WY	3	1
64 other locations	76	32

\*total percentages do not equal 100 due to rounding

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

***Place stayed night after visit***

**Question 4b**

On this trip, where did you and your personal group stay on the night after visiting Fossil Butte National Monument?

**Results**

- Table 11 shows the locations (N=87) in which visitor groups (N=230) stayed on the night after visiting Fossil Butte National Monument.

**Table 11.** Locations in which visitor groups stayed on the night after their visit (N=230 comments)

<b>Type of service</b>	<b>Number of times mentioned</b>	<b>Percent*</b>
Kemmerer, WY	26	11
Salt Lake City, UT	23	10
Jackson, WY	14	6
Logan, UT	13	6
Rock Springs, WY	9	4
Diamondville, WY	8	3
Pocatello, ID	7	3
Cheyenne, WY	6	3
Vernal, UT	6	3
Garden City, UT	5	2
Evanston, WY	4	2
Laramie, WY	4	2
Pinedale, WY	4	2
Rawlins, WY	4	2
Boise, ID	3	1
Denver, CO	3	1
Grand Teton National Park, WY	3	1
Green River, WY	3	1
Idaho Falls, ID	3	1
Montpelier, ID	3	1
67 other locations	79	34

\*total percentages do not equal 100 due to rounding

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



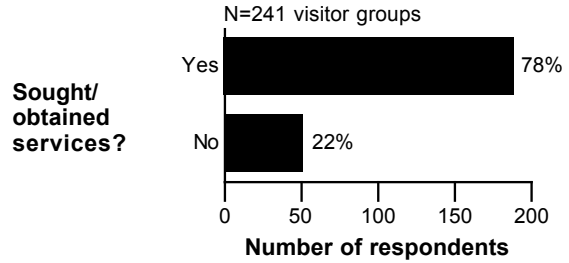
**Services used in nearby communities**

**Question 3a**

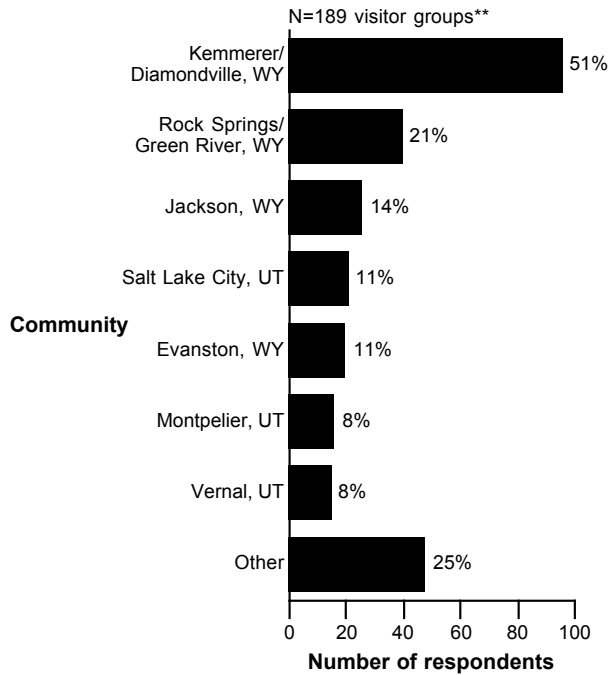
In which communities did you and your personal group seek or obtain support services (e.g., information, gas, food, lodging) for this visit to Fossil Butte National Monument?

**Results**

- 78% of visitor groups used support services in nearby communities (see Figure 20).
- As shown in Figure 21, the communities most commonly used to obtain support services were:
  - 51% Kemmerer/Diamondville, WY
  - 21% Rock Springs/Green River, WY
- “Other” communities (25%) used to obtain support services are shown in Table 12.



**Figure 20.** Visitor groups that used support services in nearby communities on this visit



**Figure 21.** Communities most commonly used to obtain support services

\*total percentages do not equal 100 due to rounding

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

**Table 12.** "Other" communities where services were obtained  
(N=50 comments)

<b>Community</b>	<b>Number of times mentioned</b>
Garden City, UT	9
Logan, UT	5
Little America, WY	4
Cokeville, WY	3
Park City, UT	3
Pinedale, WY	2
Pocatello, ID	2
Rawlins, WY	2
Afton, WY	1
Bear Lake State Park, ID	1
Buffalo, WY	1
Cheyenne, WY	1
Craters of the Moon National Monument, ID	1
Daniel, WY	1
Fort Collins, CO	1
Idaho Falls, ID	1
Lander, WY	1
Lava Hot Springs, ID	1
McCammon, ID	1
Mountain View, WY	1
Ogden, UT	1
Rich, UT	1
Rock Springs, WY	1
San Antonio, TX	1
Teton Village, WY	1
Trementon, UT	1
Twin Falls, ID	1
Yellowstone, WY	1

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\*total percentages do not equal 100 due to rounding

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

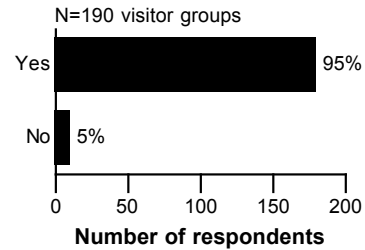
**Question 3b**

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

**Results**

- 95% of visitor groups were able to obtain all needed services in surrounding communities (see Figure 22).

**Obtained needed services?**



**Figure 22.** Visitor groups that were able to obtain needed services

**Question 3c**

If NO, what needed services were not available?

Results – Interpret with **CAUTION!**

- 15 visitor groups listed services they needed but were not available (see Table 13).

**Table 13.** Needed services (N=15 comments) **CAUTION!**

Service	Comment
Bumper sticker	Wanted to purchase one to stick on cargo box, but no store had them
Campground	Closer than Ham's Fork
Camping	Nothing available close to park
Lodging	In Garden City area Energy Inn canceled our reservations with no notification because she made a side deal to rent the whole place to the Pipeline - no respect for tourism
Maps	To be sure we don't trespass Listing of regional sites
National park passport stamp	Kids wanted to purchase it for their passport book
Restaurants	More restaurants would be nice Need a Denny's or Perkins or similar full-serve family restaurant Need more choices open later
RV camping	Would have spent more time if RV camping closer
Starbucks	No specific comment
Wi-Fi/internet	No specific comment

\*total percentages do not equal 100 due to rounding

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

**Forms of transportation**

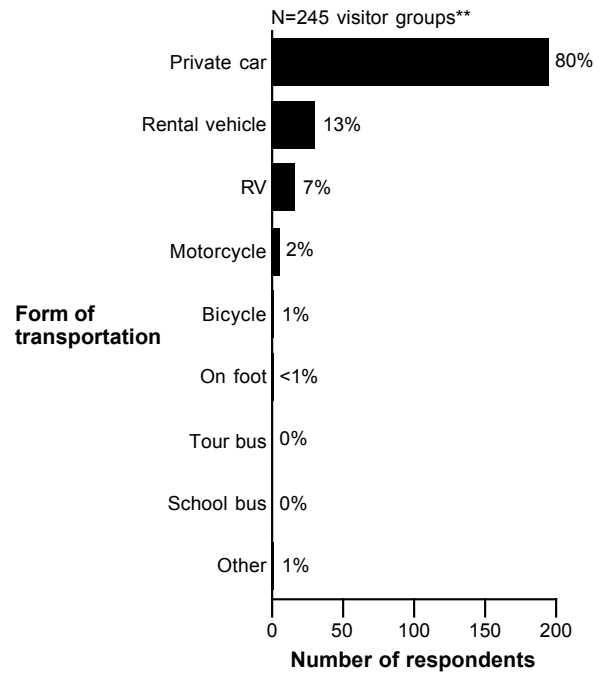
**Question 6a**

On this visit, which forms of transportation did you and your group use to travel between your overnight accommodations or home, and Fossil Butte National Monument?

**Results**

- 80% of visitor groups arrived by private car (see Figure 23).
- “Other” forms of transportation (1%) were:

Semi-truck  
Plane



**Figure 23.** Forms of transportation used to arrive at Fossil Butte National Monument

\*total percentages do not equal 100 due to rounding

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

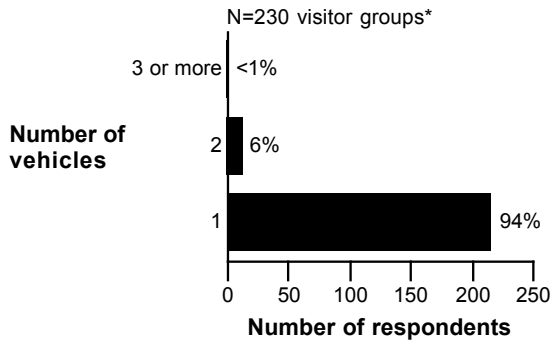
**Number of vehicles**

**Question 6b**

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

**Results**

- 94% of visitor groups used one vehicle to arrive at the park (see Figure 24).



**Figure 24.** Number of vehicles used to arrive at the park

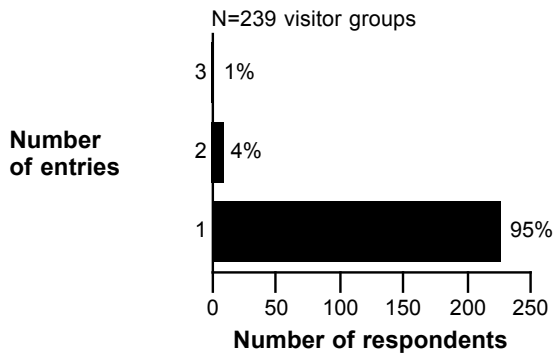
**Number of park entries**

**Question 7b**

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

**Results**

- 95% of visitor groups entered Fossil Butte National Monument one time (see Figure 25).



**Figure 25.** Number of park entries

\*total percentages do not equal 100 due to rounding

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

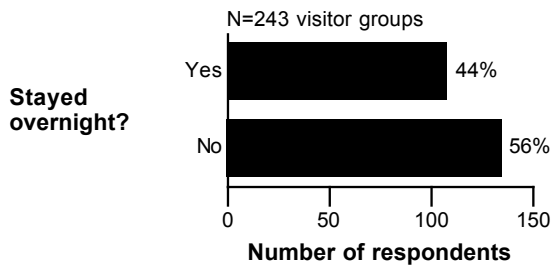
## Overnight stays

### Question 5a

On this trip, did you and your personal group stay overnight away from your permanent residence in the surrounding area of Fossil Butte National Monument (within 30 miles of the park)?

#### Results

- 44% of visitor groups stayed overnight away from their permanent residence within 30 miles of the park (see Figure 26).



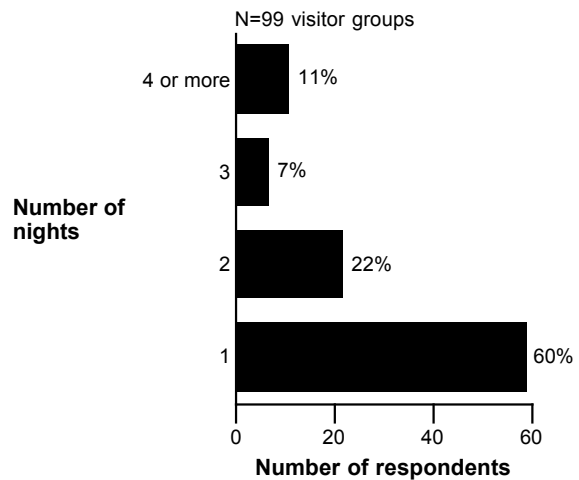
**Figure 26.** Visitor groups that stayed overnight within 30 miles of the park

### Question 5b

If YES, please list the number of nights you and your personal group stayed in the surrounding area of Fossil Butte National Monument?

#### Results

- 60% of visitor groups stayed one night within 30 miles of the park (see Figure 27).
- 22% stayed two nights.



**Figure 27.** Number of nights spent within 30 miles 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

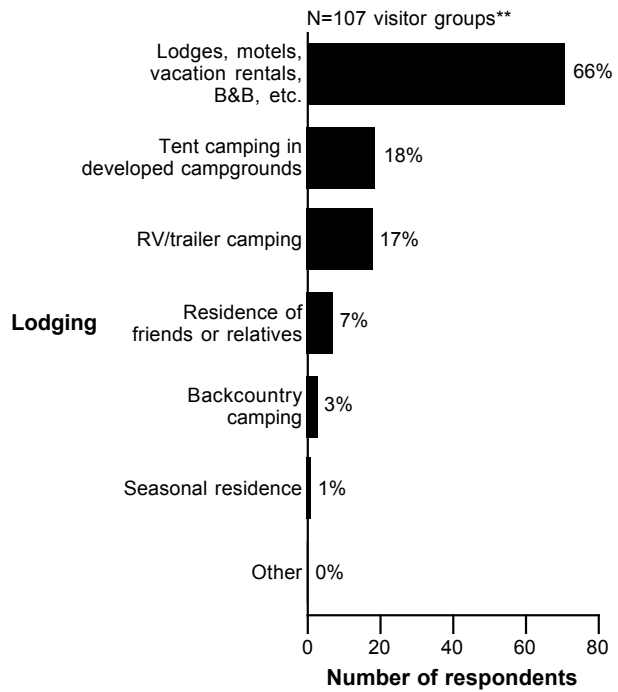
**Overnight accommodations used**

**Question 5c**

In which types of lodging did you and your personal group spend the night(s) outside the park in the surrounding area (within 30 miles of the park)?

**Results**

- 66% of visitor groups stayed in lodges, motels, vacation rentals, B&B, etc. (see Figure 28).
- 18% tent camped in developed campgrounds.



**Figure 28.** Accommodations used within 30 miles 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

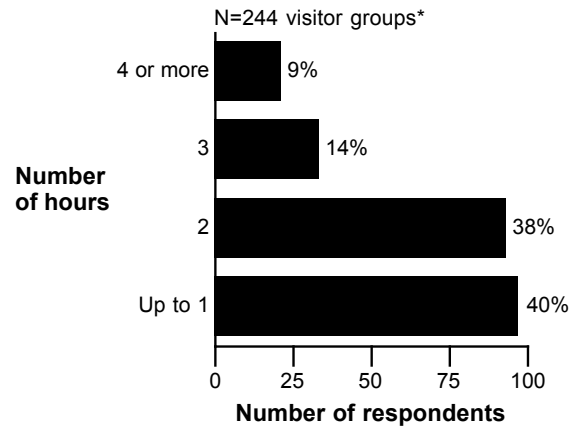
***Length of visit***

**Question 7a**

On this visit, how many hours in total did you and your personal group spend visiting Fossil Butte National Monument?

**Results**

- 40% of visitor groups spent up to one hour visiting the park (see Figure 29).
- 38% spent two hours.
- The average length of visit was 1.8 hours.



**Figure 29.** Number of hours spent visiting Fossil Butte National Monument

\*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 8**

On this visit to Fossil Butte National Monument, which park sites did you and your personal group visit?

**Results**

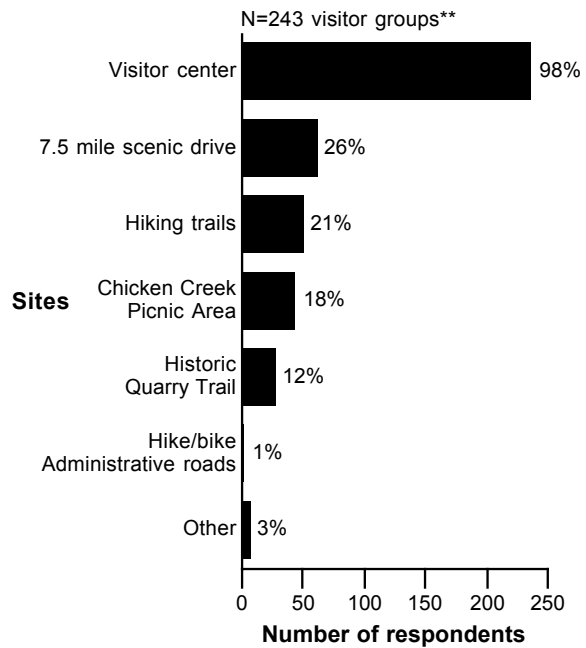
- As shown in Figure 30, the most commonly visited sites by visitor groups at Fossil Butte National Monument were:

98% Visitor center  
 26% 7.5 mile scenic drive  
 21% Hiking trails

- The least visited site was:

1% Hike/bike  
 Administrative roads

- “Other” sites (3%) visited are shown in Table 14.



**Figure 30.** Sites visited

**Table 14.** “Other” sites visited (N=5 comments) **CAUTION!**

Site	Number of times mentioned
Fossil Lake Trail	2
Fossil Dig	2
Picnicking (unspecified location)	1

\*total percentages do not equal 100 due to rounding

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

**Activities on this visit**

**Question 10a**

On this visit, in which activities did you and your personal group participate within Fossil Butte National Monument?

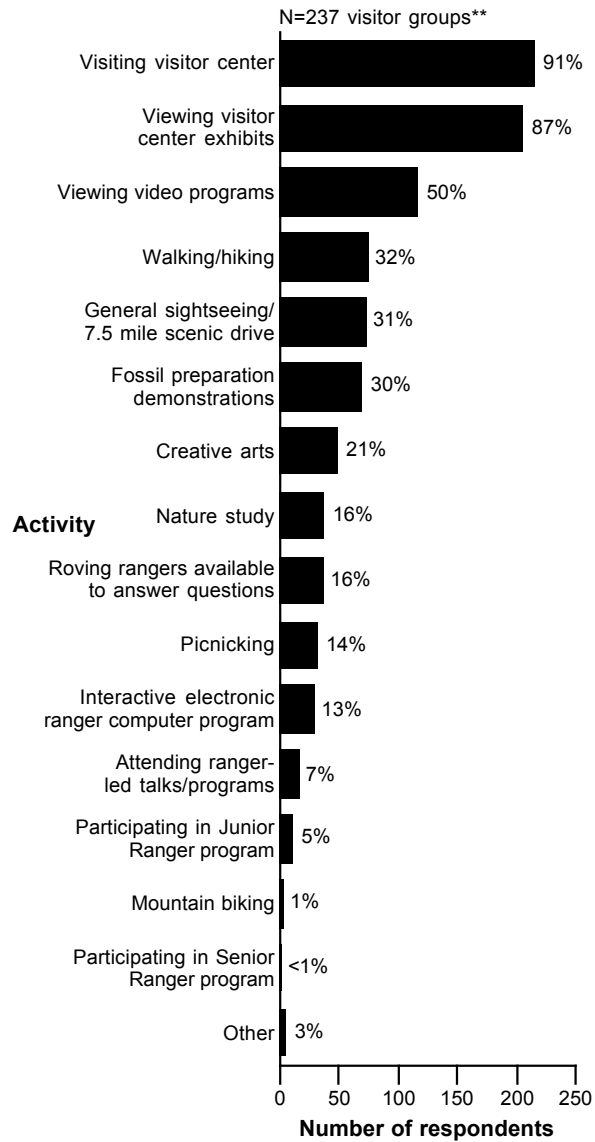
**Results**

- As shown in Figure 31, the most common activities in which visitor groups participated on this visit were:

91% Visiting visitor center  
87% Viewing visitor center exhibits

- “Other” activities (3%) were:

Dig site  
Seeing fossils  
Viewing time line outside  
Visiting art gallery  
Working excavations at Chicken Creek quarry



**Figure 31.** 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

**Most important activity**

**Question 10c**

Which one of the above activities was most important to you and your personal group on this visit to Fossil Butte National Monument?

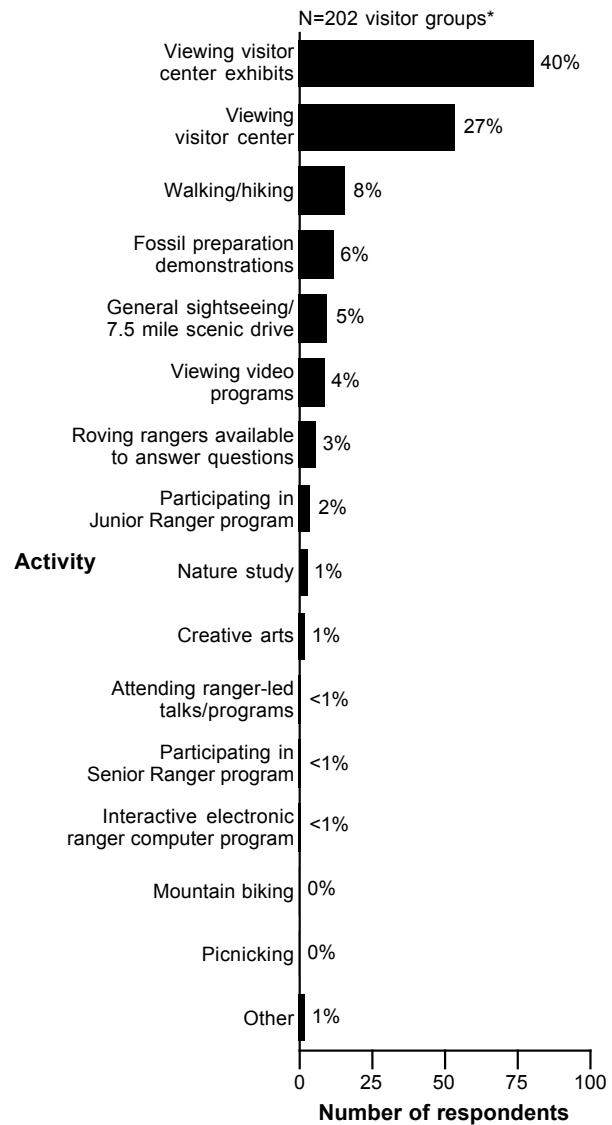
**Results**

- As shown in Figure 32, the “most important activity” most commonly listed by visitor groups were:

40% Viewing visitor center exhibits  
 27% Viewing visitor center

- “Other” activities (1%) were:

Seeing fossils  
 Working excavations



**Figure 32.** Most important activity

\*total percentages do not equal 100 due to rounding

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

**Activities on future visit**

**Question 10b**

If you were to visit the park in the future, in which activities would you and your personal group prefer to participate?

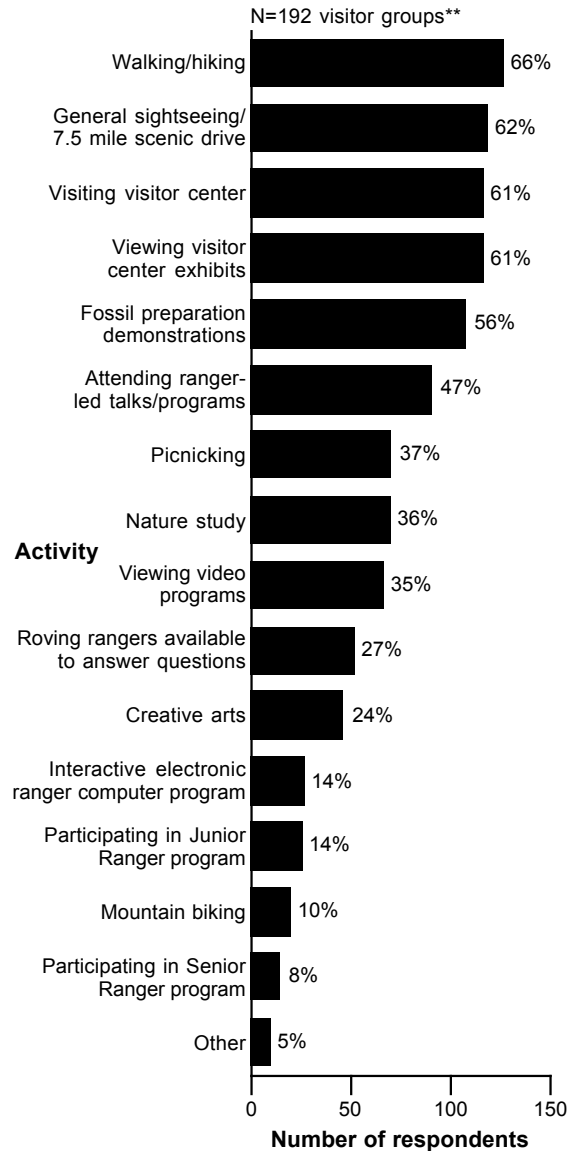
**Results**

- As shown in Figure 33, the most common activities in which visitor groups would prefer to participate in the future were:

66% Walking/hiking  
62% General sightseeing

- “Other” activities (5%) were:

Examining fossils through microscope  
Fossil hunting/excavation  
Participating with rangers and paleontologists  
Quarry



**Figure 33.** Activities 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

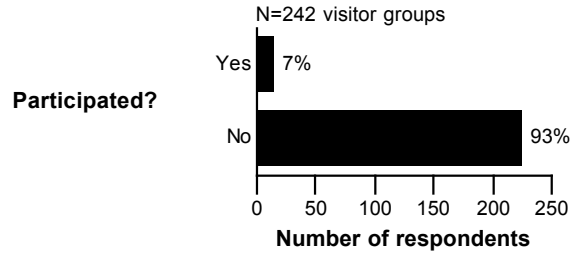
**Ranger-led talks/programs**

**Question 11a**

On this visit to Fossil Butte National Monument, did anyone in your personal group participate in any of the ranger-led talks/programs?

**Results**

- 7% of visitor groups participated in the ranger-led talks/programs (see Figure 34).



**Figure 34.** Visitor groups that participated in ranger-led talks/programs

**Question 11b**

If NO, what prevented you and your personal group from participating in ranger-led talks/programs?

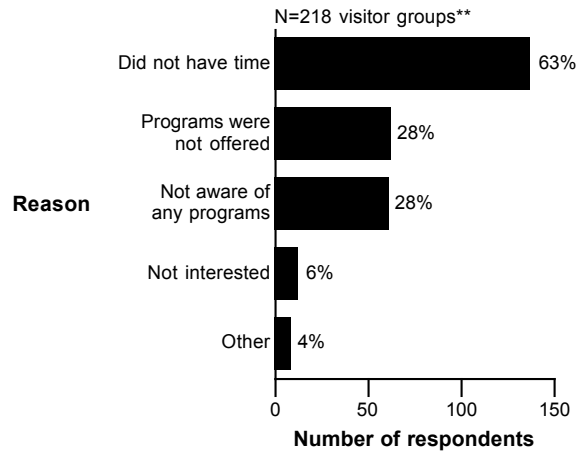
**Results**

- As shown in Figure 35, the most common reason that prevented visitor groups from participating in ranger-led talks/programs was:

63% Did not have time

- “Other” reasons (4%) were:

- Bad weather
- Disabled
- Had other activities planned
- Had small children
- Lunch time
- Too hot
- Unplanned stop
- Varied ages in group
- Visited with geologist



**Figure 35.** Reasons why visitor groups did not participate in ranger-led talks/programs

\*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 on this visit**

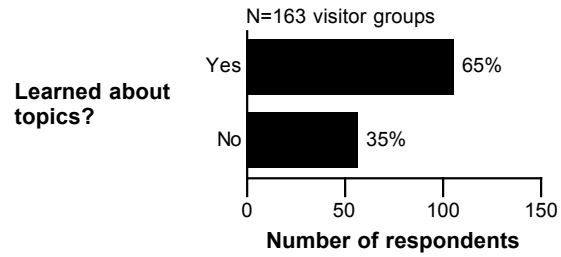
**Question 13a**

Fossil Butte National Monument exhibits and ranger-led programs discuss topics related to geology and fossils. Please indicate all the topics you learned about on this visit.

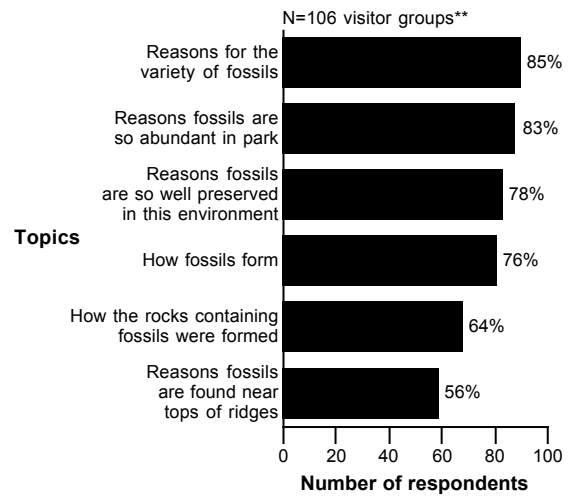
**Results**

- 65% of visitor groups learned about topics related to geology and fossils (see Figure 36).
- As shown in Figure 37, the topics visitor groups most commonly learned about were:

- 85% Reasons for the variety of fossils
- 83% Reasons fossils are so abundant in park
- 78% Reasons fossils are so well preserved in this environment
- 76% How fossils form
- 64% How the rocks containing fossils were formed
- 56% Reasons fossils are found near tops of ridges



**Figure 36.** Visitor groups that learned about topics related to geology and fossils



**Figure 37.** Topics learned

\*total percentages do not equal 100 due to rounding

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

***Topics to learn on future visit***

---

**Question 13c**

Would you and your personal group be interested in learning about these topics on a future visit to Fossil Butte National Monument?

**Results**

- Table 15 shows the topics visitor groups were interested in learning about on a future visit.

**Table 15.** Topics visitor groups were interested in learning about on a future visit (N=number of visitor groups)

Topic	N	Interested %	
		Yes	No
How fossils form	163	88	12
Reasons for the wide variety of fossils in park	164	92	8
Reasons fossils are found near tops of ridges	160	91	9
Reasons fossils are so abundant in park	166	92	8
Reasons fossils are so well preserved in this environment	166	91	9
How the rocks containing fossils were formed	159	89	11

\*total percentages do not equal 100 due to rounding

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

***Level of understanding improved*****Question 13b**

Please indicate how much your level of understanding of each topic improved during your visit.

**Results**

- Table 16 shows how much visitor groups' understandings of each topic improved during the visit.

**Table 16.** Level of understanding improved  
(N=number of visitor groups)

Topic	N	Level of understanding improved (%)*			
		Not at all	A little	Somewhat	A lot
How fossils form	159	6	20	45	29
Reasons for the wide variety of fossils in park	166	2	13	36	49
Reasons fossils are found near tops of ridges	142	17	21	31	31
Reasons fossils are so abundant in park	168	3	13	30	54
Reasons fossils are so well preserved in this environment	167	5	18	35	41
How the rocks containing fossils were formed	154	10	21	35	34

\*total percentages do not equal 100 due to rounding

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



**Question 13d**

Please list any additional topics you and your personal group are interested in learning about Fossil Butte National Monument. (Open-ended)

**Results**

- 34 visitor groups listed additional topics they were interested in learning about (see Table 17).

**Table 17.** Additional topics visitor groups were interested in learning about (N=43 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
Fossil excavation	4
Plants and wildlife of park	4
Fossil hunting	3
Geological history of area	3
How fossils relate to extinct and extant species diversity	3
Fossil preparations	2
History of the monument	2
Community digs/hands-on	1
Creationist perspective of area's history	1
Dig sites	1
Explanation of quarry	1
Fossil identification	1
History of fossil discovery at this site	1
How to reconstruct the fossils	1
How visitors can recognize fossils	1
More about animals	1
More about research process	1
More about settlers to area	1
More geologic history along hikes	1
More hands-on participation and interactive activity	1
Place the fossils and time period along tour route	1
Pressure created/needed to make a fossil	1
Significance of site to Oregon Trail?	1
The 10 devastation events	1
The commercial activity (diggings) in the area	1
What is done with fossils?	1
Where are fossils displayed outside park?	1
Where do they advertise the stargazing?	1
Why are fossils harder than rock around it?	1

\*total percentages do not equal 100 due to rounding

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

## Ratings of Services, Facilities, Attributes, and Resources

### Visitor services and facilities used

#### Question 19a

Please indicate all the visitor services and facilities that you and your personal group used at Fossil Butte National Monument during this visit.

#### Results

- As shown in Figure 38, the most common visitor services and facilities used by visitor groups were:

90% Visitor center exhibits  
80% Restrooms

- The least used service/facility was:

1% Senior Ranger program

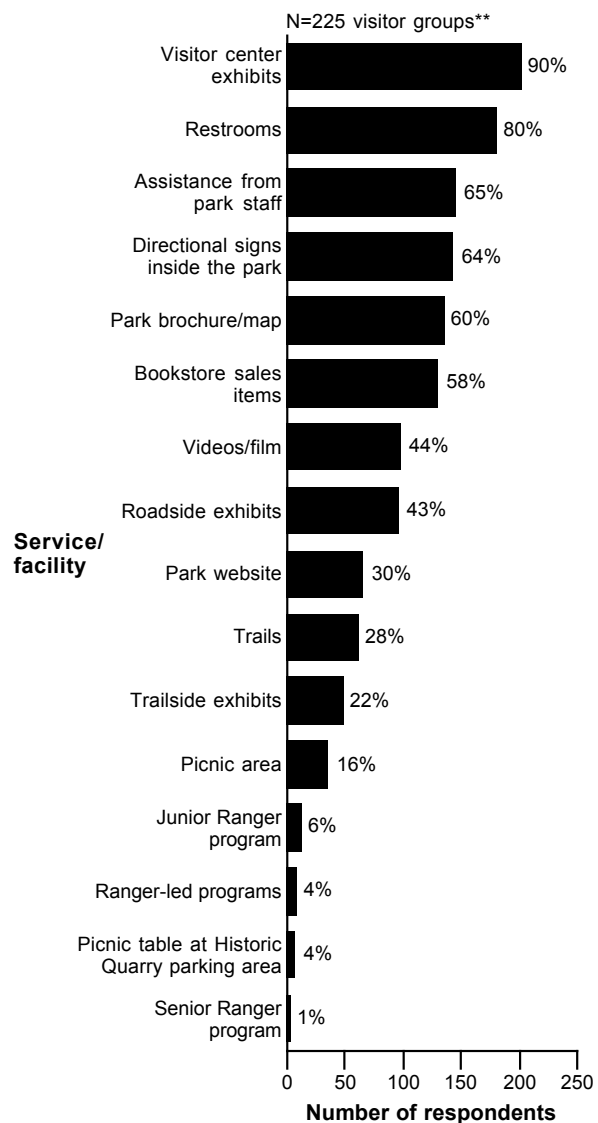


Figure 38. Visitor services and facilities used

\*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 19b**

Next, for only those visitor services and facilities that you and your personal group used, please rate their importance from 1-5.

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

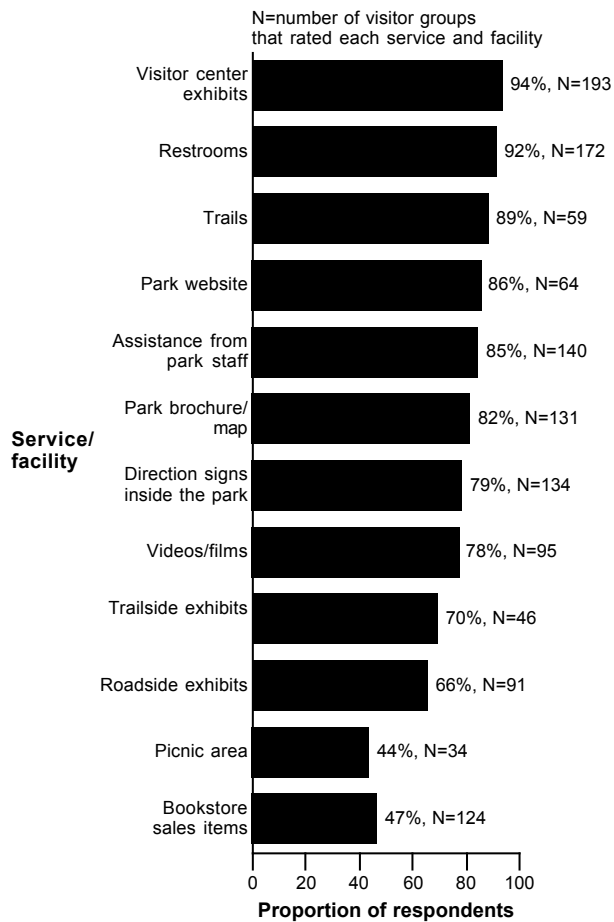
**Results**

- Figure 39 shows the combined proportions of “extremely important” and “very important” ratings of visitor services and facilities that were rated by 30 or more visitor groups.
- The services and facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:

94% Visitor center exhibits  
92% Restrooms

- Table 18 shows the importance ratings of each service and facility.
- The service/facility receiving the highest “not important” rating that was rated by 30 or more visitor groups was:

2% Bookstore sales items



**Figure 39.** Combined proportions of “extremely important” and “very important” ratings of visitor services and facilities

\*total percentages do not equal 100 due to rounding

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

**Table 18.** Importance ratings of visitor services and facilities  
(N=number of visitors that rated each service and facility)

Service/facility	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Bookstore sales items (selection, price, etc.)	124	2	11	40	30	17
Assistance from park staff	140	1	4	11	44	41
Directional signs inside the park	134	1	1	19	34	45
Junior Ranger program – <b>CAUTION!</b>	12	0	8	17	33	42
Senior Ranger program – <b>CAUTION!</b>	3	0	0	67	0	33
Picnic area	34	0	9	47	35	9
Park brochure/map	131	0	5	14	37	44
Picnic table at Historic Quarry parking area – <b>CAUTION!</b>	7	0	14	29	57	0
Ranger-led programs – <b>CAUTION!</b>	9	0	11	0	44	44
Restrooms	172	0	2	6	28	64
Roadside exhibits	91	0	2	32	43	23
Trails	59	0	0	12	53	36
Trailside exhibits	46	0	2	28	48	22
Videos/films	95	1	4	17	43	35
Visitor center exhibits	193	1	1	5	27	67
Park website (used before or during visit)	64	0	0	14	33	53

\*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 19c**

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

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

**Results**

- Figure 40 shows the combined proportions of “very good” and “good” quality ratings of visitor services and facilities that were rated by 30 or more visitor groups.

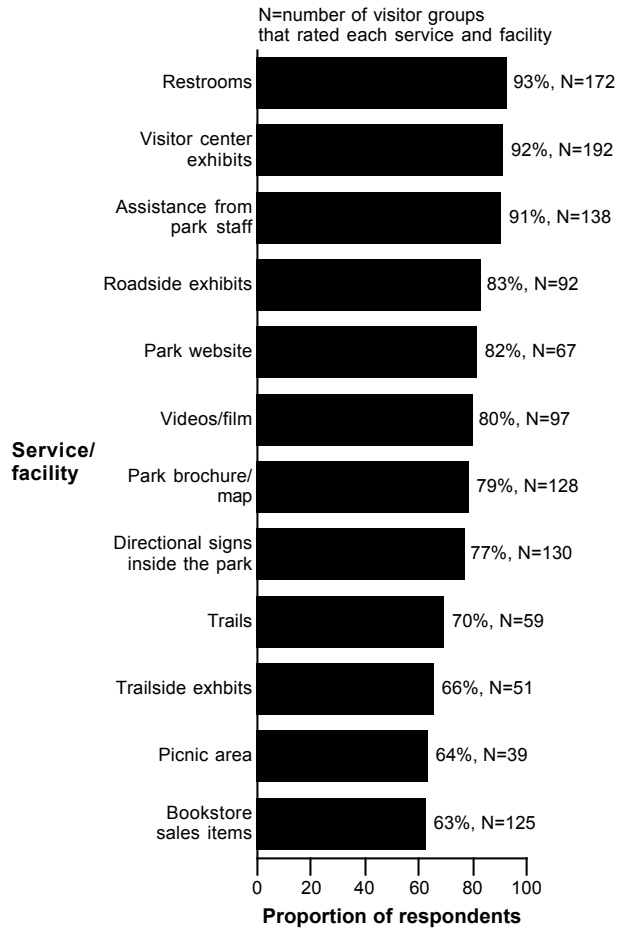
- The services and facilities that received the highest combined proportions of “very good” and “good” quality ratings were:

- 93% Restrooms
- 92% Visitor center exhibits
- 91% Assistance from park staff
- 83% Roadside exhibits

- Table 19 shows the quality ratings of each service and facility.

- The service/facility receiving the highest “very poor” quality rating that was rated by 30 or more visitor groups was:

- 8% Trailside exhibits



**Figure 40.** Combined proportions of “very good” and “good” quality ratings of visitor services and facilities

\*total percentages do not equal 100 due to rounding

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

**Table 19.** Quality ratings of visitor services and facilities  
(N=number of visitors that rated each service and facility)

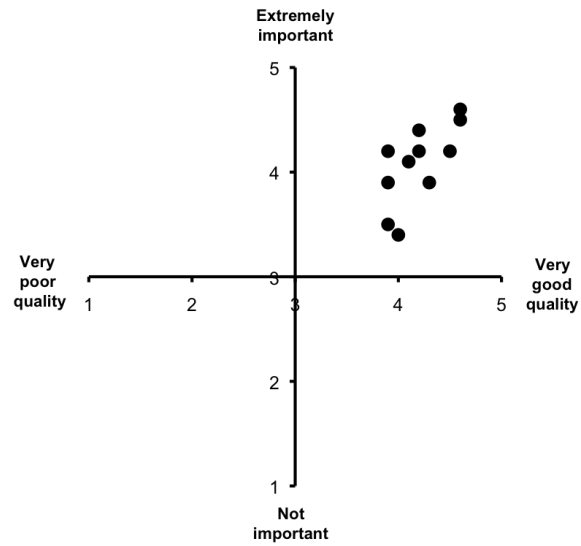
Service/facility	N	Rating (%)*				
		Very poor	Poor	Average	Good	Very good
Bookstore sales items (selection, price, etc.)	125	1	3	34	39	26
Assistance from park staff	138	1	3	6	29	62
Directional signs inside the park	130	2	2	18	38	39
Junior Ranger program – <b>CAUTION!</b>	17	6	6	12	53	24
Senior Ranger program – <b>CAUTION!</b>	8	13	13	13	50	13
Picnic area	39	3	3	31	31	33
Park brochure/map	128	1	2	19	39	40
Picnic table at Historic Quarry parking area – <b>CAUTION!</b>	11	10	10	18	36	27
Ranger-led programs – <b>CAUTION!</b>	13	8	15	8	38	31
Restrooms	172	1	1	6	30	63
Roadside exhibits	92	1	2	14	38	45
Trails	59	2	5	24	51	19
Trailside exhibits	51	4	4	25	37	29
Videos/films	97	3	4	12	43	37
Visitor center exhibits	192	1	2	6	29	63
Park website (used before or during visit)	67	1	4	12	48	34

\*total percentages do not equal 100 due to rounding

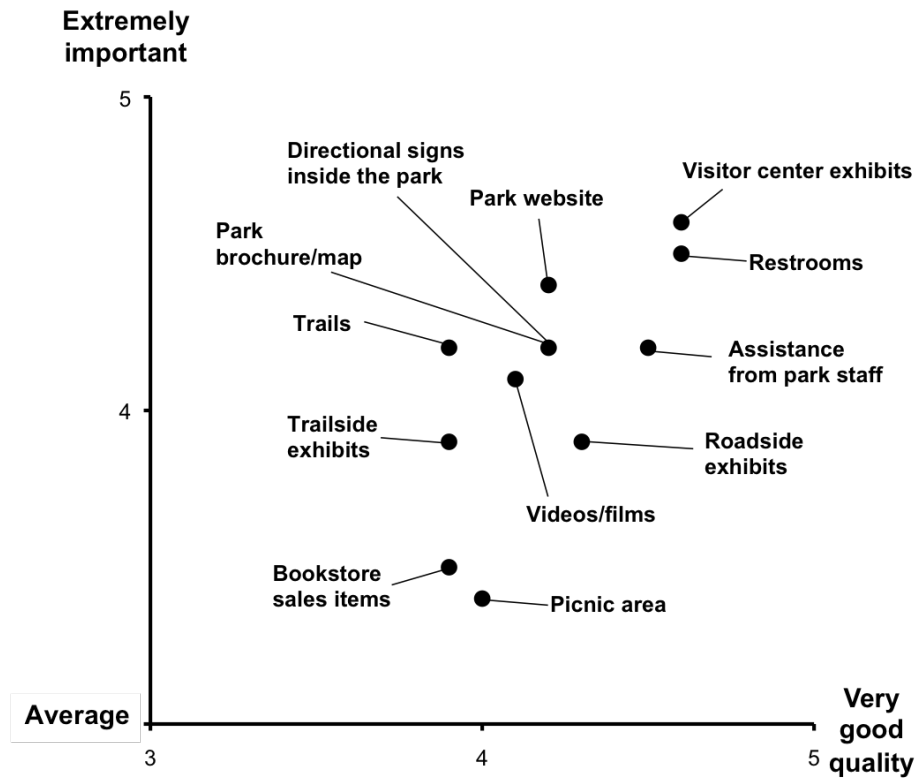
\*\*total percentages do not equal 100 because visitors could select more than one answer

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

- Figures 41 and 42 show the mean scores of importance and quality ratings of all visitor services and facilities that were rated by 30 or more visitor groups.
- All visitor services and facilities were rated above average.



**Figure 41.** Mean scores of importance and quality ratings of visitor services and facilities



**Figure 42.** Detail of Figure 41

\*total percentages do not equal 100 due to rounding

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

**Importance of protecting park attributes and resources**

**Question 18**

It is the National Park Service’s responsibility to protect Fossil Butte National Monument’s natural, scenic, and cultural resources while at the same time providing for public enjoyment. How important is protection of the following resources/attributes in the park to you and your personal group?

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

**Results**

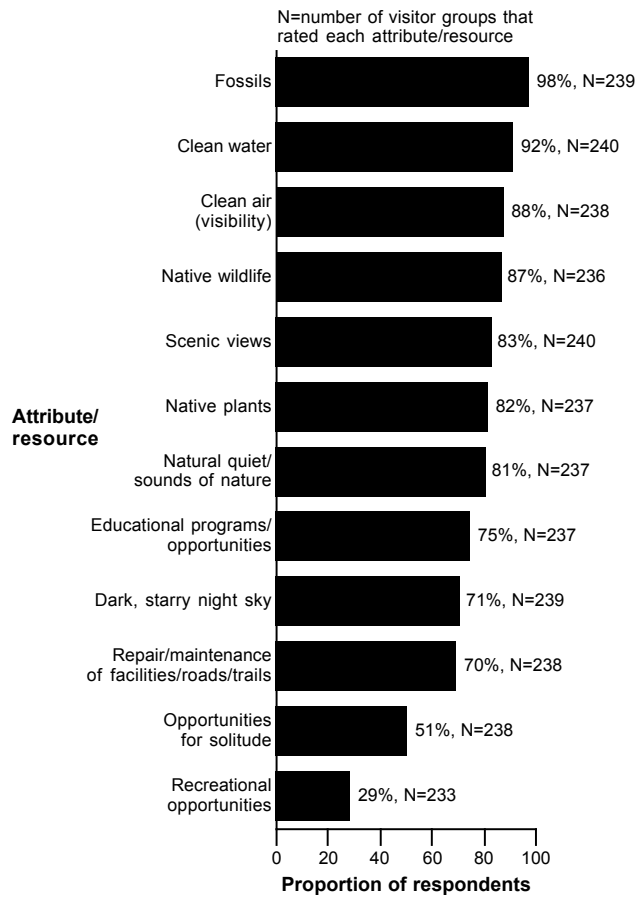
- As shown in Figure 43, the highest combined proportions of “extremely important” and “very important” ratings of park attributes and resources included:

- 98% Fossils
- 92% Clean water
- 88% Clean air
- 87% Native wildlife

- Table 20 shows the importance ratings of park attributes and resources.

- The attribute/resource that received the highest “not important” rating was:

- 12% Recreational opportunities



**Figure 43.** Combined proportions of “extremely important” and “very important” ratings of park attributes and resources

\*total percentages do not equal 100 due to rounding

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



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

Attribute/resource	N	Rating (%)*				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Clean air (visibility)	238	1	2	9	41	47
Clean water	240	1	1	6	35	57
Dark, starry night sky	239	5	5	18	32	38
Educational programs/ opportunities	237	1	3	22	41	34
Fossils	239	<1	<1	1	24	74
Native plants	237	<1	4	13	35	47
Native wildlife	236	1	2	10	38	49
Repair/maintenance of facilities/roads/trails	238	<1	5	24	43	27
Natural quiet/ sounds of nature	237	<1	5	14	35	46
Recreational opportunities	233	12	22	37	18	11
Scenic views	240	2	3	12	39	44
Opportunities for solitude	238	5	13	30	22	29

\*total percentages do not equal 100 due to rounding

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

## Expenditures

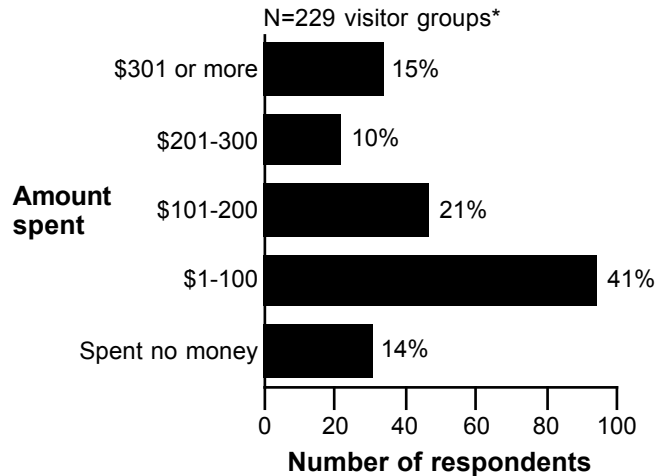
### *Total expenditures inside and outside the park*

#### Question 20a

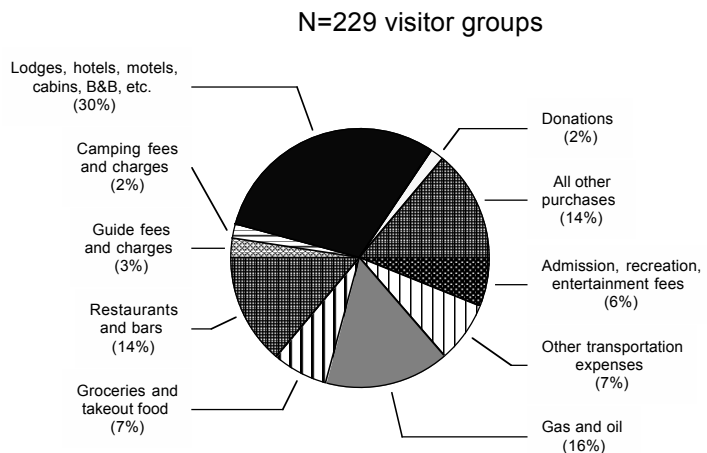
For you and your personal group, please estimate all expenditures for the items listed below for this visit to Fossil Butte National Monument and the surrounding area (within 30 miles of the park).

#### Results

- 41% of visitor groups spent \$1-100 (see Figure 44).
- 21% spent \$101-200 or more.
- The average visitor group expenditure was \$187.
- The median group expenditure (50% of groups spent more and 50% of groups spent less) was \$84.
- Average total expenditure per person (per capita) was \$75.
- As shown in Figure 45, the largest proportions of total expenditures inside and outside the park were:
  - 30% Lodges, hotels, motels, cabins, B&B, etc.
  - 16% Gas and oil
  - 14% All other purchases
  - 14% Restaurants and bars



**Figure 44.** Total expenditures inside and outside the park



**Figure 45.** Proportions of total expenditures inside and outside the park

\*total percentages do not equal 100 due to rounding

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

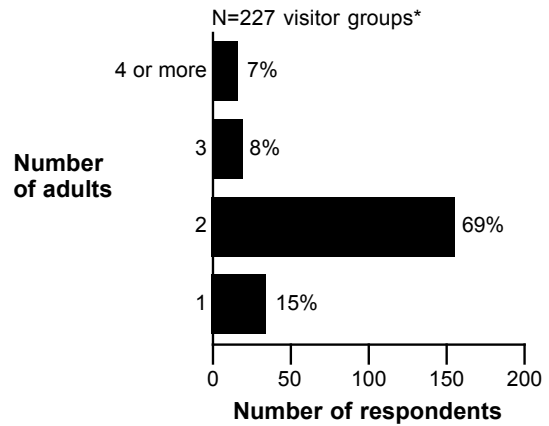
***Number of adults covered by expenditures***

**Question 20c**

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

**Results**

- 69% of visitor groups had two adults covered by expenditures (see Figure 46).



**Figure 46.** Number of adults covered by expenditures

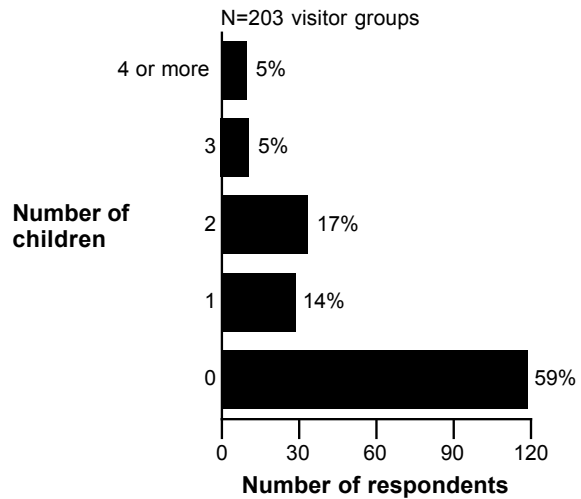
***Number of children covered by expenditures***

**Question 20c**

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

**Results**

- 59% of visitor groups had no children covered by expenditures (see Figure 47).
- 17% had two children.



**Figure 47.** 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**

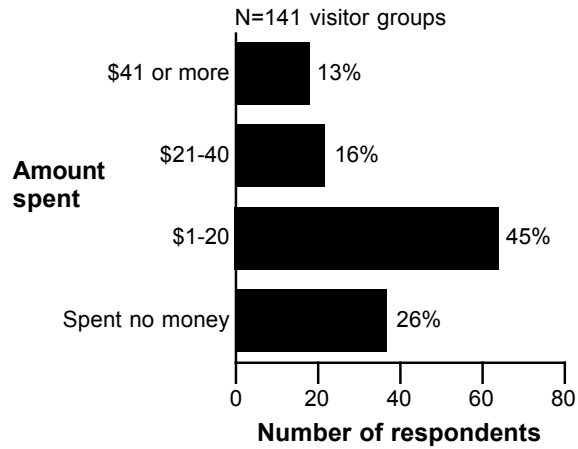
**Question 20a**

Please list your group's total expenditures in Fossil Butte National Monument.

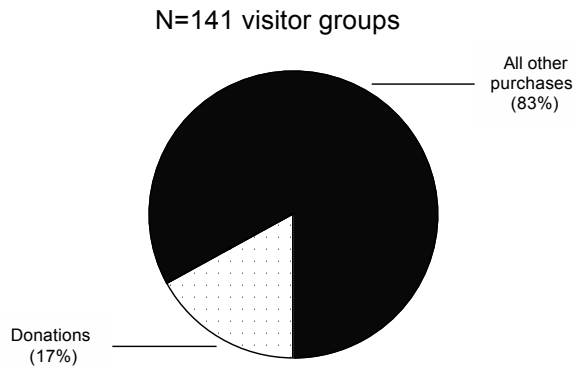
**Results**

- 45% of visitor groups spent \$1-20 inside the park (see Figure 48).
- 26% spent no money.
- The average visitor group expenditure inside the park was \$19.
- The median expenditure (50% of groups spent more and 50% of groups spent less) was \$8.
- Average total expenditure per person (per capita) was \$10.
- As shown in Figure 49, the largest proportion of total expenditures inside the park was:

83% All other purchases



**Figure 48.** Total expenditure inside the park



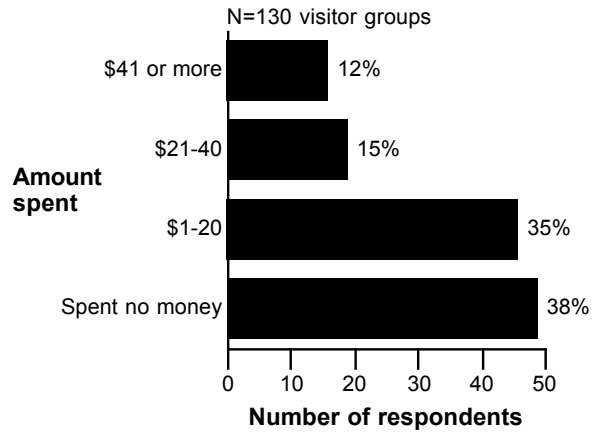
**Figure 49.** Proportions of total expenditures inside the park

\*total percentages do not equal 100 due to rounding

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

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

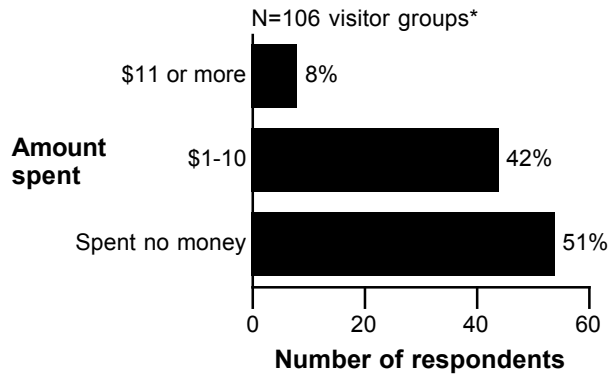
- 38% of visitor groups spent no money on all other purchases inside the park (see Figure 50).
- 35% spent \$1-20.



**Figure 50.** Expenditures for other purchases inside the park

Donations

- 51% of visitor groups spent no money on donations inside the park (see Figure 51).
- 42% spent \$1-10.



**Figure 51.** 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**

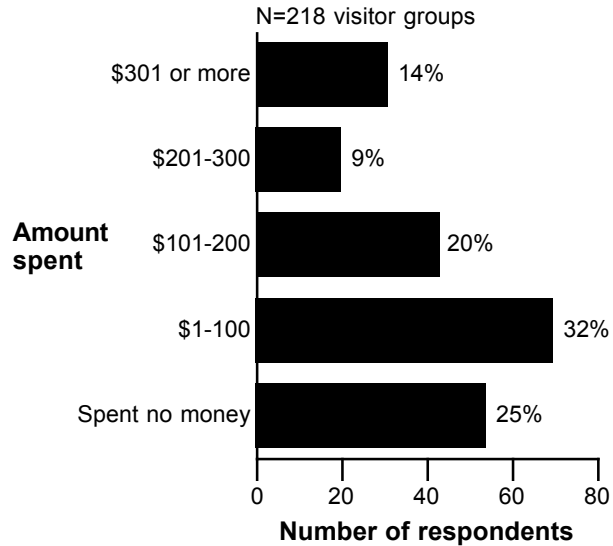
**Question 20b**

Please list your group's total expenditures in the surrounding area outside the park (within 30 miles of the park).

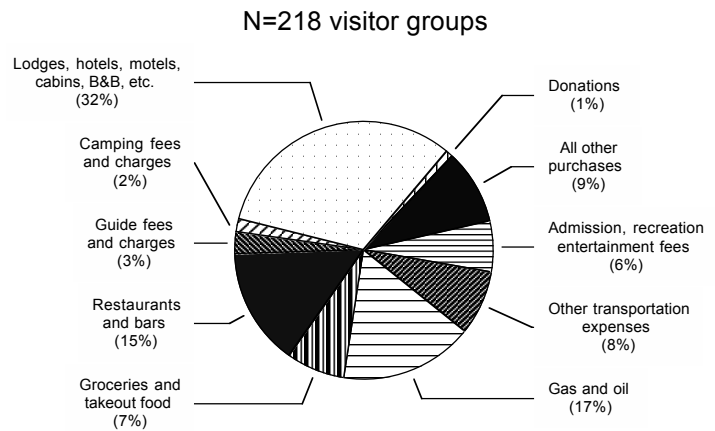
**Results**

- 32% of visitor groups spent \$1-100 outside the park (see Figure 52).
- 25% spent no money.
- The average visitor group expenditure outside the park was \$184.
- The median expenditure (50% of groups spent more and 50% of groups spent less) was \$81.
- Average total expenditure per person (per capita) was \$96.
- As shown in Figure 53, the largest proportions of total expenditures outside the park were:

- 32% Lodges, hotels, motels, cabins, B&B, etc.
- 17% Gas and oil
- 15% Restaurants and bars



**Figure 52.** Total expenditures outside the park (within 30 miles of the park)



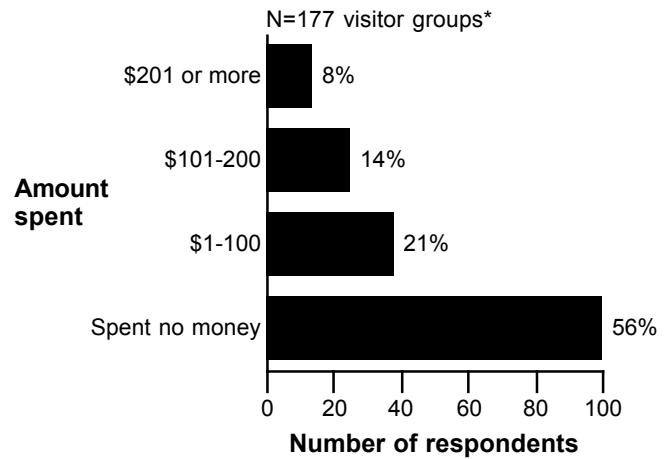
**Figure 53.** Proportions of total expenditures outside the park

\*total percentages do not equal 100 due to rounding

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

Lodges, hotels, motels, cabins, B&B, etc.

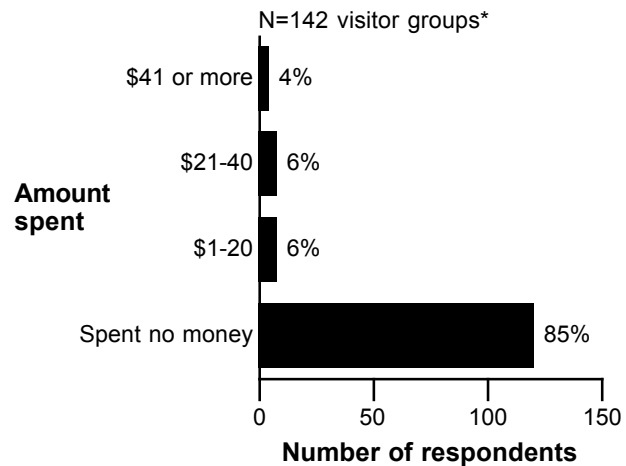
- 56% of visitor groups spent no money on lodging outside the park (see Figure 54).
- 21% spent \$1-100.



**Figure 54.** Expenditures for lodging outside the park

Camping fees and charges

- 85% of visitor groups spent no money on camping fees and charges outside the park (see Figure 55).
- 12% spent \$1-40.



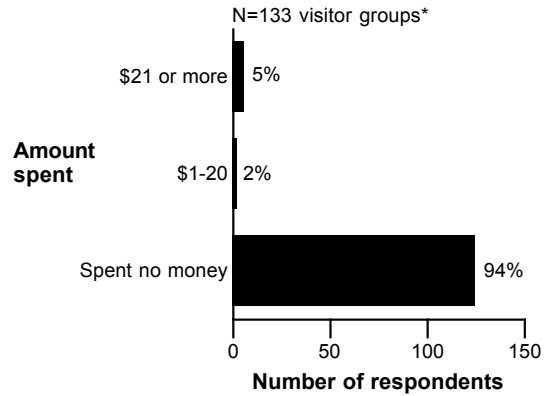
**Figure 55.** Expenditures for camping fees and charges outside

\*total percentages do not equal 100 due to rounding

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

Guide fees and charges

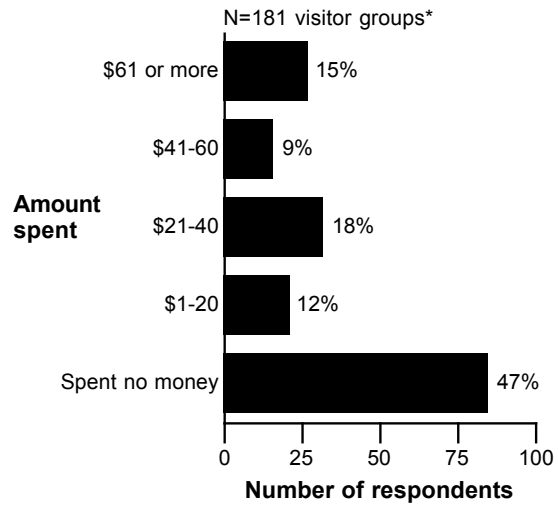
- 94% of visitor groups spent no money on guide fees and charges outside the park (see Figure 56).
- 5% spent \$21 or more.



**Figure 56.** Expenditures for guide fees and charges outside the park

Restaurants and bars

- 47% of visitor groups spent no money at restaurants and bars outside the park (see Figure 57).
- 18% spent \$21-40.
- 15% spent \$61 or more.



**Figure 57.** Expenditures for restaurants and bars outside the park

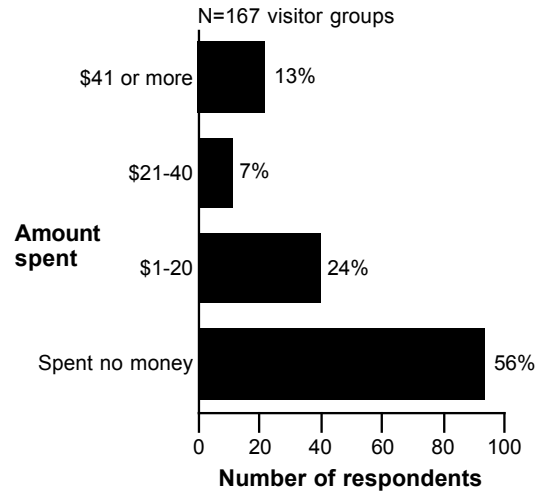
\*total percentages do not equal 100 due to rounding

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



Groceries and takeout food

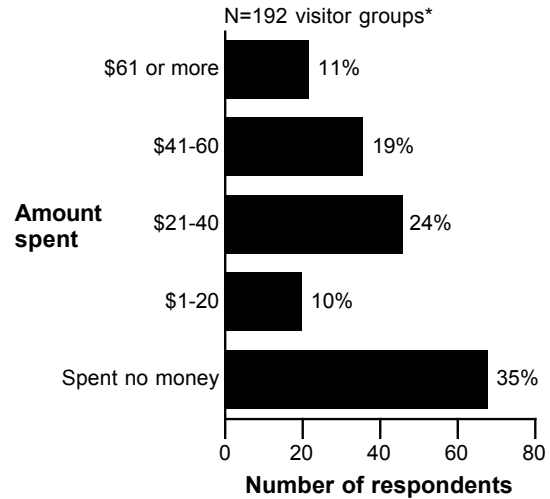
- 56% of visitor groups spent no money on groceries and takeout food outside the park (see Figure 58).
- 24% spent \$1-20.



**Figure 58.** Expenditures for groceries and takeout food outside the park

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

- 35% of visitor groups spent no money on gas and oil outside the park (see Figure 59).
- 24% spent \$21-40.



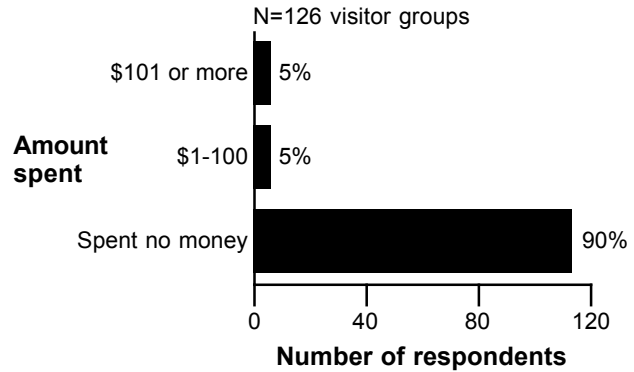
**Figure 59.** Expenditures for gas and oil outside the park

\*total percentages do not equal 100 due to rounding

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

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

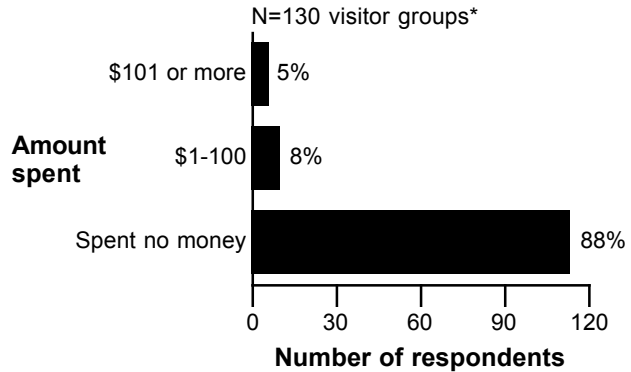
- 90% of visitor groups spent no money on other transportation purchases outside the park (see Figure 60).



**Figure 60.** Expenditures for other transportation purchases outside the park

Admission, recreation, and entertainment fees

- 88% of visitor groups spent no money on admission, recreation, and entertainment fees outside the park (see Figure 61).
- 8% spent \$1-100.



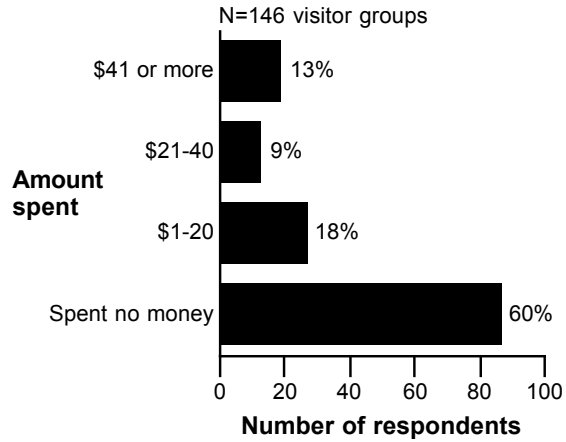
**Figure 61.** Expenditures for admission, recreation, and entertainment fees outside the park

\*total percentages do not equal 100 due to rounding

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

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

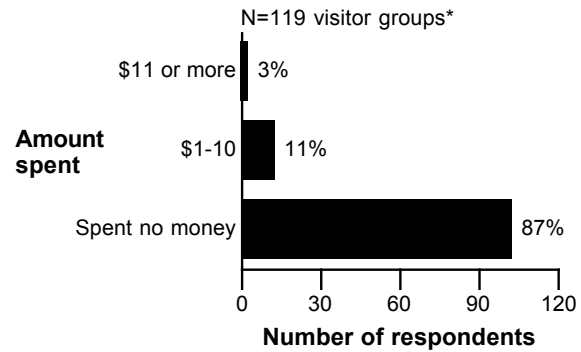
- 60% of visitor groups spent no money on all other purchases outside the park (see Figure 62).
- 18% spent \$1-20.



**Figure 62.** Expenditures for other purchases outside the park

Donations

- 87% of visitor groups spent no money on donations outside the park (see Figure 63).
- 11% spent \$1-10.



**Figure 63.** 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

## Preferences for Future Visits

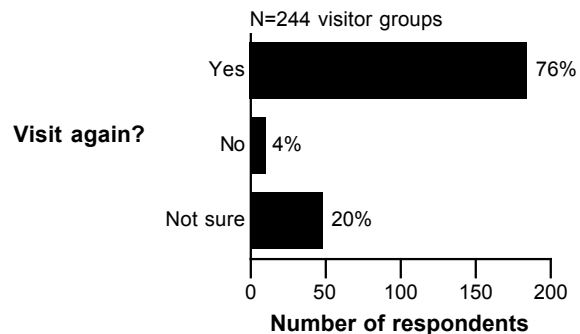
### Future visits

#### Question 17a

Would you and members of your personal group consider visiting Fossil Butte National Monument again in the future?

#### Results

- 76% of visitor groups would consider visiting Fossil Butte National Monument again in the future (see Figure 64).



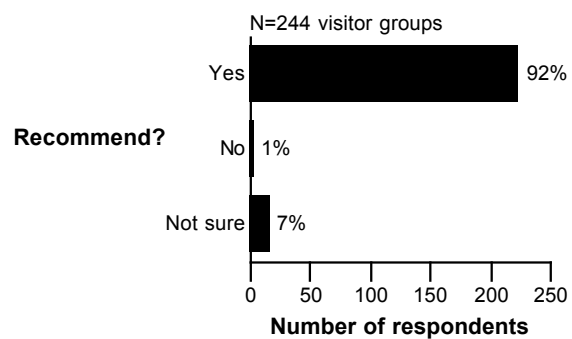
**Figure 64.** Visitor groups that would consider visiting the park again in the future

#### Question 17b

Would you and members of your personal group recommend visiting Fossil Butte National Monument to your friends/relatives?

#### Results

- 92% of visitor groups would recommend visiting Fossil Butte National Monument to their friends/relatives (see Figure 65).



**Figure 65.** Visitor groups that would recommend visiting park to friends/relatives

\*total percentages do not equal 100 due to rounding

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

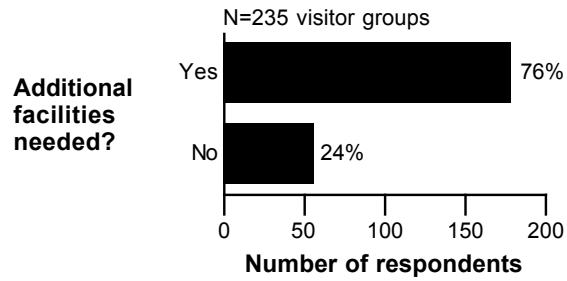
**Facilities for future visits**

**Question 14**

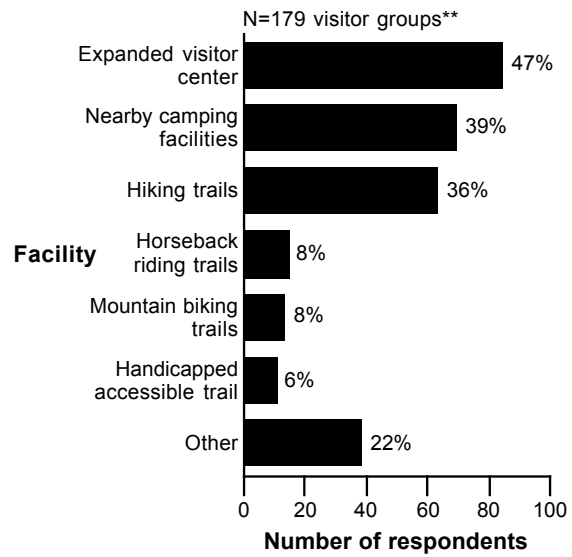
If you were to visit Fossil Butte National Monument in the future, which of the following additional facilities would you like to have available?

**Results**

- 76% of visitor groups would like to have additional facilities available (see Figure 66).
- As shown in Figure 67, among those visitor groups that would like to have additional facilities available:
  - 47% Expanded visitor center
  - 39% Nearby camping facilities
  - 36% Hiking trails
- “Other” reasons (22%) are listed in Table 21.



**Figure 66.** Visitor groups would like to have additional facilities available



**Figure 67.** Preferred type of additional facilities

\*total percentages do not equal 100 due to rounding

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

**Table 21.** Additional facilities  
(N=37 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
Area to dig for/view fossils	7
A place for hands-on activities	2
Access/view quarry	2
Areas that the public can explore	2
Food and drink	2
Food/gift shop	2
Trash cans	2
Better advertisement of picnic/hiking areas	1
Camping with hookups	1
Dig sites	1
Enter the quarry	1
Food vendor	1
Fossil grounds for kids (learn interactively)	1
Hiking trails with fossils	1
More driving roads	1
More exhibits	1
Motorcycle parking	1
Movie	1
Multi-language support (explanations)	1
Nearby camping facilities	1
Oregon Trail information	1
Shaded parking	1
Tours to active sites	1
Water at hiking trails	1
Water spigot	1

\*total percentages do not equal 100 due to rounding

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

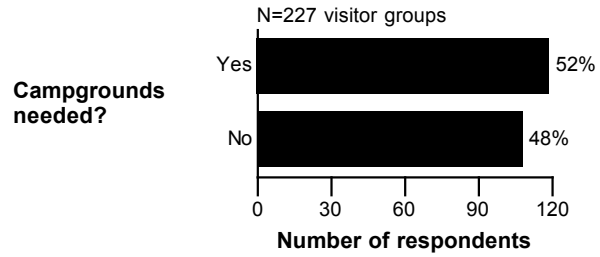
## Campgrounds

### Question 16a

In your opinion, are campgrounds needed near Fossil Butte National Monument?

#### Results

- 52% of visitor groups indicated that campgrounds are needed near the park (see Figure 68).



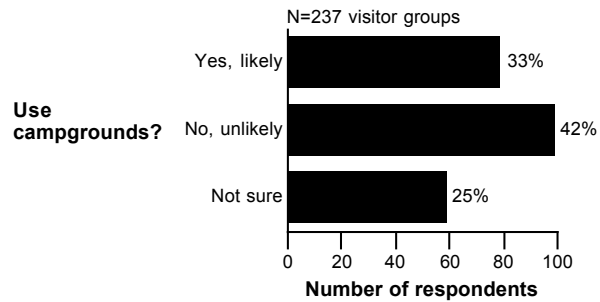
**Figure 68.** Visitor groups that indicated campgrounds are needed near the park

### Question 16b

If campgrounds were provided, would you and your personal group be likely to use them on a future visit?

#### Results

- 33% of visitor groups would be likely to use campgrounds on a future visit (see Figure 69).



**Figure 69.** Visitor groups' likelihood of using campgrounds 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

**Learning methods in future**

**Question 15a**

If you were to visit Fossil Butte National Monument in the future, how would you and your personal group prefer to learn about cultural and natural history/features of the park?

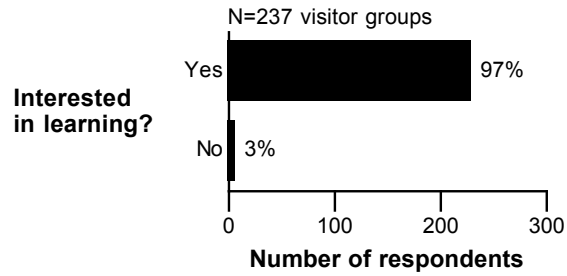
**Results**

- 97% of visitor groups were interested in learning about cultural and natural history/features of the park in the future (see Figure 70).
- As shown in Figure 71, among those visitor groups that were interested in learning about cultural and natural history/features of the park, the most common methods were:

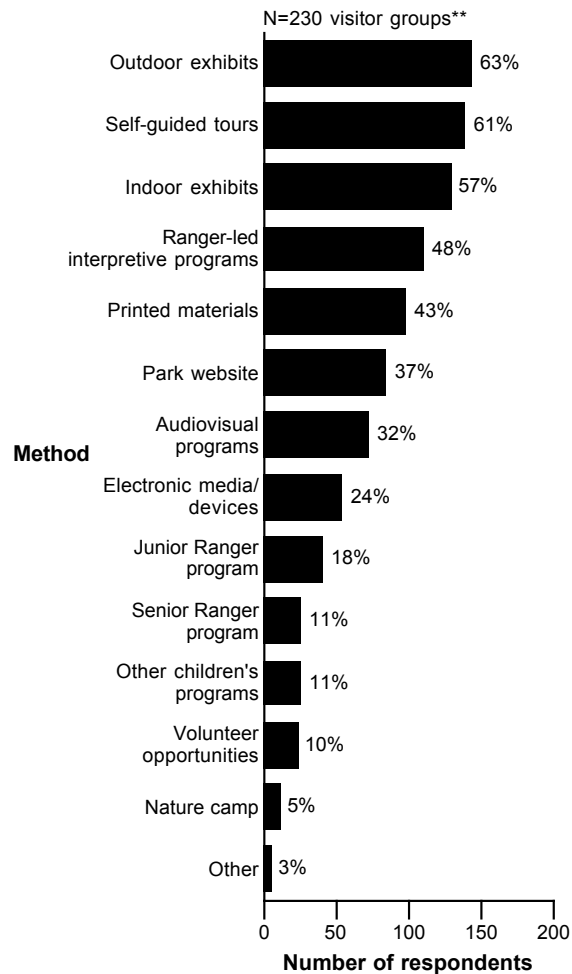
- 63% Outdoor exhibits
- 61% Self-guided tours

- “Other” methods (3%) included:

- Direct interaction with researchers
- Exploration area
- Guided bus tour - dig site
- Keep it unspoiled
- Timeline that coordinates with animal/plant life



**Figure 70.** Visitor groups that were interested in learning about cultural and natural history/features in the future



**Figure 71.** Preferred method of learning

\*total percentages do not equal 100 due to rounding

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



***Preferred length of ranger-led programs***

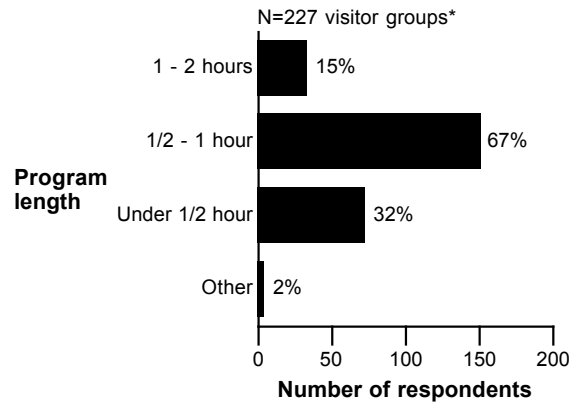
**Question 15b**

What length of ranger-led program would you and your personal group like to attend?

**Results**

- 67% of visitor groups preferred a ranger-led program length of 1/2 - 1 hour (see Figure 72).
- 32% preferred a program length of under 1/2 hour.
- “Other” preferred program length (2%) was:

Vary by topic



**Figure 72.** Preferred length of ranger-led program

\*total percentages do not equal 100 due to rounding

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

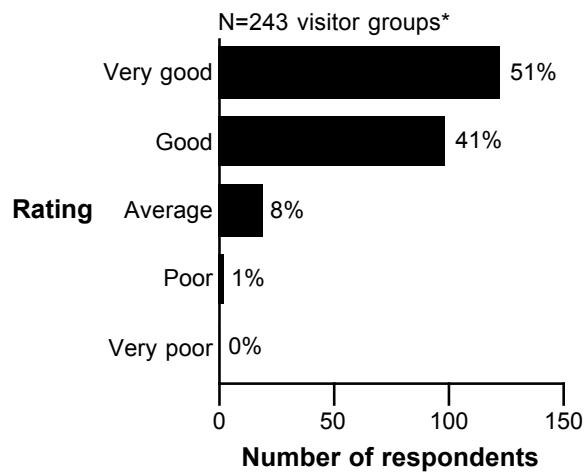
## Overall Quality

### Question 27

Overall, how would you rate the quality of the facilities, services, and recreational opportunities provided to you and your personal group at Fossil Butte National Monument during this visit?

#### Results

- 92% of visitor groups rated the overall quality of facilities, services, and recreational opportunities as “good” or “very good” (see Figure 73).
- 1% of visitor groups rated the quality as “very poor” or “poor.”



**Figure 73.** Overall quality rating of facilities, services, and recreational opportunities

\*total percentages do not equal 100 due to rounding

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

## Visitor Comment Summaries

### *National significance*

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#### Question 12

Fossil Butte National Monument was established because of its significance to the nation. In your opinion, what is the national significance of the park? (Open-ended)

#### Results

- 86% of visitor groups (N=213) responded to this question.
- Table 22 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

**Table 22.** National significance  
(N=257 comments; some visitor groups made more than one comment.)

Comment	Number of times mentioned
Protection/preservation of fossils/paleontological site	31
Educational resource/opportunity	24
Geological/paleontological history	18
Historical significance	13
Preservation of earth/fossil history	12
Geologic history	9
The fossils	9
Scientifically significant	8
Access to fossils/fossil discoveries	7
Large number of fossils	7
Preservation of geologic history	7
Concentration of large variety of fossils	6
Fossil resource	6
Place to learn about geology/earth's history	6
Teaches us about the past	6
Natural history	5
Beautiful/scenic place	4
Education of future generations	4
Very significant	4
Don't know/not sure	3
Evolution/prehistoric life preserved in fossils	3
Fossils help understand earth history	3
Gives Americans understanding of geological wonders of their country	3
Important site/resource	3
Rare fossils	3
Understanding of evolution and geologic time	3
Example of climate change	2
Fossil Lake is a resource	2
Fossils tell the story of former life forms	2
Hands-on/interactive experience	2
History of evolution	2

**Table 22.** National significance (continued)

<b>Comments</b>	<b>Number of times mentioned</b>
National treasure	2
Research opportunity	2
Understanding of natural processes	2
Unique	2
Unique record/display of history	2
Beauty and origin of flying dinosaurs	1
Biodiversity	1
Controlled/regulated fossil hunting	1
Demonstrates fragile relationship with the environment	1
Educate the public	1
Example of geologic richness	1
Fossil fish	1
Fossil research	1
Geologic wonder	1
Hard to imagine water landscape	1
Helps date other fossils	1
Highlights educational benefits of parks	1
Humans are part of the ecosystem	1
Importance of preservation	1
Importance of stewardship	1
Important to learn	1
Incredible natural history	1
International significance	1
Largest collection of bird and bat fossils	1
Learning about Earth's environment	1
Learning about fossils	1
Money made from sales	1
Place to see fossils	1
Prehistory	1
Quiet/peace	1
Relationship to the Creation Story and Flood	1
See how our tax dollars are used	1
Understanding the environment	1
Unique landscape	1
Wildlife protection	1

### ***What visitors liked most***

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#### **Question 9a**

What did you and your personal group like most about your visit to Fossil Butte National Monument? (Open-ended)

#### **Results**

- 95% of visitor groups (N=235) responded to this question.
- Table 23 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

**Table 23.** What visitors liked most  
(N=361 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>PERSONNEL (3%)</b>	
Helpful/friendly staff	4
Ranger	4
Knowledgeable staff	3
Other comment	1
<b>INTERPRETIVE SERVICES (62%)</b>	
Fossil exhibits in visitor center	77
Timeline/geologic scale	36
Movie/video	22
Information at visitor center	16
Visitor center fossil preparation demonstration	14
Information/discussions with ranger	6
Junior ranger program	5
History	4
Learning about fossils	4
Viewing paleontologists at work	4
Historical markers on roadside	3
Visitor center	3
Amount of fossils	2
Children's activities	2
Learning/educational information	2
Mural	2
New/improved exhibits	2
Ranger talk	2
Seeing the fossil digging sites	2
Other comments	15
<b>FACILITIES/MAINTENANCE (14%)</b>	
Visitor center	34
Fossil Lake Trail	3
Trails	3
Picnic area	2
Other comments	7

**Table 23.** Liked most (continued)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>POLICIES/MANAGEMENT (1%)</b>	
Preservation of the area	2
Other comment	1
<b>RESOURCE MANAGEMENT (9%)</b>	
Fossils	25
Other comments	6
<b>GENERAL (12%)</b>	
Scenery/scenic views	14
Scenic drive	8
Hiking	5
Quiet	3
Uncrowded	3
Other comments	10

**What visitors liked least****Question 9b**

What did you and your personal group like least about your visit to Fossil Butte National Monument? (Open-ended)

**Results**

- 57% of visitor groups (N=142) responded to this question.
- Table 24 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

**Table 24.** Liked least

(N=154 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>PERSONNEL (1%)</b>	
Comments	2
<b>INTERPRETIVE SERVICES (25%)</b>	
Lack of hands-on activities	2
Missed the fossil preparation demonstration	2
More information about trails	2
More interpretive information along the trail	2
Other comments	30
<b>FACILITIES/MAINTENANCE (19%)</b>	
Small visitor center	4
Lack of directional signs on scenic drive	3
Camping not available	2
Lack of trees/shade shelters	2
Lack of food/drink options	2
More directional signs to the park	2
Need more short/quick trails	2
Other comments	12
<b>POLICIES/MANAGEMENT (17%)</b>	
Insufficient access to quarry	9
Hoped to see more fossils in the field	4
No place to dig on our own	2
This survey	2
Other comments	9
<b>RESOURCE MANAGEMENT (1%)</b>	
Comment	1
<b>GENERAL COMMENTS (38%)</b>	
Lacked time	21
Nothing to dislike	17
Weather was too hot	8
Other comments	12

## ***Planning for the future***

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### **Question 25**

If you were a manager planning for the future of Fossil Butte National Monument what would you and your personal group propose? (Open-ended)

### **Results**

- 61% of visitor groups (N=151) responded to this question.
- Table 25 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

**Table 25.** Planning for future  
(N=219 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>PERSONNEL (2%)</b>	
More rangers	3
Other comments	2
<b>INTERPRETIVE SERVICES (45%)</b>	
Provide hands-on fossil collection/ preparation	21
Expand the exhibits	6
More hands-on activities for children	5
Expand the fossil exhibits	3
More interactive/hands-on exhibits	3
Opportunities to see fossil digging	3
Opportunities to view fossils in the field	3
Evening campfire/campground talks	2
More ranger-led activities	2
Outdoor exhibit of an excavated fossil	2
Other comments	48
<b>FACILITIES/MAINTENANCE (30%)</b>	
Add a campground	20
Add trails	11
Expand visitor center	6
Food/drink services	5
Improve road/directional signs	3
Continue facility maintenance/upkeep	2
Improve trails	2
Nature trail at visitor center	2
Other comments	15
<b>POLICY/MANAGEMENT (16%)</b>	
Advertise/promote the park	16
Do not over-develop	3
Easier access to fossil sites	2
Expand the park	2
Keep it as it is	2
Other comments	9



**Table 25.** Planning for future (continued)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>RESOURCE MANAGEMENT (1%)</b>	
Comments	3
<b>GENERAL COMMENTS (6%)</b>	
Need more time	3
Other comments	10

### ***Additional comments***

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#### **Question 26**

Is there anything else you and your personal group would like to tell us about your visit to Fossil Butte National Monument? (Open-ended)

#### **Results**

- 46% of visitor groups (N=114) responded to this question.
- Table 26 shows a summary of visitor comments. A copy of hand-written comments can be found in the Visitor Comments section.

**Table 26.** Additional comments

(N=166 comments; some visitor groups made more than one comment.)

<b>Comment</b>	<b>Number of times mentioned</b>
<b>PERSONNEL (17%)</b>	
Helpful staff	6
Friendly/nice staff	5
Knowledgeable staff	2
Other comments	16
<b>INTERPRETIVE SERVICES (22%)</b>	
Enjoyed/liked fossil exhibits	7
Informative/educational experience	5
Enjoyed the timeline	4
Other comments	20
<b>FACILITIES/MAINTENANCE (9%)</b>	
Beautiful visitor center	4
Nice facilities	3
Other comments	8
<b>POLICIES/MANAGEMENT (4%)</b>	
Promote/market the park	2
Other comments	5
<b>RESOURCE MANAGEMENT (2%)</b>	
Other comments	4
<b>GENERAL COMMENTS (51%)</b>	
Enjoyed visit	34
Will return	7
Interesting experience	5
Needed more time	5
Awesome/amazing	4
Informative/educational experience	3
Did not know of park's existence	3
Thank you	3
Visited/excavated at other quarries nearby	3
Fun/interesting for children	2
Good job	2
Other comments	14

## **Visitor Comments**

This section contains visitor responses to open-ended questions.



## **Appendix 1: The Questionnaire**



## Appendix 2: Additional Analysis

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

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

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

For more information please contact:

Visitor Services Project, PSU  
College of Natural Resources  
P.O. Box 441139  
University of Idaho  
Moscow, ID 83844-1139

Phone: 208-885-7863  
Fax: 208-885-4261  
Email: [littlej@uidaho.edu](mailto:littlej@uidaho.edu)  
Website: <http://www.psu.uidaho.edu>

## Appendix 3: Decision Rules for Checking Non-response Bias

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

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

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

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

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

As shown in Table 2, the p-value for respondent/non-respondent group size test is greater than 0.05, indicating insignificant differences between respondents and non-respondents. Table 3 shows no significant difference in group type. Thus, non-response bias for group structure 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 park. In the Fossil Butte National Monument survey, 20 respondents reported to be the older person in the group rather than the person who accepted the survey at the park to be the person who completed the survey. Therefore, non-response bias is judged to be insignificant.



## References

- 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. (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.
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- Filion, F. L. (Winter 1975-Winter 1976). Estimating Bias due to Non-response in Mail Surveys. *Public Opinion Quarterly*, Vol 39 (4): 482-492.
- 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

All VSP reports are available on the Park Studies Unit website at [www.psu.uidaho.edu.vsp.reports.htm](http://www.psu.uidaho.edu.vsp.reports.htm). 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
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

### 1993

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

**Visitor Services Project Publications (continued)****1994**

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

**1998 (continued)**

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

**1999**

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

**2000**

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

**2001**

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

**2002**

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

**Visitor Services Project Publications** (continued)**2002** (continued)

- 138. Catoctin Mountain Park
- 139. Hopewell Furnace National Historic Site
- 140. Stones River National Battlefield (fall)

**2003**

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

**2004**

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

**2005**

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

**2006**

- 174. Kings Mountain National Military Park (spring)

**2006** (continued)

- 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)

**2007**

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

**2008**

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

**2009**

- 209. Fort Larned National Historic Site
- 210. Homestead National Monument of America
- 211. Minuteman Missile National Historic Site
- 212. Perry's Victory & International Peace Memorial

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

### **2009** (continued)

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

### **2010**

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

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.



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

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



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**Natural Resource Stewardship and Science**  
**1201 Oakridge Drive, Suite 150**  
**Fort Collins, CO 80525**

**[www.nature.nps.gov](http://www.nature.nps.gov)**

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