




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

Visitor Services Project



**Timpanogos Cave
National Monument
Visitor Study
Summer 2005**

 **University of Idaho**
Park Studies Unit
Visitor Services Project
Report 167



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Report 167**

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**Visitor Services Project
Timpanogos Cave National Monument
Report Summary**

- This report describes the results of a visitor study at Timpanogos Cave National Monument (NM) during July 8-16, 2005. A total of 460 questionnaires were distributed to visitor groups. Of those, 286 questionnaires were returned resulting in a 62% response rate. Fifteen percent of visitors chose to use the online option to complete the questionnaire.
 - This report profiles Timpanogos Cave NM visitors. Most results are presented in graphs and frequency tables. Summaries of visitor comments are included in the report and complete comments are included in the Visitor Comments Appendix.
 - Fifty-two percent of visitor groups were groups of 5 or more, 27% were in groups of three or four, and 17% were in groups of two. Sixty-nine percent of the visitor groups were family groups. Forty-two percent of visitors were ages 21-50 years and 39% were ages 15 or younger.
 - United States visitors were from Utah (64%), California (6%), and 34 other states. International visitors, comprising 4% of the total visitation, were from Japan (23%), Spain (17%), and 9 other countries.
 - Fifty-five percent of visitors visited Timpanogos Cave NM for the first time in their lifetime and 88% visited for the first time in the past 12 months. Thirty-two percent of visitors (16 years or older) had some college and 30% held a bachelor's degree.
 - Prior to this visit, visitor groups most often obtained information about Timpanogos Cave NM through previous visits (65%) and friends/relatives/word of mouth (48%). Eight percent of visitor groups did not obtain any information about the park before their visit. Most groups (88%) received the information they needed about the park.
 - Thirty-four percent of visitor groups' primary reason for traveling to the Timpanogos Cave NM area (within 50 miles) was to visit Timpanogos Cave NM. On this visit, the most common activities were taking the cave tour (85%), hiking/walking (63%), and visiting visitor center (47%).
 - In regard to use, importance, and quality of information services and facilities, it is important to note the number of visitor groups that responded to each question. The most used services/facilities by the 263 visitor groups included cave tour (85%), monument brochure/map (56%), and trailside interpretive signs (51%). The services/facilities that received the highest combined proportions of "extremely important" and "very important" ratings included cave tour (95%, N=221) and monument website (67%, N=65). The services/facilities that received the highest combined proportions of "very good" and "good" ratings included cave tour (90%, N=217) and monument brochure/map (89%, N=139).
 - In regard to use, importance, and quality of visitor services and facilities, it is important to note the number of visitor groups that responded to each question. The most used services/facilities by the 279 visitor groups included parking areas (82%), visitor center restrooms (81%), and trail to cave (81%). The services/facilities that received the highest combined proportions of "extremely important" and "very important" ratings included trail to cave (97%, N=220), visitor center restrooms (96%, N=223), and parking areas (93%, N=224). The services/facilities that received the highest combined proportions of "very good" and "good" ratings included trail to cave (92%, N=220), assistance from monument staff (88%, N=114), and Swinging Bridge picnic area (78%, N=36).
 - Most visitor groups (93%) rated the overall quality of services, facilities, and recreational opportunities at Timpanogos Cave NM as "very good" or "good." No visitor groups rated the overall quality as "very poor" or "poor."
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INTRODUCTION

This report describes the results of a visitor study at Timpanogos Cave NM. This visitor study was conducted from July 8-16, 2005 by the National Park Service (NPS) Visitor Services Project (VSP), a part of the Park Studies Unit (PSU) at the University of Idaho.

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 results of the study.

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

- *Demographics*
- *Information Prior to Visit*
- *Information During Visit*
- *Ratings of the Park's Services, Facilities, Elements, Attributes, Resources, and Value for Fee Paid*
- *Expenditures (only presented if the questionnaire included expenditure questions)*
- *Information about Future Preferences*
- *Overall Quality*
- *Visitor Comments*

Section 3: **Appendices**

Appendix 1: The *Questionnaire* contains a copy of the original questionnaire distributed to groups.

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

Appendix 3: Decision rules for checking non-response bias

Appendix 4: *Visitor Services Project Publications* contains a complete list of publications by the PSU. Copies of these reports can be obtained by contacting PSU office or visiting the website: <http://www.psu.uidaho.edu/vsp/reports.htm>.

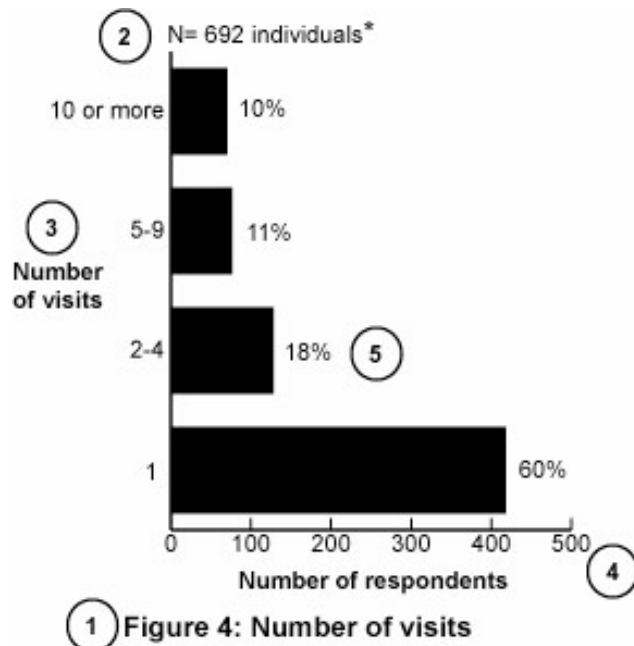
Visitor Comments Appendix: A separate appendix contains visitor responses to open-ended questions. It is bound separately from this report due to its size.

Presentation of the results

Most results are represented in the form of graphs (see example below) with some narrative text. Results may also be displayed as scatter plots, pie charts, or tables when applicable.

SAMPLE ONLY

- 1: The figure title describes the graph's information.
- 2: Listed above the graph, the "N" shows the number of individuals or visitor groups responding to the question. If "N" is less than 30, **CAUTION!** on the graph shows 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.



METHODS

Survey Design

Sample size and sampling plan

All VSP questionnaires follow design principles outlined in Don A. Dillman's book *Mail and Internet Surveys: The Tailored Design Method* (2000). Based on this methodology, the sample size was calculated based on park visitation statistics of previous years. To minimize coverage error, the sample size was also determined to provide adequate information about specific park sites if requested.

Interviews were conducted with visitor groups, and 460 questionnaires were distributed to a random sample of visitor groups who arrived at Timpanogos Cave NM during the period from July 8-16, 2005. Visitors could complete either the paper version of the questionnaire or the online version. The online option did not change the sample size or sampling plan, but provided the visitor with another option for completing the survey.

Table 1 presents the locations and numbers of questionnaires distributed at each location. These locations were selected based on park visitation statistics and advice from park staff.

Table 1: Questionnaire distribution location

N=number of questionnaires distributed;
percentage does not equal 100 due to rounding.

Sampling site	N	Percent
Visitor Center	380	83
Swinging Bridge Picnic Area	70	15
Evening Program at Visitor Center	10	2
Total	460	101

Questionnaire design

The Timpanogos Cave NM 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 Timpanogos Cave NM. Many questions asked visitors to choose answers from a list that was provided, often with an open-ended option, while others were completely open-ended.

The questionnaire was presented in two formats—traditional paper booklet and online which was compatible with most common web browsers for both PC and Macintosh computers. The online version of the questionnaire did not allow visitors to “skip” a question before proceeding to the next question and to a certain degree did not allow the participant to

answer the question “incorrectly”. The online survey password was a one-time use, computer generated password unique to each participant. Unique passwords were used to prevent unauthorized access to a participant’s survey. Participants could log in and out of their survey by selecting the “save and return later” option. When the participant finished the survey and selected the “completed and exit” option, the survey was “locked” and future access was not possible.

No pilot study was conducted to test the Timpanogos Cave NM questionnaire. However, all questions followed the OMB guidelines and/or were used in previous surveys. Thus, the clarity and consistency of the survey instrument have been tested and proven. For the first time, the VSP offered an online option for completing the survey instrument.

Survey procedure

Visitor groups were greeted, briefly introduced to the purpose of the study, and asked to participate. If visitors agreed, an interview lasting approximately two-minutes was used to determine group size, group type, and the age of the group member (at least 16 years of age) who would complete the questionnaire. These individuals were then asked for their names, addresses, and telephone numbers in order to mail them a reminder/thank you postcard and follow-ups, if needed. All visitor groups were given a questionnaire containing a postcard with a unique user ID and password, the Internet address, and directions for completing the survey online. Visitors were asked to complete the survey after their visit, and then return the questionnaire by mail or complete the survey online. The questionnaires were pre-addressed and affixed with a U.S. First Class postage stamp.

Two weeks following the survey, a reminder/thank you postcard was mailed to all participants. Replacement questionnaires and follow-up letters 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 and follow-up letters were mailed to visitors who still had not completed their survey. Follow-up letters contained another unique password that differentiated between mailing waves and eliminated duplicate submissions.

Data Analysis

Returned questionnaires were coded and the information was entered into a computer using standard statistical software packages—Statistical Package for the Social Sciences (SPSS) and Sequel Server (SQL). Frequency distribution and cross-tabulations were calculated for the coded data and responses to open-ended questions were categorized and summarized. The online version was entered by the visitor, while the paper version was entered by two independent data entry staff and validated by a third staff member.

Limitations

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

1. This study used a self-administered questionnaire. In addition, the respondents filled out the questionnaire after the visit, which may have resulted in poor recall. Thus, it is not possible to know whether visitor responses reflect actual behavior.
2. Visitors were given more than one option to complete the survey, which may have affected the response rate.
3. The data reflect visitor use patterns of visitors to the selected sites during the study period of July 8-16, 2005. The results present a 'snapshot-in-time' and do not necessarily apply to visitors during other times of the year.
4. 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.
5. Occasionally, there may be inconsistencies in the results. Inconsistencies arise from missing data or incorrect answers (due to misunderstood directions, carelessness, or inaccurate memory of the respondent). Therefore, refer to both the percentage and N (number of individuals or visitor groups) when interpreting the results.

Special Conditions

During the survey distribution period the weather was sunny with extremely high temperatures (in the 100s) during the day. The monument experienced a high volume of visitors so many were unable to participate in the cave tour due to maximum tour-size limitations.

Checking Non-response Bias

At Timpanogos Cave NM, 488 visitor groups were contacted and 460 of these groups (94%) accepted the questionnaire. Questionnaires were completed and returned by 286 visitor groups, resulting in a 62% response rate for this study. Of the 286 questionnaires completed, 43 were completed online resulting in a 15% online completion rate. Age of the group member who actually filled out the questionnaire and group size were the two variables used for checking non-response bias.

The results in Table 2 show that there are no significant differences between respondent and non-respondent ages and group sizes. Therefore, the non-response bias was judged to be insignificant and the data of this study is a good representation of a larger population of visitors to Timpanogos Cave NM. See Appendix 3 for more details of the non-response bias checking procedure.

Table 2: Comparison of all respondents and non-respondents

Variable	Respondent		Non-respondent		p-value (t-test)
	Average	N	Average	N	
Age	41.7	285	36	174	0.42
Group size	5.5	286	5.5	175	0.89

The results in Table 3 show that there are no significant differences between online and paper version respondent ages and group sizes. Therefore, there are no significant differences between online and paper respondents.

Table 3: Comparison of online vs paper survey respondents

Variable	Online respondent		Paper respondent		p-value (t-test)
	Average	N	Average	N	
Age	38.8	43	40.9	234	0.33
Group size	5.4	43	5.6	237	0.76

RESULTS

Demographics

Visitor age

Question 17

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

Note: Response was limited to seven members of each personal group.

Results

- Visitor ages ranged from 1 to 95 years old.
- 42% were in the 21-50 age group.
- 39% of visitors were 15 years or younger (see Figure 1).

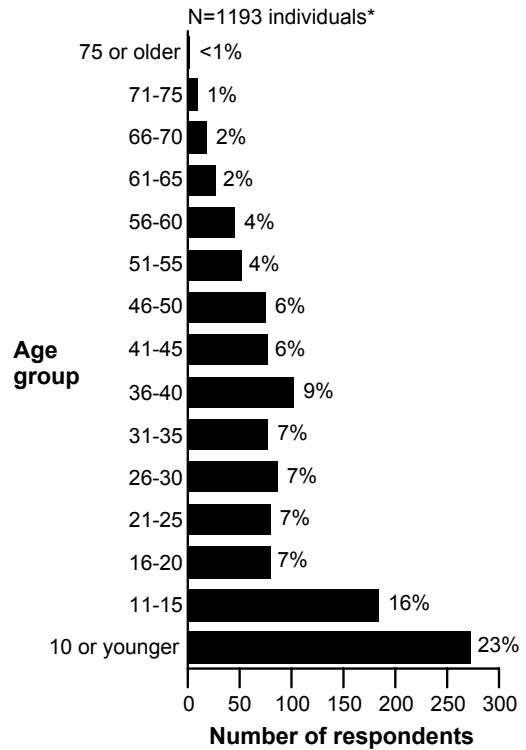


Figure 1: Visitor ages

Visitor level of education

Question 19

For you and your personal group (age 16 and over), what is your highest level of education?

Note: Response was limited to seven members of each personal group.

Results

- 32% of visitors had some college (see Figure 2).
- 30% held a bachelor's degree.

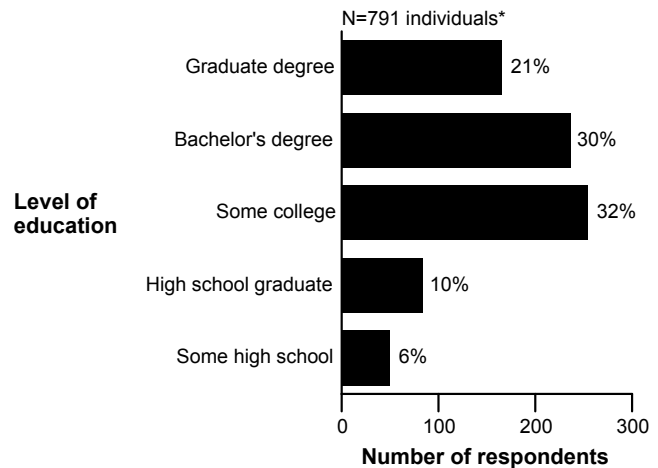


Figure 2: Visitor level of education

* total percentages do not equal 100 due to rounding

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

Preferred languages for speaking and writing

Question 20a

Is English the primary language that you and your group prefer to speak and write?

Results

- 93% percent of visitor groups preferred to speak and write English (see Figure 3).

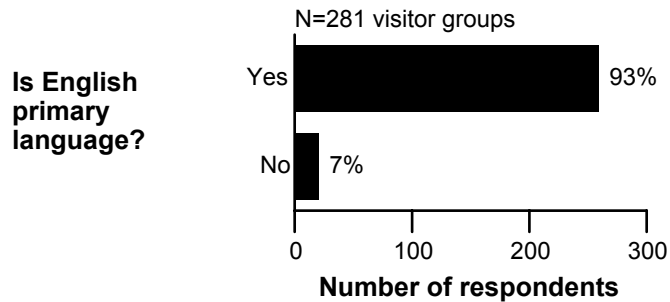


Figure 3: English as primary language

Question 20b

If NO, what one language do you and your group prefer to for speak and write?

Results (Interpret with **CAUTION!**)

- Preferred languages mentioned by visitor groups (N=16) who do not use English as their primary language were:

- | | |
|---------|----------|
| Arabic | French |
| Chinese | Japanese |
| Dutch | Korean |
| Finnish | Spanish |

Services visitors would like translated into other languages

Question 20c

What services in the monument would you like to have provided in languages other than English?

Results (Interpret with **CAUTION!**)

- Monument services that visitor groups (N=8) would like provided in languages other than English were:

- | | |
|--------------|---------------|
| Cave guide | Maps |
| Everything | Pamphlets |
| Guided tours | Warning signs |
| History | |

Question 20d

Which language?

Results (Interpret with **CAUTION!**)

- Preferred languages mentioned by visitor groups (N=10) were:

- | | |
|---------|-----------|
| Arabic | Japanese |
| Dutch | Norwegian |
| German | Spanish |
| Italian | |

* 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 17

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

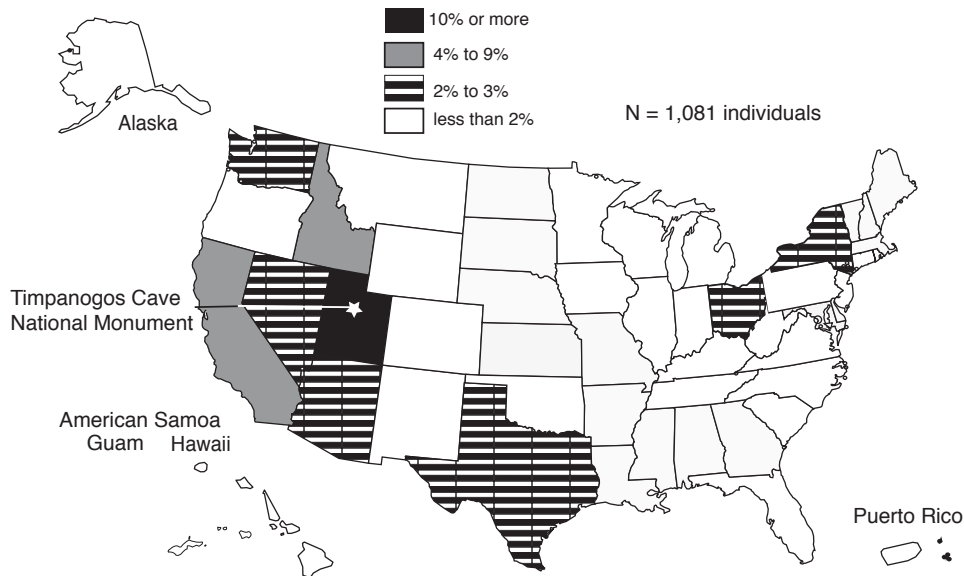
Table 4: United States visitors by state of residence*

Note: Response was limited to seven members of each personal group.

Results

- U.S. visitors comprised 96% of visitors to park (see Table 4 and Map 1).
- 64% of visitors came from Utah.
- 6% came from California.
- 4% came from Idaho.
- Smaller proportions came from 33 other states.

State	Number of visitors	Percent of U.S. visitors N=1,081 individuals	Percent of total visitors N=1,128 individuals
Utah	696	64	62
California	60	6	5
Idaho	45	4	4
Arizona	31	3	3
Ohio	29	3	3
Texas	26	2	2
Washington	22	2	2
New York	21	2	2
Nevada	16	1	1
Massachusetts	15	1	1
Colorado	12	1	1
Florida	10	1	1
Arkansas	9	1	1
Maine	7	1	1
Minnesota	6	1	1
New Hampshire	6	1	1
North Carolina	6	1	1
Oklahoma	6	1	1
Pennsylvania	6	1	1
Virginia	6	1	1
16 other states	46	4	4



Map 1: Proportions of United States visitors by state of residence

* total percentages do not equal 100 due to rounding

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

International visitors by country of residence

Question 17

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

Note: Response was limited to seven members of each personal group.

Results

- As shown in Table 5, international visitors comprised 4% of total visitation to Timpanogos Cave NM.
- 23% of international visitors came from Japan.
- 17% came from Spain.
- 13% came from Costa Rica.
- 13% came from France.
- 11% came from Canada.
- Smaller proportions came from 6 other countries.

Table 5: International visitors by country of residence*

Country	Number of visitors	Percent of international visitors N=47 individuals	Percent of total visitors N=1,128 individuals
Japan	11	23	1
Spain	8	17	1
Costa Rica	6	13	1
France	6	13	1
Canada	5	11	<1
Holland	4	9	<1
Finland	2	4	<1
Palestine	2	4	<1
Austria	1	2	<1
Germany	1	2	<1
Italy	1	2	<1

* total percentages do not equal 100 due to rounding

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

Visitors with disabilities/impairments

Question 18a

Does anyone in your group have any disabilities/impairments that affected their visit to Timpanogos Cave NM?

Results

- 6% of visitor groups had members with disabilities or impairments that affected their park experience (see Figure 4).

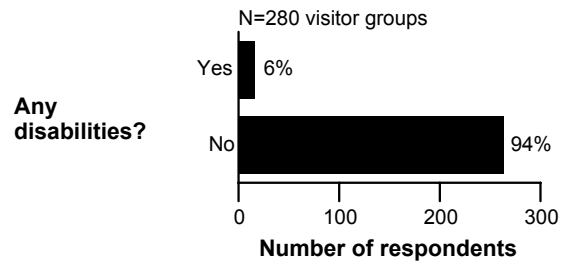


Figure 4: Visitors with disabilities/impairments

Question 18b

If YES, what kind of disability/impairment?

Results (Interpret with CAUTION!)

- As shown in Figure 5, not enough visitor groups responded to this question in order to provide reliable data.
- 26% of visitor groups had “other” types of disabilities which included:

- Asthma
- High blood pressure
- Multiple sclerosis
- Vertigo
- Did not speak English

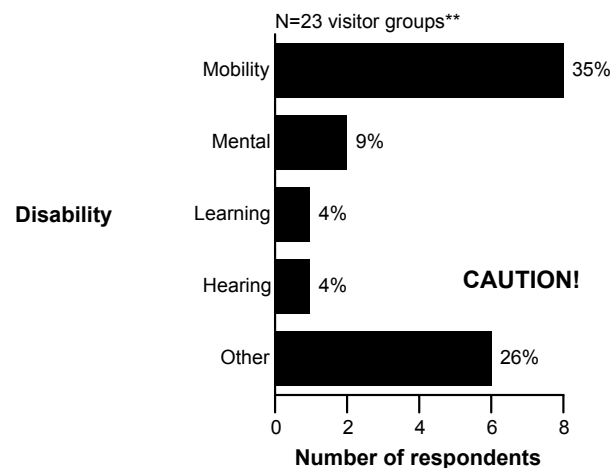


Figure 5: Visitors with disabilities/impairments

Question 18c

Because of the disability/impairment did you encounter any access or service problems during this visit to Timpanogos Cave NM?

Results (Interpret with CAUTION!)

- As shown in Figure 6, not enough visitor groups responded to this question in order to provide reliable data.

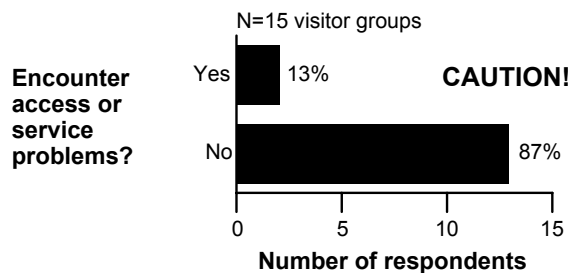


Figure 6: Visitors with disabilities/impairments

Question 18d

If YES, what were the problems?

Results (Interpret with CAUTION!)

- The access or service problem that visitors with disabilities/impairments (N=1) encountered was width of trail.

* total percentages do not equal 100 due to rounding

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

Number of visits to Timpanogos Cave NM in the past 12 months

Question 17

How many times have you visited the monument in the past 12 months (including this visit)?

Note: Response was limited to seven members of each personal group.

Results

- 88% of visitors visited Timpanogos Cave NM once in the past 12 months (see Figure 7).

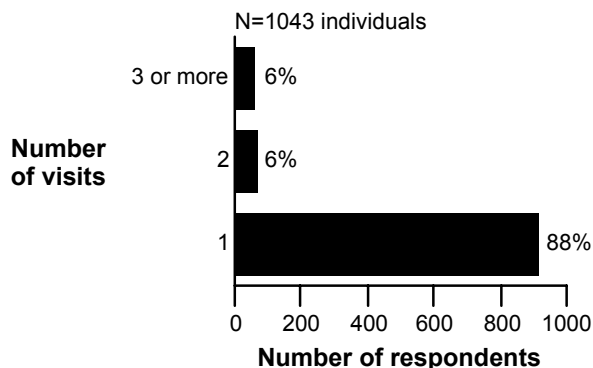


Figure 7: Number of visits to the monument in past 12 months

Number of visits to Timpanogos Cave NM in lifetime

Question 17

How many times have you visited the monument in your lifetime (including this visit)?

Note: Response was limited to seven members of each personal group.

Results

- 55% of visitors visited Timpanogos Cave NM for the first time in their lifetime (see Figure 8).
- 30% visited the park two or three times.
- 15% visited the park four or more times.

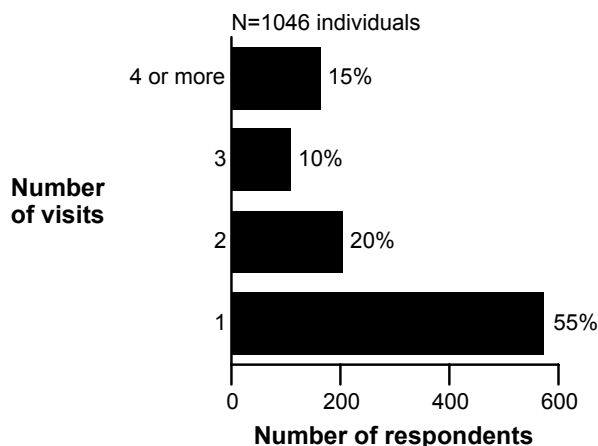


Figure 8: Number of visits to the monument in visitor lifetime

* total percentages do not equal 100 due to rounding

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

Visitor group size

Question 16a

How many people in your personal group?

Results

- Visitor group sizes ranged from one person to 40 people.
- 36% of visitor groups had six or more people (see Figure 9).
- 32% had four or five people.
- 28% had two or three people.

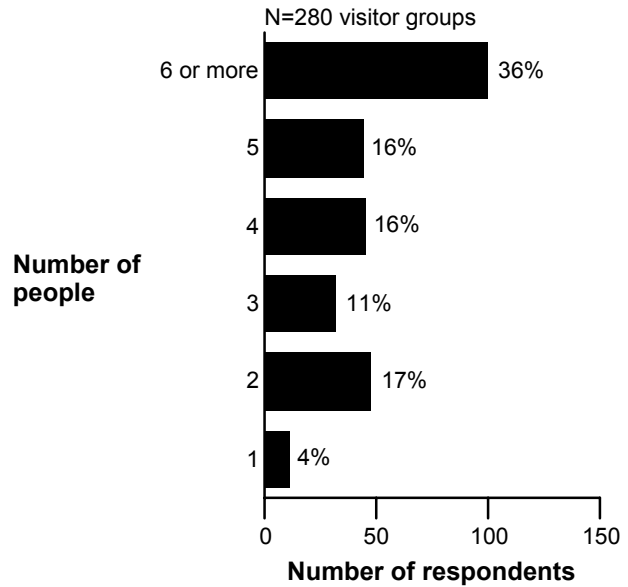


Figure 9: Visitor group size

Visitor group type

Question 14

What kind of personal group (not tour/school/business group) were you with?

Results

- 69% of visitor groups were made up of family members (see Figure 10).
- 14% were with family & friends.
- 3% were with “other” group types which included:

Church group
 Church youth group
 Date

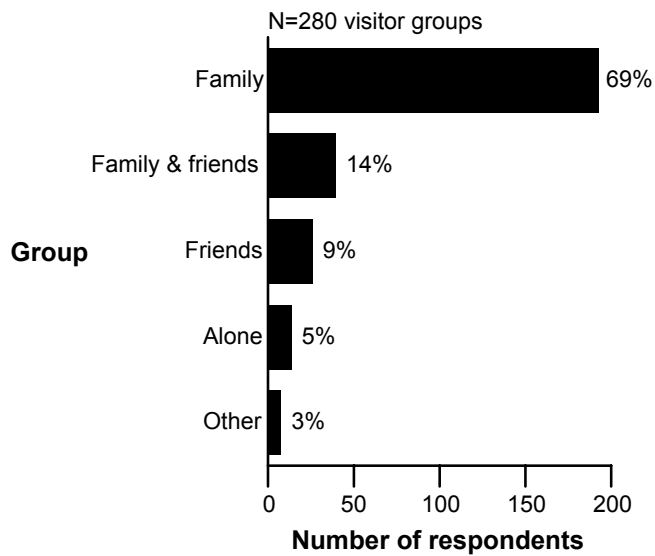


Figure 10: Visitor group type

* total percentages do not equal 100 due to rounding

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

Question 13a

Were you and your personal group with a guided tour group?

Results

- 17% of visitor groups were traveling with a guided tour group (see Figure 11).

Guided tour group

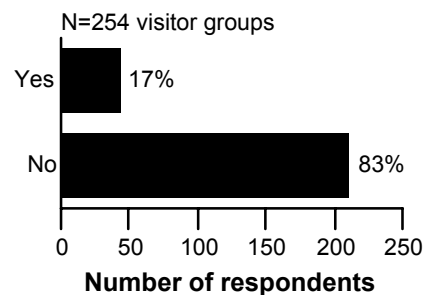


Figure 11: Visitors traveling with a guided tour group

Question 13b

Were you and your personal group with a school/educational group?

Results

- 2% of visitor groups were traveling with a school/educational group (see Figure 12).

School/educational group

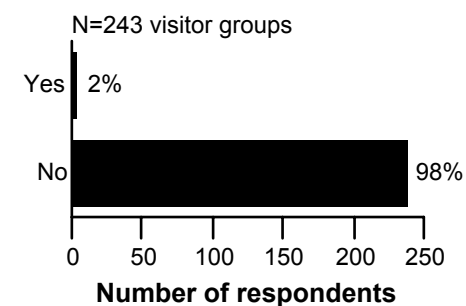


Figure 12: Visitors traveling with a school/educational group

Question 13c

Were you and your personal group with a family reunion group?

Results

- 12% of visitor groups were with a family reunion group (see Figure 13).

Family reunion group

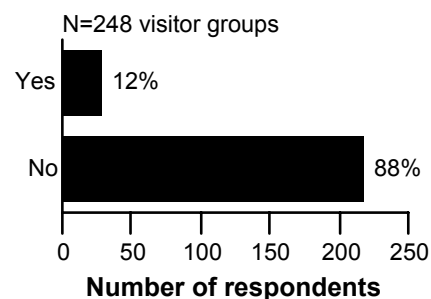


Figure 13: Visitors with a family reunion group

* total percentages do not equal 100 due to rounding

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

Question 13d

Were you and your personal group with a corporate group?

Results

- No visitor groups were traveling with a corporate group (see Figure 14).

Corporate group

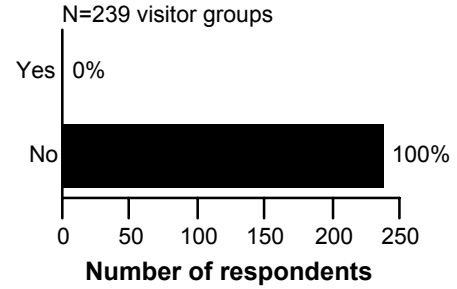


Figure 14: Visitors traveling with a corporate group

Question 13e

Were you and your personal group with a scouts/youth group?

Results

- 2% of visitor groups were traveling with a scouts/youth group (see Figure 15).

**Scouts/
youth group**

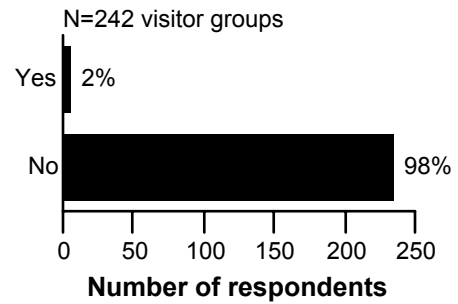


Figure 15: Visitors traveling with a scouts/youth group

Question 13f

Were you and your personal group with a church group?

Results

- 3% of visitor groups were traveling with a church group (see Figure 16).

Church group

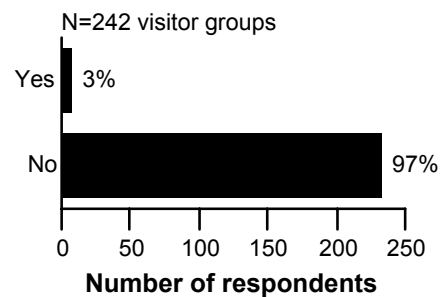


Figure 16: Visitors traveling with a church group

* total percentages do not equal 100 due to rounding

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

Information Prior to Visit

Information sources prior to visit

Question 1a

Prior to this visit, how did you and your group obtain information about Timpanogos Cave NM?

Results

- 8% of visitor groups did not obtain any information about the park prior to their visit (see Figure 17).

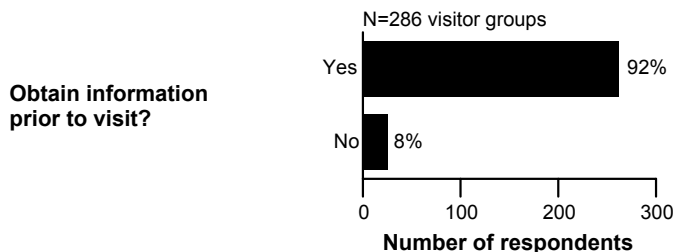


Figure 17: Visitors who obtained information about park prior to this visit

- As shown in Figure 18, of those who obtained some information prior to their visit (92%), the most common sources of information included:

- 65% Previous visits
- 48% Friends/relatives/word of mouth
- 19% Monument website
- 15% Walking/driving/biking saw signs

- 4% of visitor groups used "other" sources of information which included:

- Live in area
- BYU Geology class
- School programs
- Museum exhibit at Utah State University

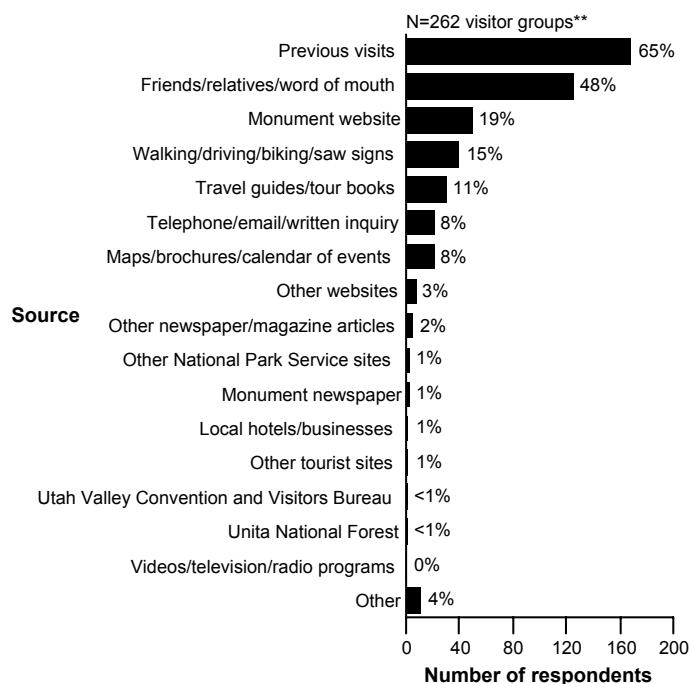


Figure 18: Sources of information used by visitor groups prior to this visit

* total percentages do not equal 100 due to rounding

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

Question 1b

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

Results

- 88% of visitor groups obtained information they needed to prepare for this trip to Timpanogos Cave NM (see Figure 19).

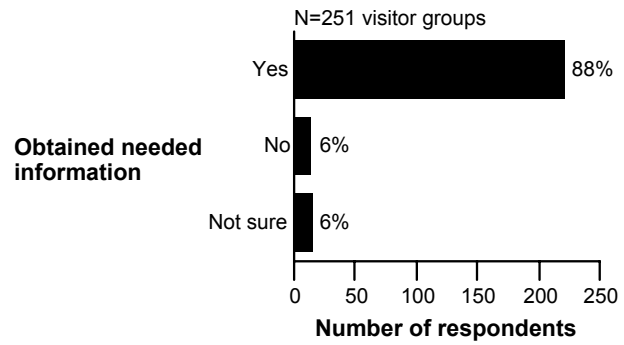


Figure 19: Visitor groups who obtained needed information prior to this visit to Timpanogos Cave NM

Question 1c

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

Results (Interpret with **CAUTION!**)

- Additional information that visitor groups (N=16) needed but was not available through these sources included:

- Hours of operation
- Tour times and fees
- Ticket/reservation requirements for tour
- Length of wait before tour
- Clothing requirements for cave
- Specific directions to the monument
- Difficulty level of hike to cave

* total percentages do not equal 100 due to rounding

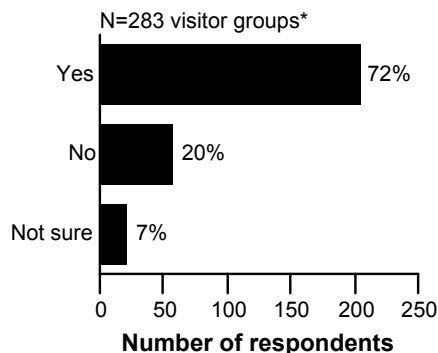
** total percentages do not equal 100 because visitors could select more than one answer

Visitor awareness of management by National Park Service

Question 2a

Prior to this visit, were you and your group aware of the difference between a state park and a national park?

Aware of difference between state and national park?



Results

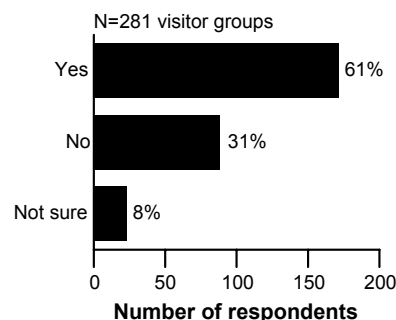
- 72% of visitor groups were aware of the difference between a state park and a national park (see Figure 20).

Figure 20: Awareness of difference between a state park and a national park

Question 2b

Prior to this visit, were you and your group aware of the difference between a national forest and a national park?

Aware of difference between national forest and national park?



Results

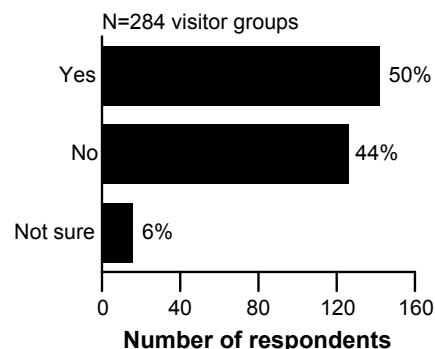
- 61% of visitor groups were aware of the difference between a national forest and a national park (see Figure 21).

Figure 21: Awareness of difference between a national forest and a national park

Question 2c

Prior to this visit, were you and your group aware that Timpanogos Cave NM is a unit of the National Park System?

Aware monument is part of NPS system?



Results

- 50% of visitor groups were aware that the monument is a unit of the National Park System (see Figure 22).

Figure 22: Awareness that Timpanogos Cave NM is a unit of the National Park System

* total percentages do not equal 100 due to rounding

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

Information During Visit

Primary reason for visiting Timpanogos Cave NM area

Question 3

On this trip, what was the primary reason that you and your group visited the Timpanogos Cave NM area (within 50 miles of monument)?

Results

- 40% of visitor groups were residents of the local area (see Figure 23).
- Of those who were not residents (60%), primary reasons for visiting the Timpanogos Cave NM area included:

34% Visit the monument (see Figure 24)

29% Visit friends/relatives in the area

- 10% of visitors had “other” primary reasons for visiting which included:

- Exercise
- Camping
- Picnicking
- Hiking the trail
- Driving through area
- Vacation home in area
- Barbershop singing in area

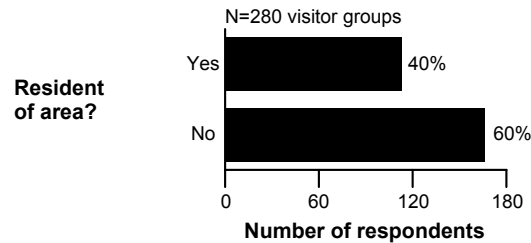


Figure 23: Resident of area (within 50 miles of monument)

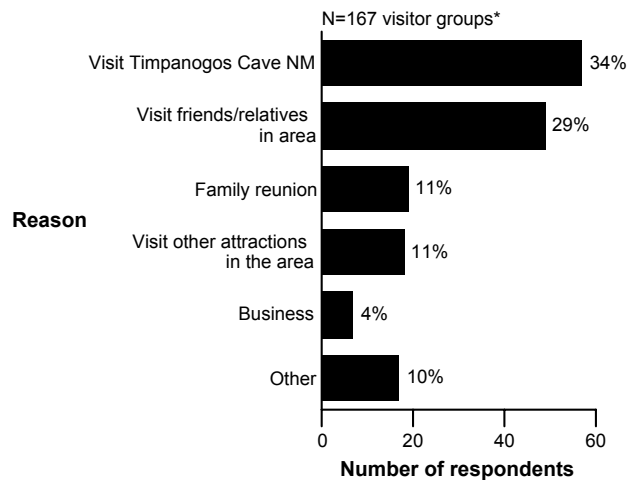


Figure 24: Primary reason for visiting the Timpanogos Cave NM area (within 50 miles of monument)

How Timpanogos Cave NM fit into travel plans

Question 5

How did this visit to Timpanogos Cave NM fit in to your travel plans?

Results

- 54% of visitor groups reported that the monument was their primary destination (see Figure 25).
- 32% reported monument was one of several destinations.

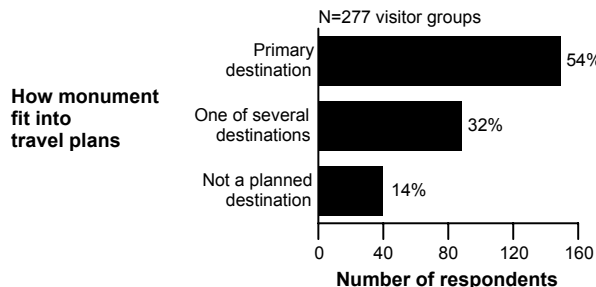


Figure 25: Monument as destination

* total percentages do not equal 100 due to rounding

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

Adequacy of directional signs

Question 4a

Were the signs directing you to Timpanogos Cave NM adequate?

Results

Signs on interstates

- 73% of visitor groups felt the directional signs on interstates were adequate (see Figure 26).

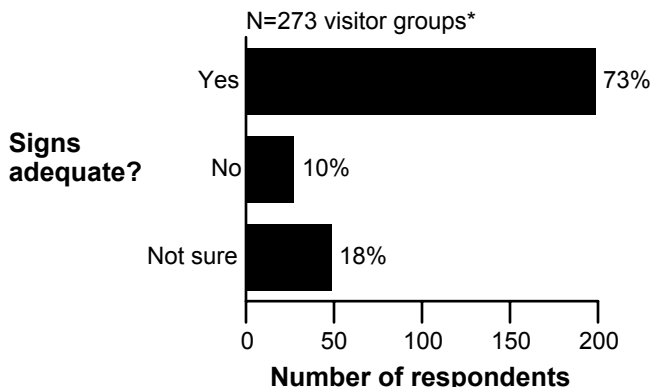


Figure 26: Adequacy of directional signs on interstates

Signs on state highways

- 75% of visitor groups felt the directional signs on state highways were adequate (see Figure 27).

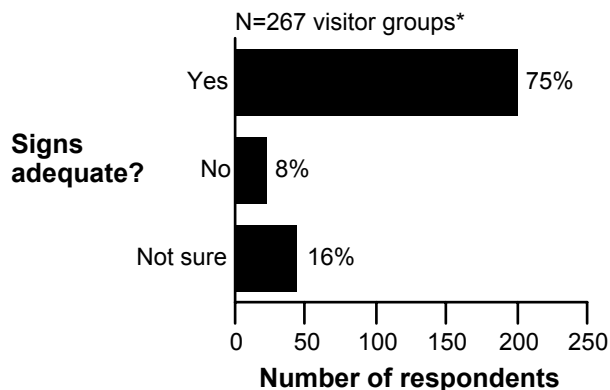


Figure 27: Adequacy of directional signs on state highways

Signs on city streets

- 61% of visitor groups felt the directional signs on city streets were adequate (see Figure 28).

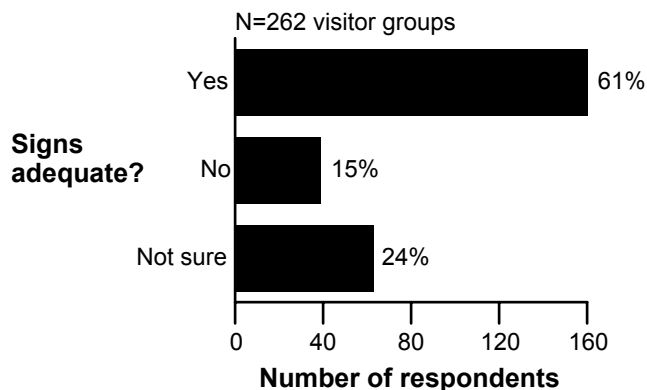


Figure 28: Adequacy of directional signs on city streets

* total percentages do not equal 100 due to rounding

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

Question 4b

Did you and your group have any difficulty locating the monument?

Results

- 6% of visitor groups had difficulty in locating the monument (see Figure 29).

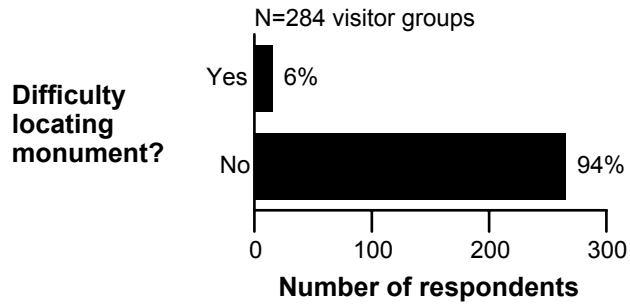


Figure 29: Difficulty locating the monument

Question 4c

If YES, please explain the problem.

Results (Interpret with **CAUTION!**)

- The difficulties visitor groups (N=15) experienced locating the monument were:

- Inaccurate directions on MapQuest and Yahoo Maps
- Lack of directional signs on I-15, on canyon roads, and in communities
- Lack of mileage to monument signs
- Monument not clearly shown on state map
- Road construction

Number of vehicles used

Question 16b

On this visit, please list the number of vehicles that you and your group used to enter the monument.

Results

- 76% of visitor groups arrived in one vehicle (see Figure 30).
- 14% arrived in two vehicles.

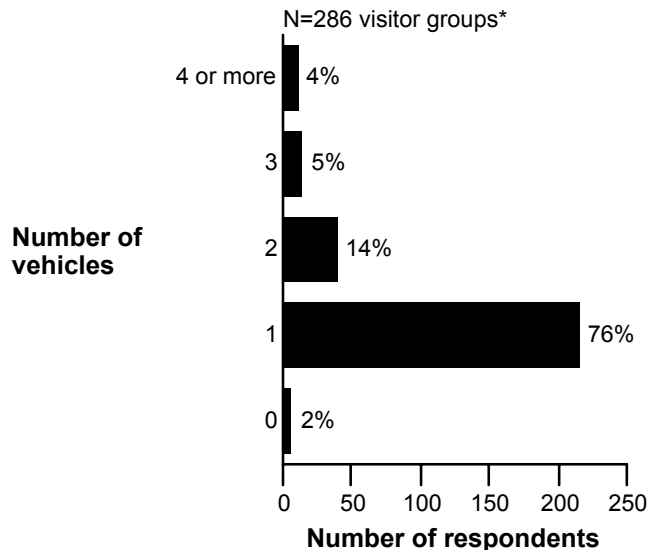


Figure 30: Number of vehicles used by visitor groups on this visit

* total percentages do not equal 100 due to rounding

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

Length of visit

Question 15

On the day you received this questionnaire, how long did you and your group spend visiting Timpanogos Cave NM?

Results

- 35% of visitor groups visited four hours (see Figure 31).
- 28% spent three hours.
- 16% spent five or more hours.

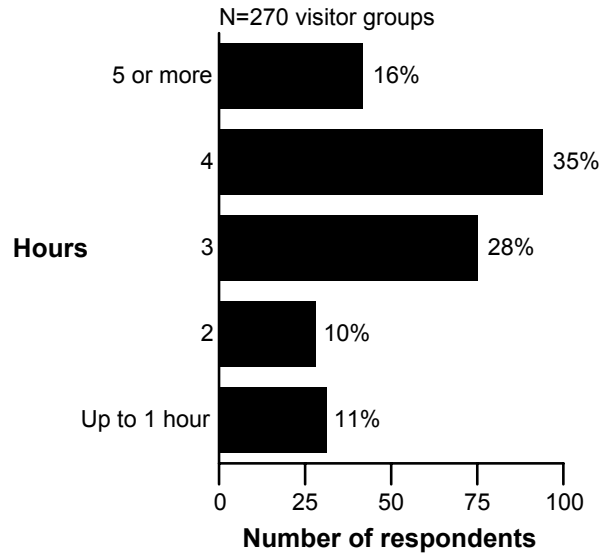


Figure 31: Number of hours visiting the park

Sites visited

Question 10

For this visit, please check all the sites that you and your group visited in Timpanogos Cave NM.

Results

- 85% of visitor groups walked/hiked the cave trail (see Figure 32).
- 84% visited the cave.
- 73% visited the visitor center.

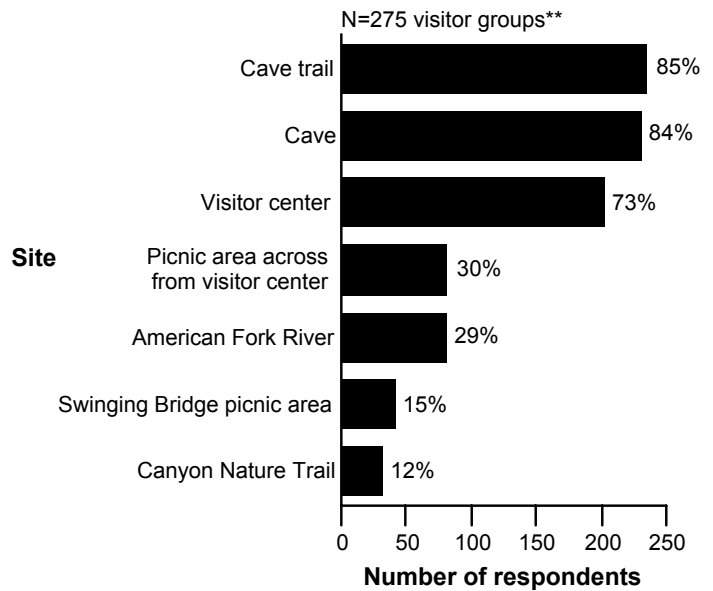


Figure 32: Sites visited

* total percentages do not equal 100 due to rounding

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

Activities

Question 6a

On the list below, please check all of the activities which you and your group participated in during this visit to Timpanogos Cave NM.

Results

- As shown in Figure 33, the most common activities on this visit included:

85% Taking cave tour

63% Hiking/walking

- The least common activity was:

1% Attending evening programs

- 3% of visitor groups listed “other” activities which included:

Camping
 Gold panning
 Throwing rocks in river
 Checking out picnic grounds

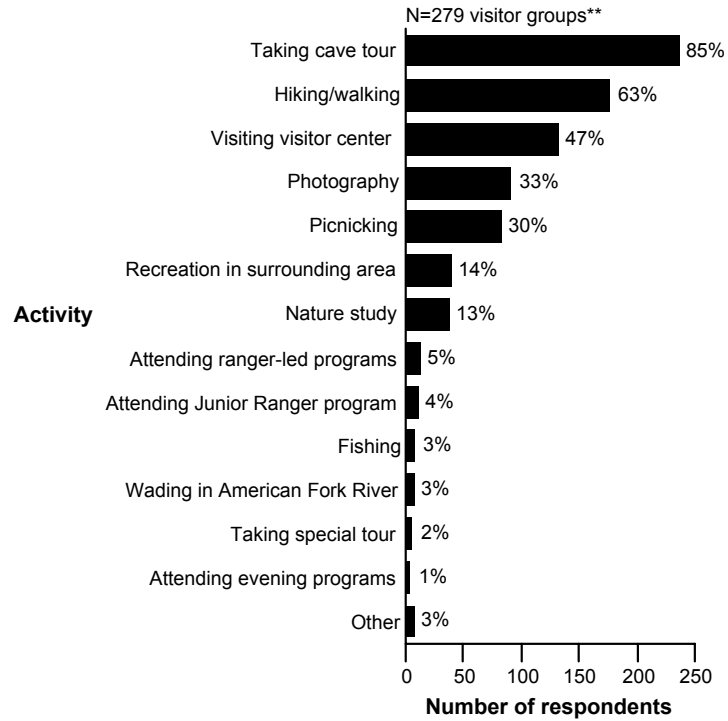


Figure 33: Visitor activities on this visit

* total percentages do not equal 100 due to rounding

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

Question 6b

Which of the above activities was the primary activity that you and your group participated in during this visit to Timpanogos Cave NM?

Results

- 77% of visitor groups indicated that taking the cave tour was their primary activity (see Figure 34).

Primary activity

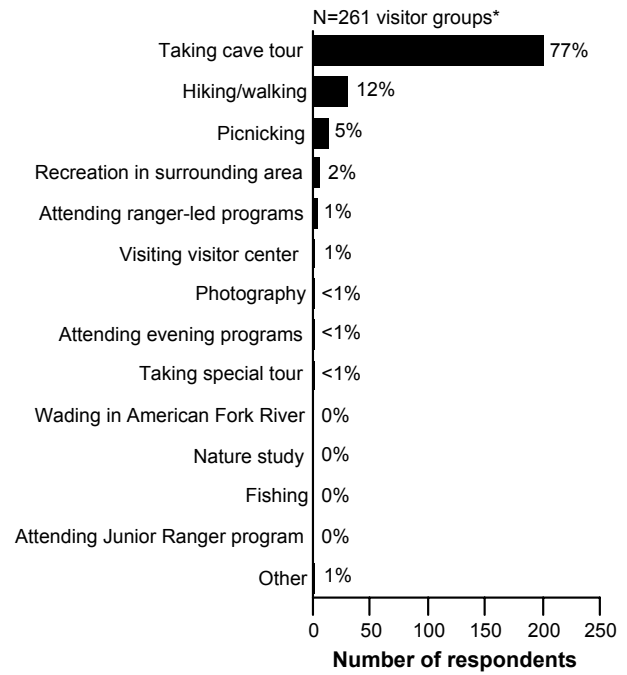


Figure 34: Primary activity

* total percentages do not equal 100 due to rounding

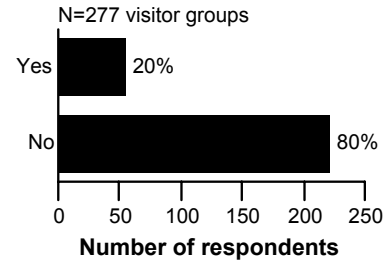
** total percentages do not equal 100 because visitors could select more than one answer

Safety concerns while visiting the monument

Question 7a

On this visit, did you and your group have any specific safety concerns while visiting Timpanogos Cave NM?

Any specific safety concerns?



Results

- 20% of visitor groups had specific safety concerns (see Figure 35).

Figure 35: Safety concerns in the monument

Question 7b

If YES, what were the concerns?

Results

- The safety issues affecting visitors' (N=58) experience included:

- Falling rocks
- Narrow walkways
- Fear of falling off edge of cliffs
- No handrails/guard rails
- Steep trail
- Lack of water
- Strenuous hike
- Snakes
- Heat

* total percentages do not equal 100 due to rounding

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

Visitor opinions about the cave tour fee

Question 8

Timpanogos Cave NM currently charges a fee (\$7/adult aged 16 years and older, \$5/junior aged 6 to 15, and \$3/child aged 3 to 5) for the **cave tour** (not the Introduction to Caving Tour). In your opinion, how appropriate are the amounts of these fees?

Results

Appropriateness of adult fee

- 71% of visitor groups felt the fee was “about right” (see Figure 36).
- 20% felt the fee was “high.”

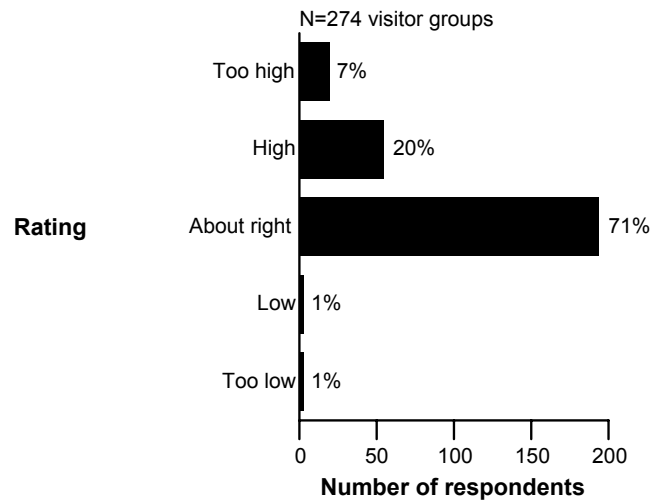


Figure 36: Appropriateness of adult fee

Appropriateness of junior fee

- 72% of visitor groups felt the fee was “about right” (see Figure 37).
- 20% felt the fee was “high.”

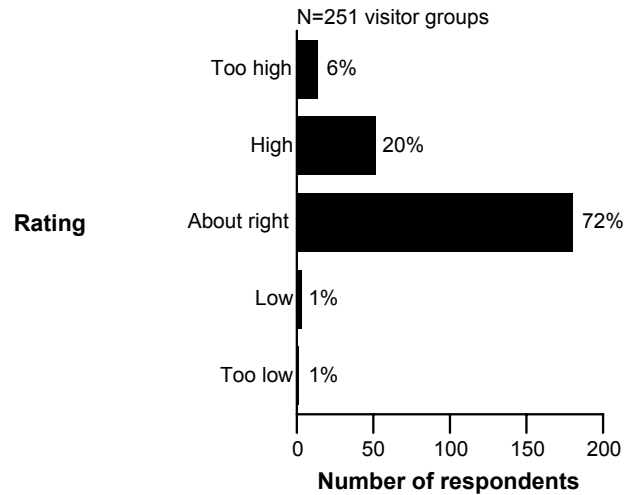


Figure 37: Appropriateness of junior fee

* total percentages do not equal 100 due to rounding

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

Appropriateness of child fee

- 71% of visitor groups felt the fee was “about right” (see Figure 38).
- 16% felt the fee was “high.”

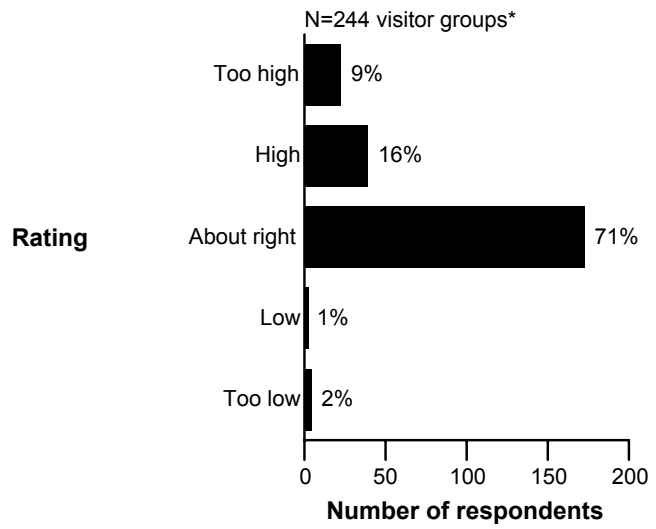


Figure 38: Appropriateness of child fee

* total percentages do not equal 100 due to rounding

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

Participation in cave tour and value of fee paid for the tour

Question 9a

On this visit, did you and your group take the cave tour?

Results

- 84% of visitor groups took the cave tour (see Figure 39).

Participate in cave tour?

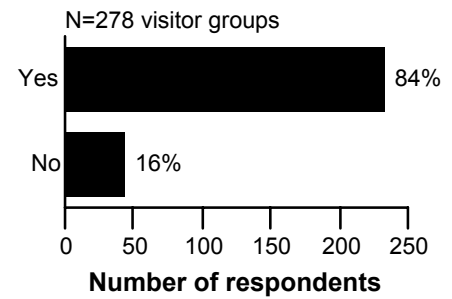


Figure 39: Participation in cave tour

Question 9b

If YES, please rate the value received for the fee paid for the tour.

Results

- 81% of visitor groups felt the value of the fee paid was “very good” or “good” (see Figure 40).
- 1% felt the value was “very poor” or “poor.”

Rating

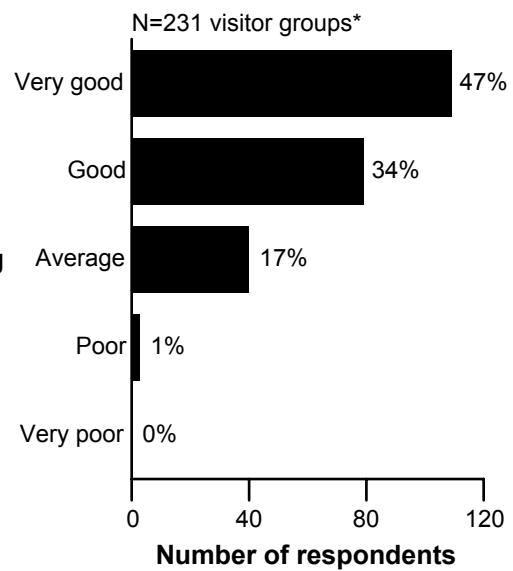


Figure 40: Value for fee paid for cave tour

* total percentages do not equal 100 due to rounding

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

Perceptions of crowding during cave tour

Question 9c
How many people were in your cave tour?

- Results
- 27% of visitors groups had 1-5 people in their tour (see Figure 41).
 - 27% had 16-20 people in their tour.
 - 23% had 11-15 people in their tour.

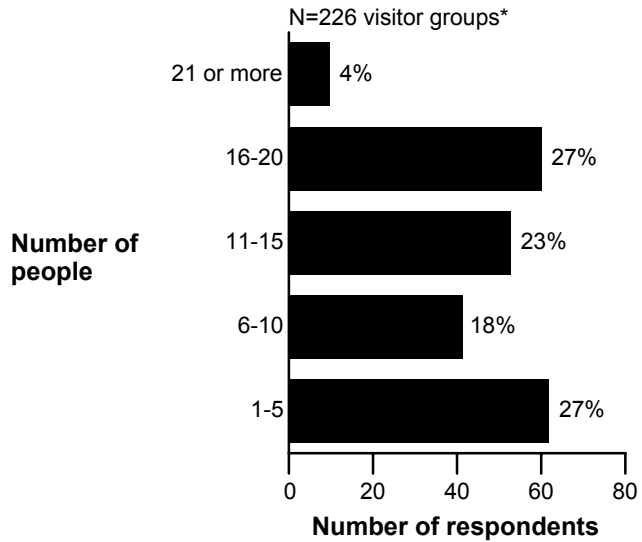


Figure 41: Number of people in cave tour

Question 9d
How crowded did you and your group feel during your cave tour?

- Results
- 44% of visitor groups felt “neither crowded nor uncrowded” during their tour (see Figure 42).
 - 29% felt “somewhat crowded.”
 - 19% felt “extremely crowded.”

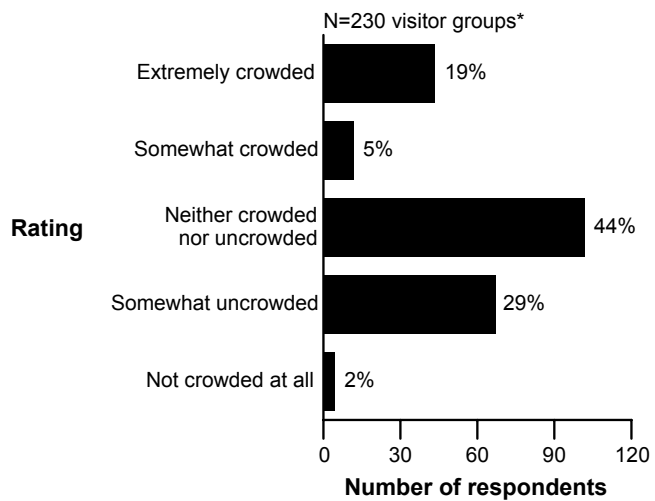


Figure 42: Perceptions of crowding during cave tour

* total percentages do not equal 100 due to rounding

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

Question 9e

What do you and your group think is the maximum acceptable number of people in each cave tour group before it comes too crowded?

Results

- 66% of visitor groups felt there was an acceptable maximum number of people for each cave tour (see Figure 43).
- 40% felt the acceptable maximum number of people for each cave tour was 16-20 people (see Figure 44).
- 32% felt the acceptable maximum number of people was 11-15 people.
- 21% felt the acceptable maximum number of people was 6-10 people.
- The minimum number of people mentioned was five.

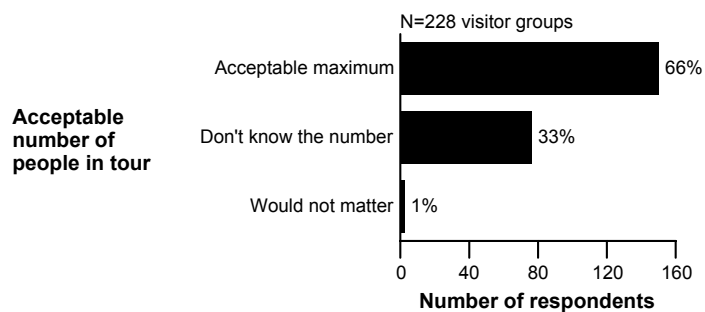


Figure 43: Maximum acceptable number of people on cave tour before it becomes too crowded

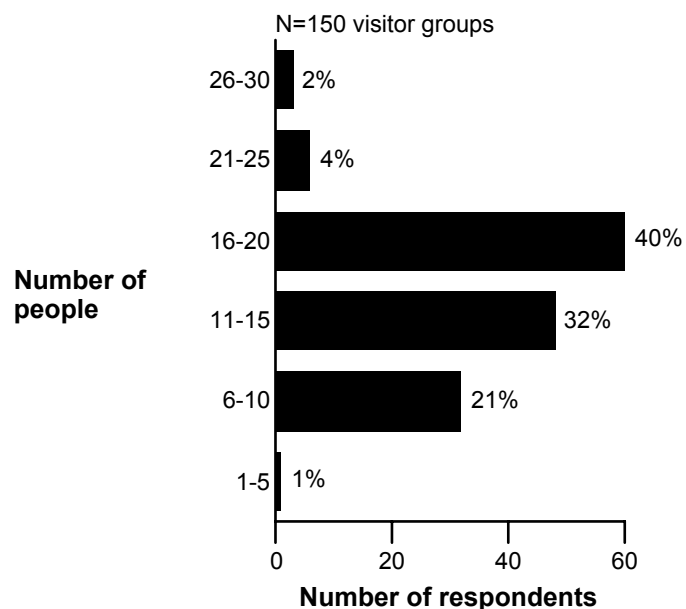


Figure 44: Maximum acceptable number of people on cave tour

* total percentages do not equal 100 due to rounding

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

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

Information services and facilities used

Question 11a

Please check all of the information services and facilities that you and your group used during this visit to Timpanogos Cave NM.

Results

- As shown in Figure 45, the most used information services/facilities included:

85% Cave tour

56% Monument brochure/map

51% Trailside interpretive signs

- The least used services/facilities included:

3% Special tour (Introduction to Caving Tour)

2% Evening programs

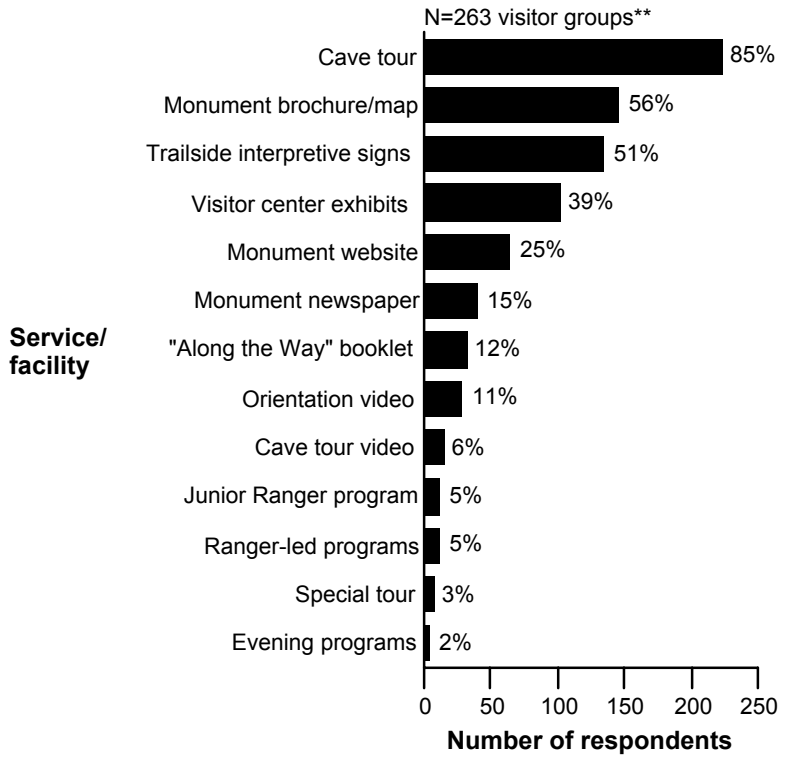


Figure 45: Visitor information services and facilities used

* total percentages do not equal 100 due to rounding

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

Importance ratings of information services and facilities

Question 11b

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

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

Results

- Figure 46 shows the combined proportions of “extremely important” and “very important” ratings for all services and facilities that were rated by enough visitor groups (N≥30).
- The services/facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:

- 95% Cave tour
- 67% Monument website
- 53% Monument brochure/map

- Figures 47 to 59 show the importance ratings for each information service and facility.
- The service/facility receiving the highest “not important” rating was:

- 15% Monument newspaper
“Timpanogos Reflections”

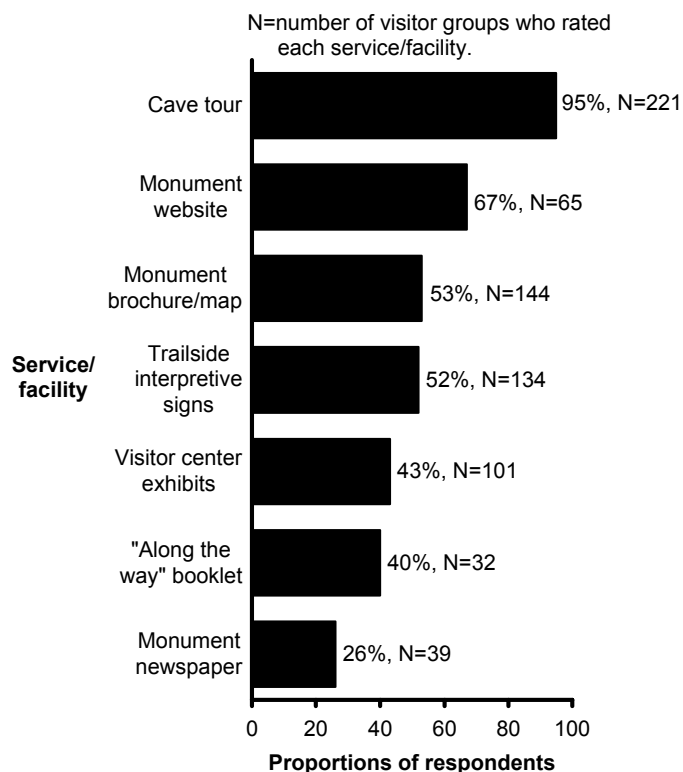


Figure 46: Combined proportions of “extremely important” and “very important” ratings for information services and facilities

* total percentages do not equal 100 due to rounding

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

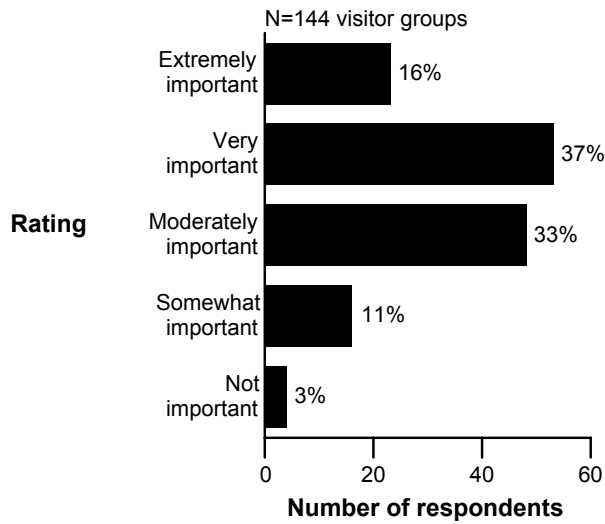


Figure 47: Importance of monument brochure/map

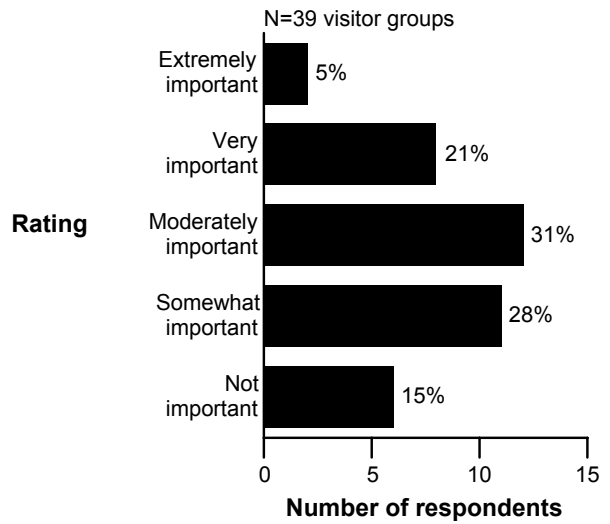


Figure 48: Importance of monument newspaper "Timpanogos Reflections"

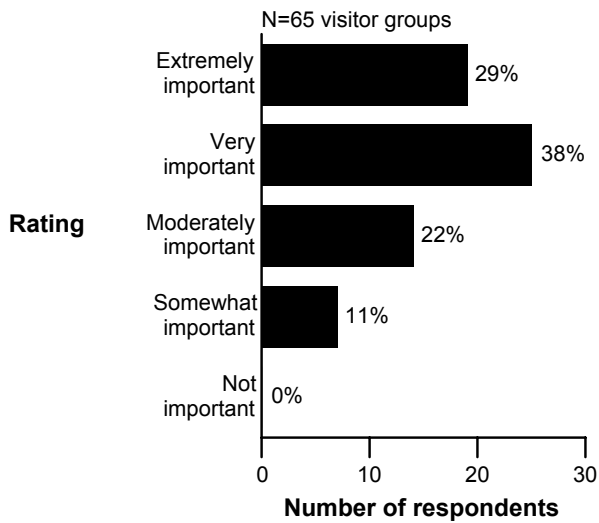


Figure 49: Importance of monument website (used before/during visit)

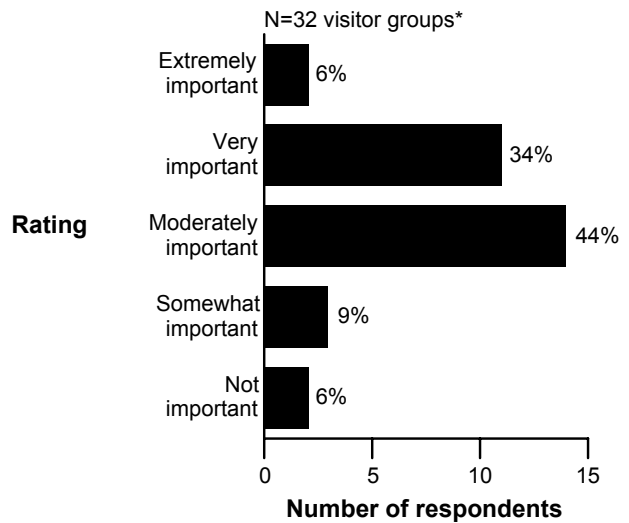


Figure 50: Importance of "Along the Way" booklet

* total percentages do not equal 100 due to rounding

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

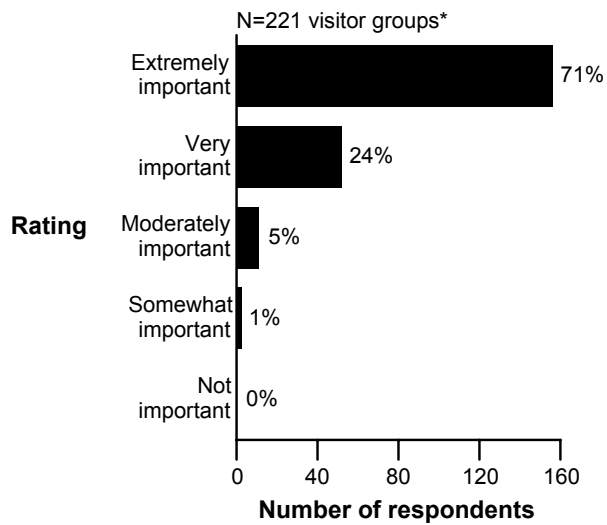


Figure 51: Importance of cave tour

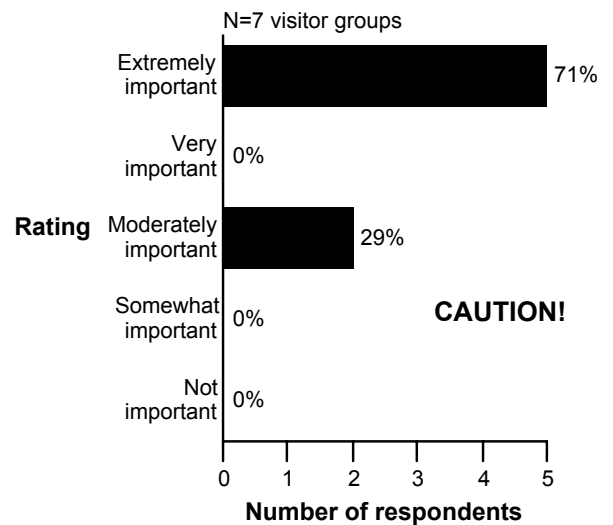


Figure 52: Importance of special tour (Introduction to Caving Tour)

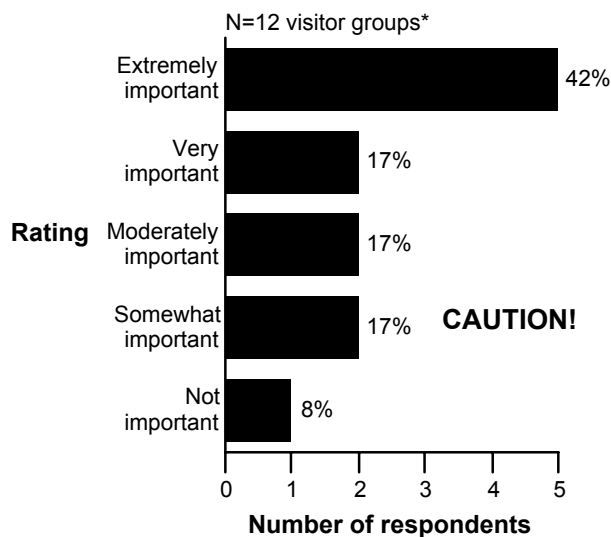


Figure 53: Importance of ranger-led programs (other than cave tour)

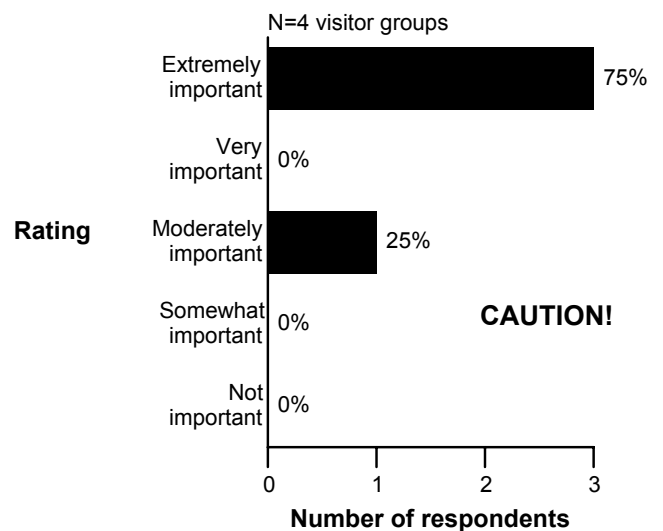


Figure 54: Importance of evening programs

* total percentages do not equal 100 due to rounding

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

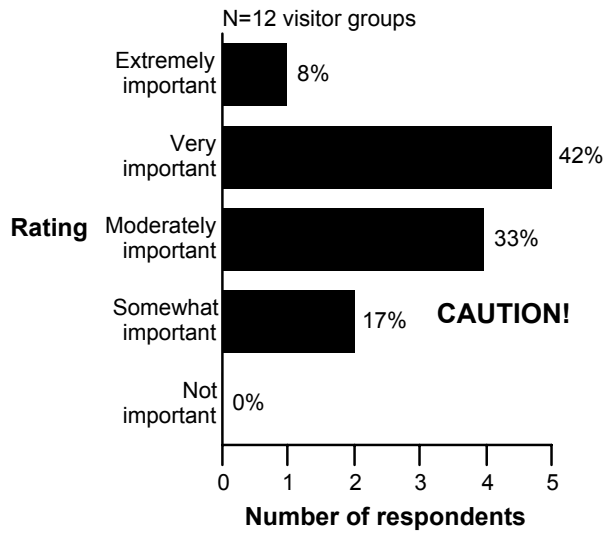


Figure 55: Importance of Junior Ranger program

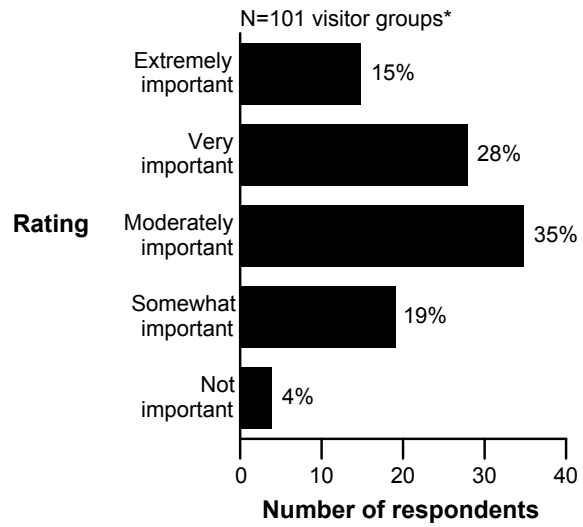


Figure 56: Importance of visitor center exhibits

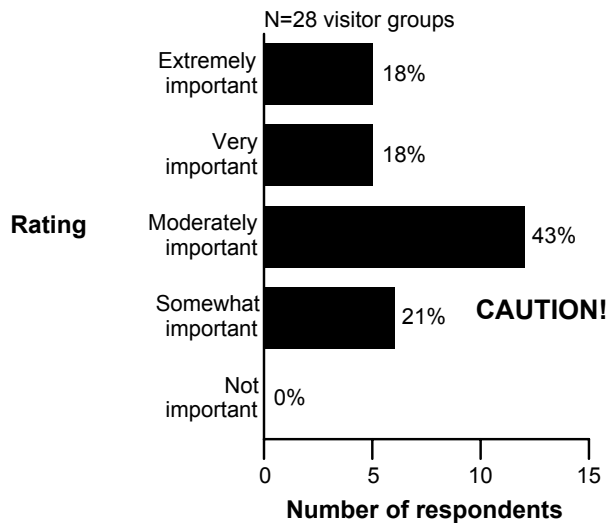


Figure 57: Importance of orientation video (22 minutes)

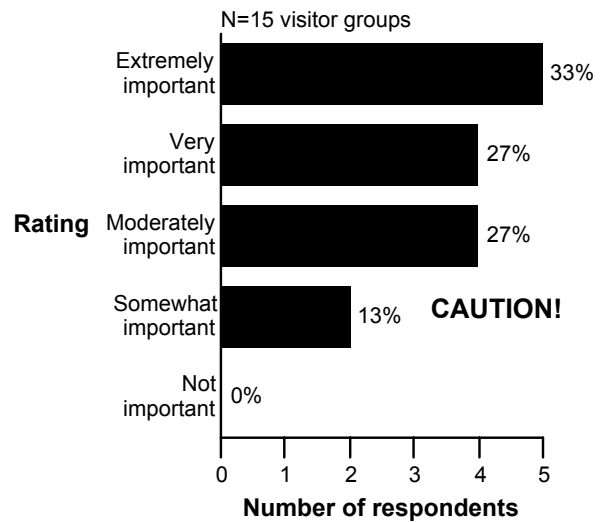


Figure 58: Importance of cave tour video (45 minutes)

* total percentages do not equal 100 due to rounding

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

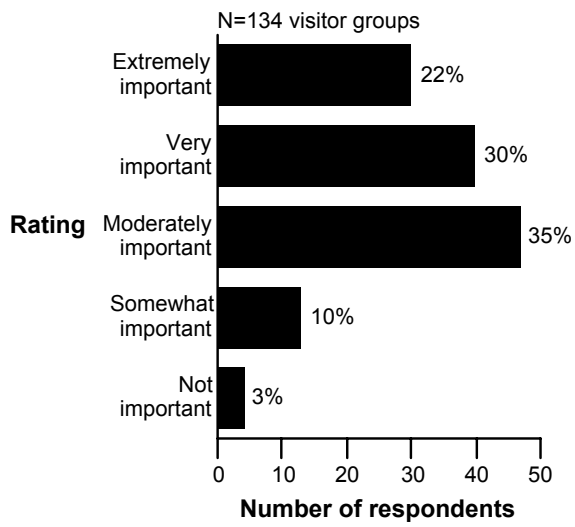


Figure 59: Importance of trailside interpretive signs

* total percentages do not equal 100 due to rounding

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

Quality ratings of information services and facilities

Question 11c

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

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

Results

- Figure 60 shows the combined proportions of “very good” and “good” quality ratings for services and facilities that were rated by enough visitor groups (N≥30).
- The services/facilities that received the highest combined proportions of “very good” and “good” quality ratings were:

- 90% Cave tour
- 89% Monument brochure/map
- 84% “Along the Way” booklet

- Figures 61 to 73 show the quality ratings for each information service and facility.
- The service/facility receiving the highest “very poor” quality rating was:

- 3% “Along the Way” booklet

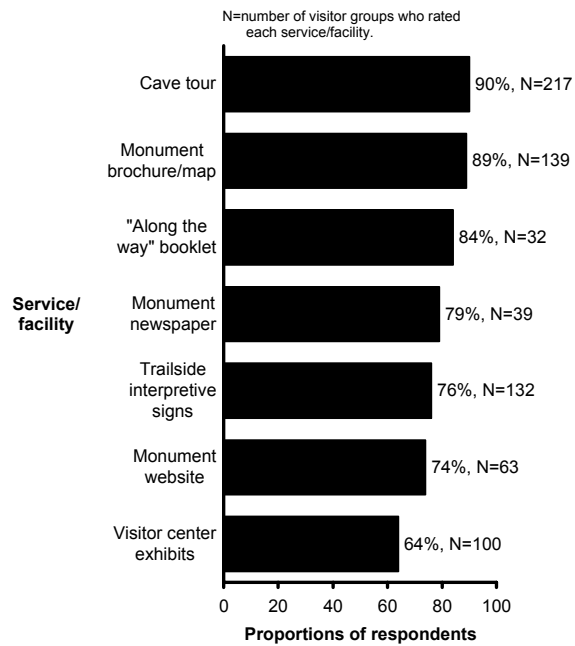


Figure 60: Combined proportions of “very good” and “good” quality ratings for information services and facilities

* total percentages do not equal 100 due to rounding

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

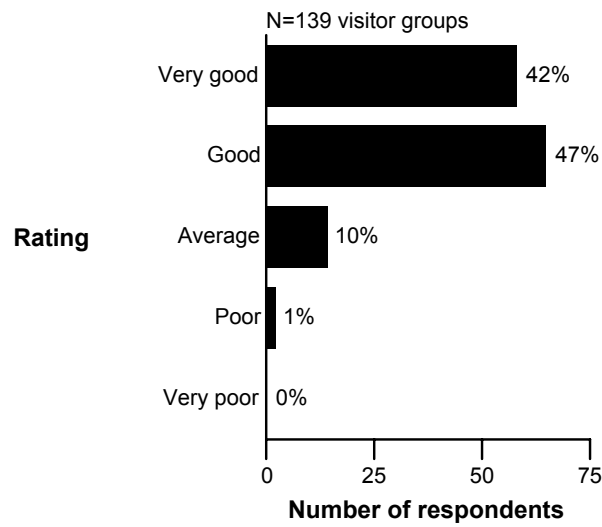


Figure 61: Quality of monument brochure/map

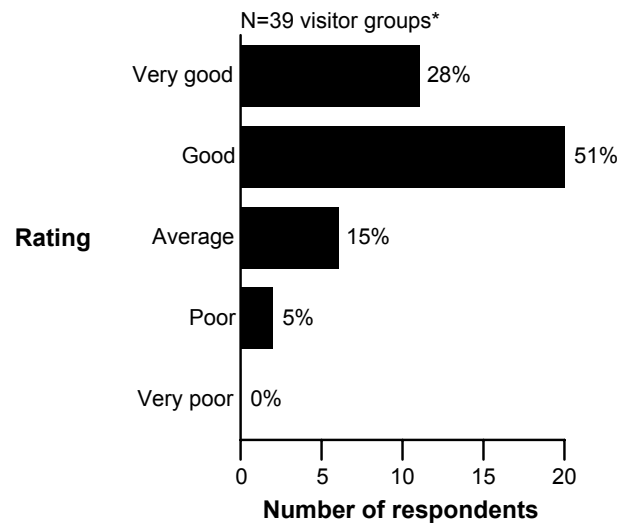


Figure 62: Quality of monument newspaper "Timpanogos Reflections"

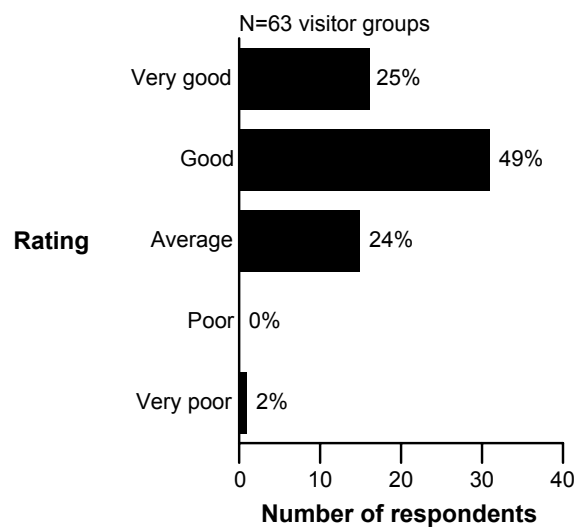


Figure 63: Quality of monument website (used before/during visit)

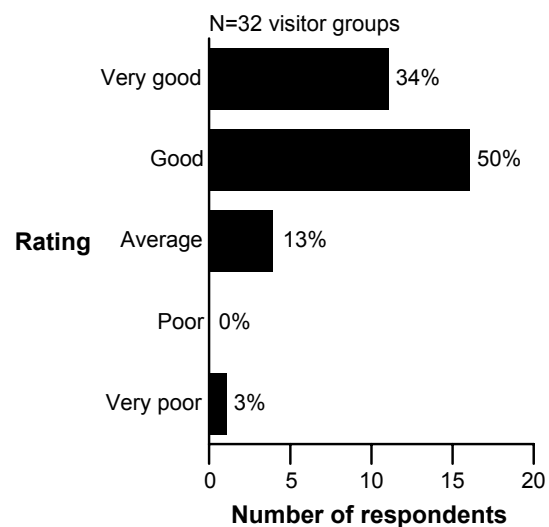


Figure 64: Quality of "Along the Way" booklet

* total percentages do not equal 100 due to rounding

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

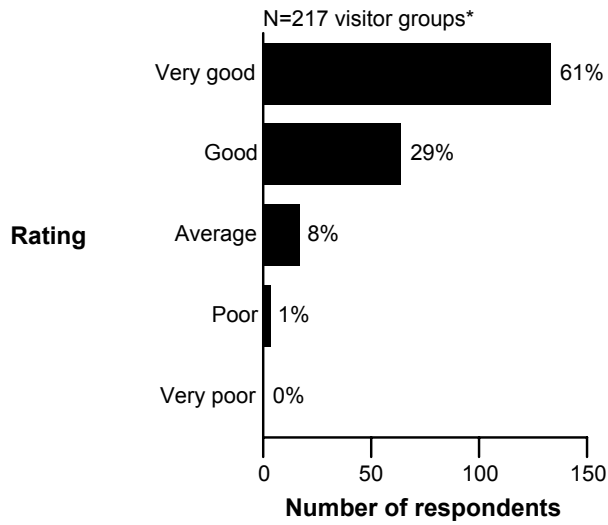


Figure 65: Quality of cave tour

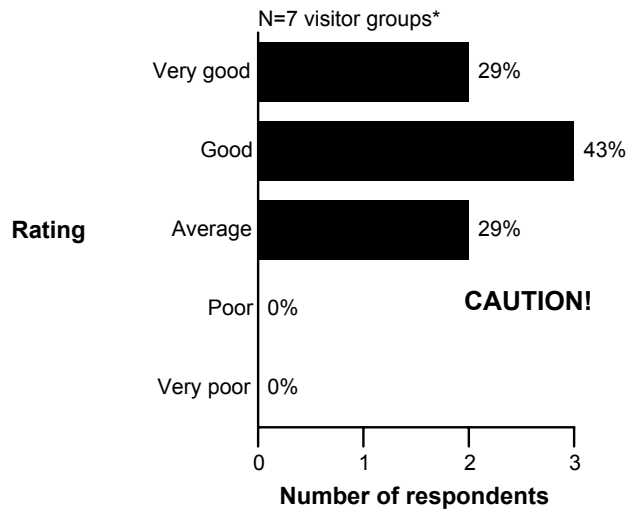


Figure 66: Quality of special tour (Introduction to Caving Tour)

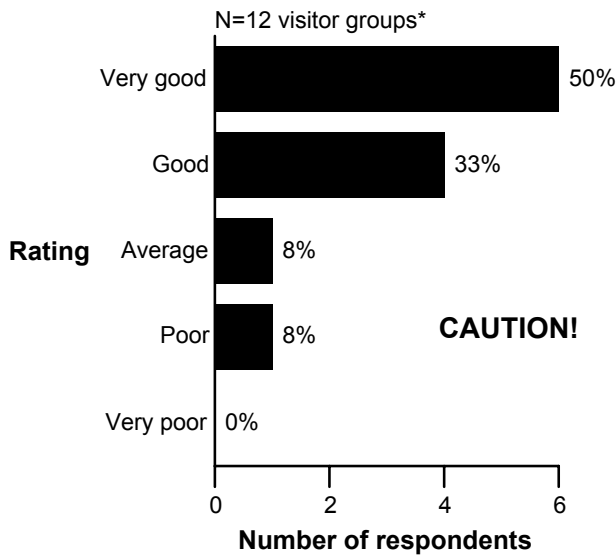


Figure 67: Quality of ranger-led programs (other than cave tour)

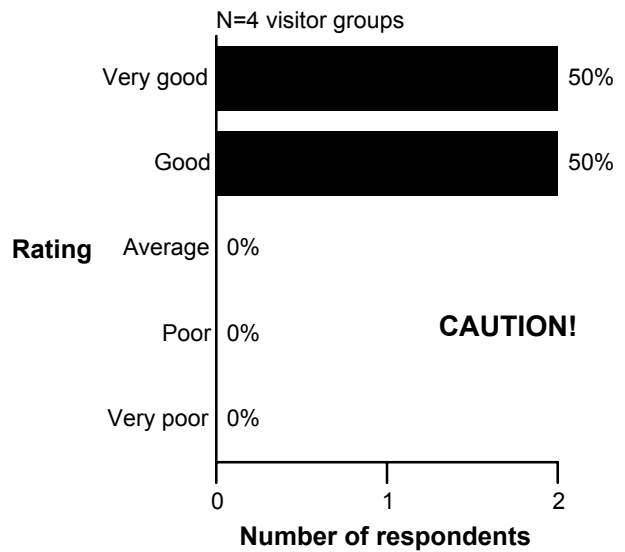


Figure 68: Quality of evening programs

* total percentages do not equal 100 due to rounding

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

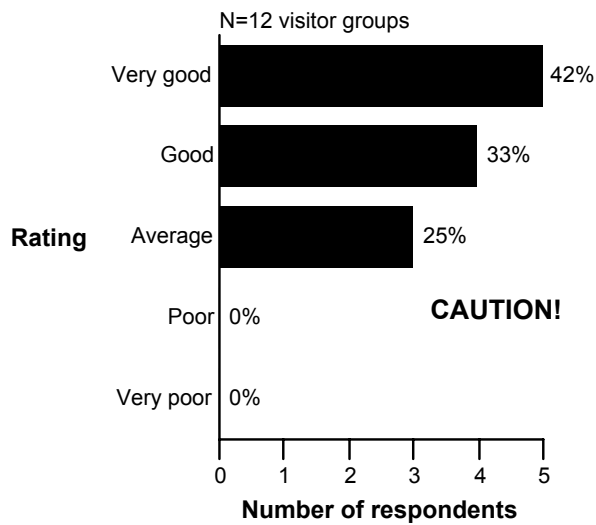


Figure 69: Quality of Junior Ranger program

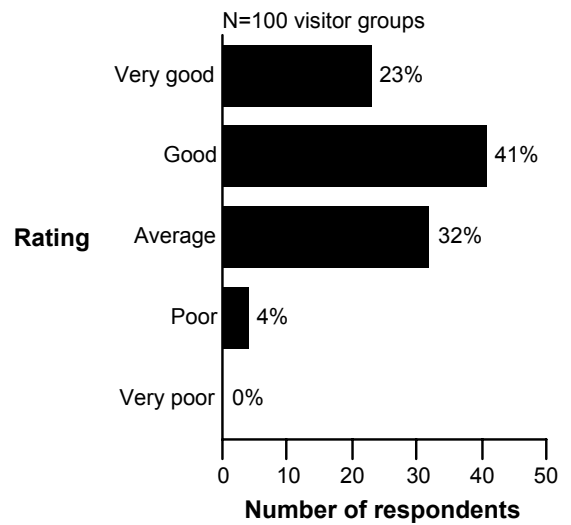


Figure 70: Quality of visitor center exhibits

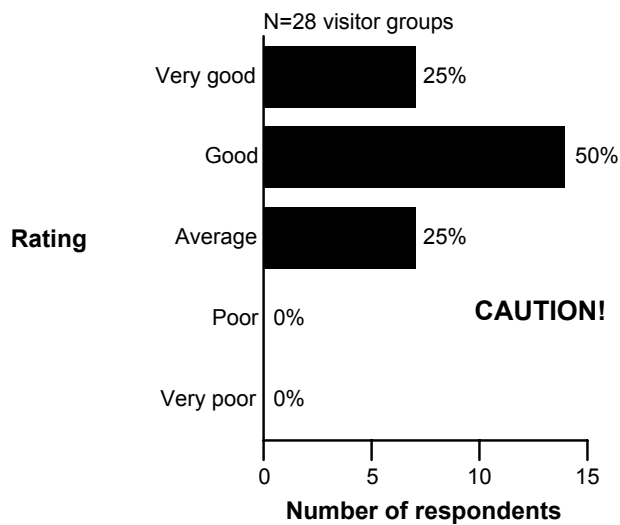


Figure 71: Quality of orientation video (22 minutes)

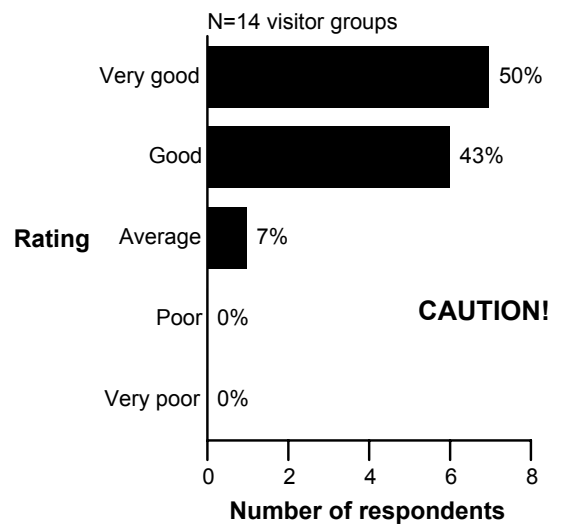


Figure 72: Quality of cave tour video (45 minutes)

* total percentages do not equal 100 due to rounding

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

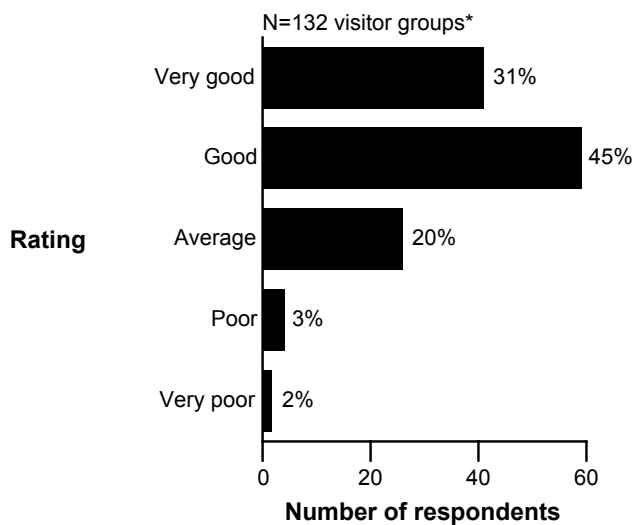


Figure 73: Quality of trailside interpretive signs

* total percentages do not equal 100 due to rounding

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

Means of importance and quality scores

- Figures 74 and 75 show the mean scores of importance and quality ratings for all information services and facilities that were rated by enough visitor groups (N≥30).
- All information services and facilities were rated above average in importance and quality with the exception of the monument newspaper “Timpanogos Reflections” which rated slightly below average in importance.

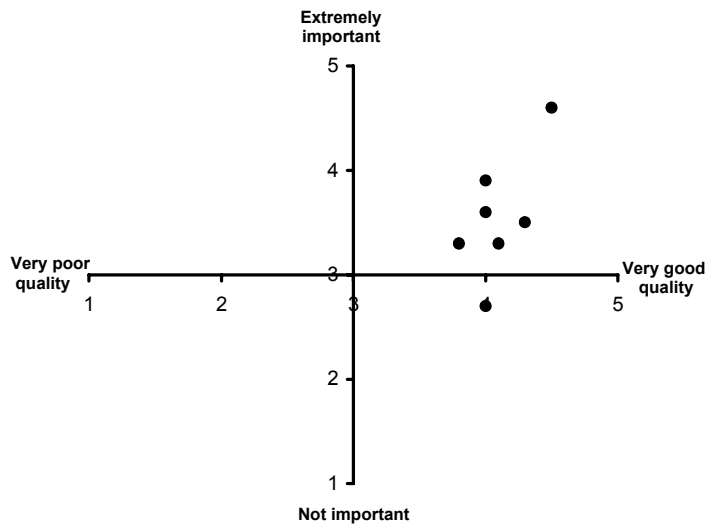


Figure 74: Mean scores of importance and quality ratings for information services and facilities

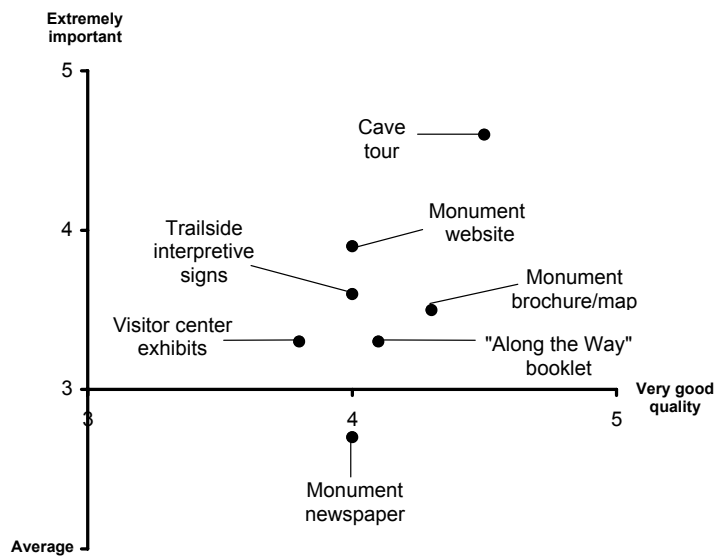


Figure 75: Detail of Figure 74

* total percentages do not equal 100 due to rounding

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

Visitor services and facilities used

Question 12a

Please check all of the visitor services and facilities that you or your group used during this visit to Timpanogos Cave NM.

Results

- As shown in Figure 76, the most used visitor services and facilities included:

- 82% Parking areas
- 81% Visitor center restrooms
- 81% Trail to cave

- The least used service and facility was:

- 3% Access for disabled persons

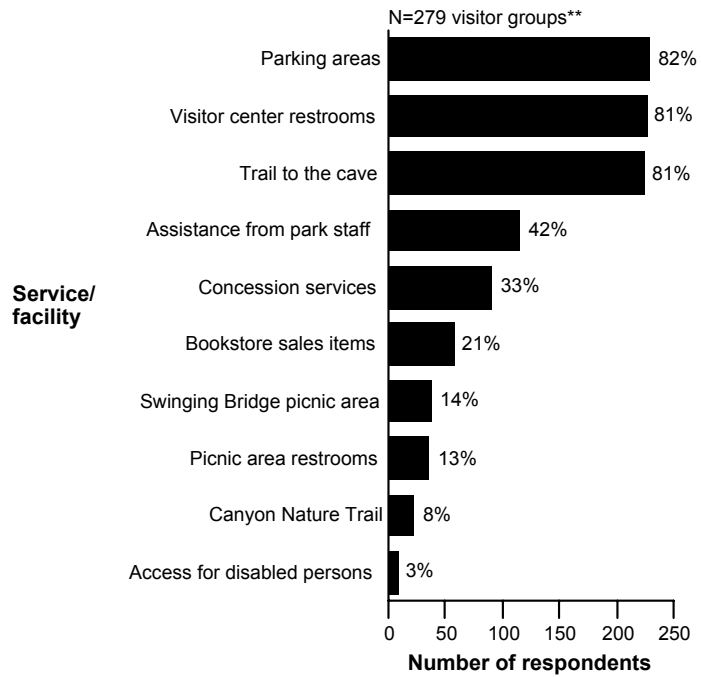


Figure 76: Visitor services and facilities used

* total percentages do not equal 100 due to rounding

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

Importance ratings of visitor services and facilities

Question 12b

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

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

Results

- Figure 77 shows the combined proportions of “extremely important” and “very important” ratings for all services and facilities that were rated by enough visitor groups (N≥30).
- The services/facilities receiving the highest combined proportions of “extremely important” and “very important” ratings were:
 - 97% Trail to cave
 - 96% Visitor center restrooms
 - 93% Parking areas
- Figures 78 to 87 show the importance ratings for each visitor service and facility.
- The services/facilities receiving the highest “not important” ratings were:
 - 3% Concession services
 - 3% Swinging Bridge picnic area

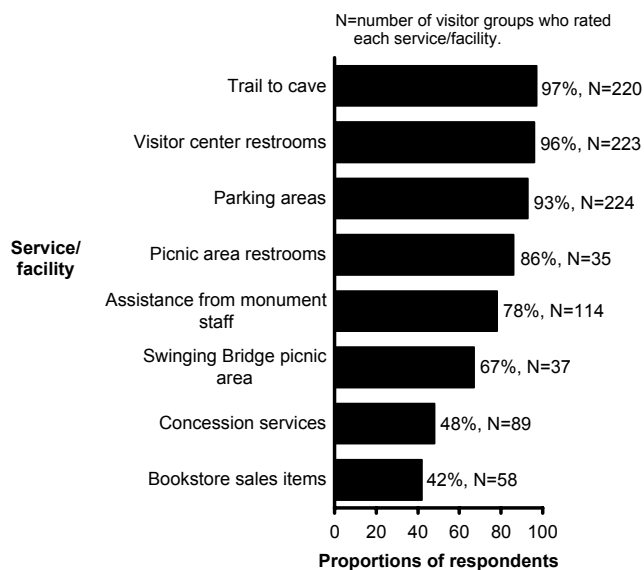


Figure 77: Combined proportions of “extremely important” and “very important” ratings for visitor services and facilities

* total percentages do not equal 100 due to rounding

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

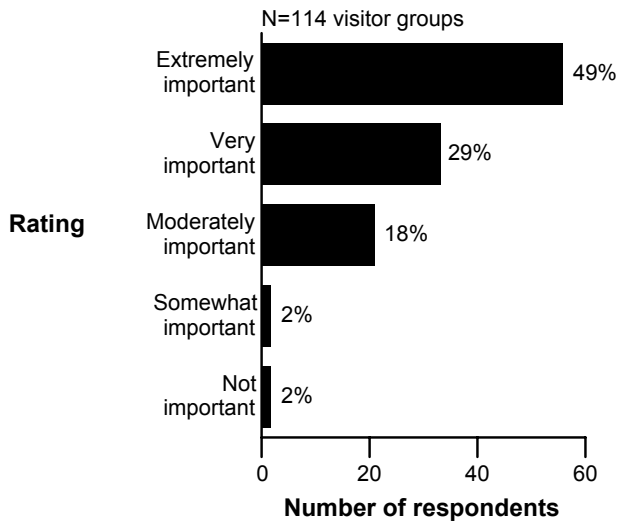


Figure 78: Importance of assistance from monument staff

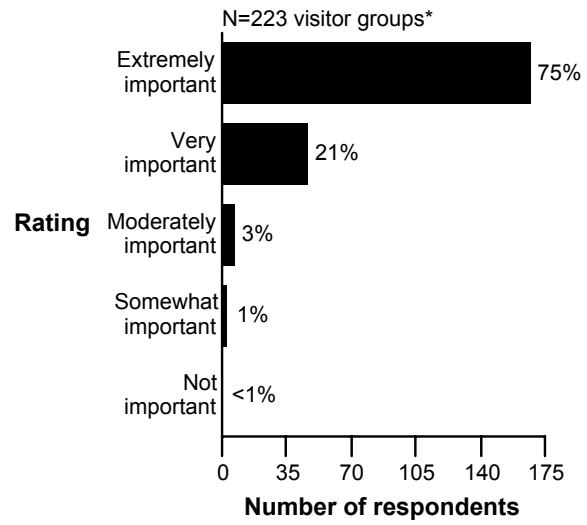


Figure 79: Importance of visitor center restrooms

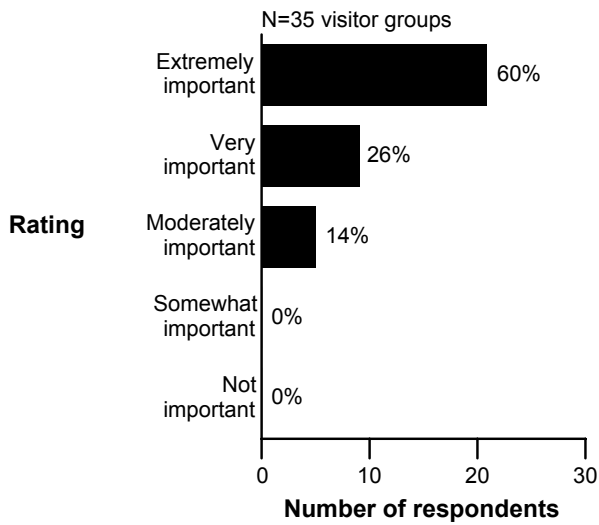


Figure 80: Importance of picnic area restrooms

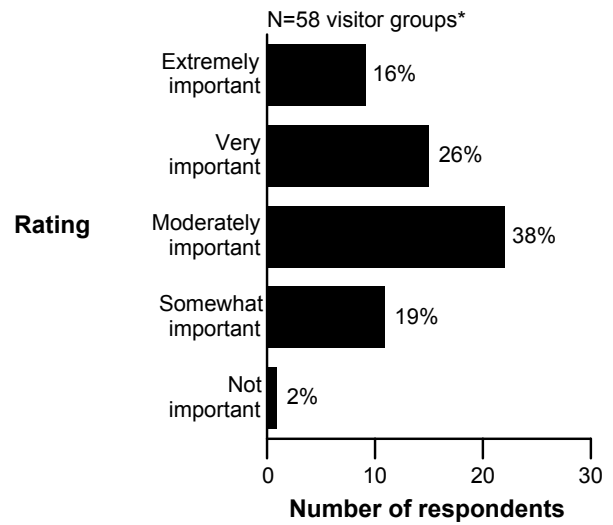


Figure 81: Importance of bookstore sales items (books/maps/posters)

* total percentages do not equal 100 due to rounding

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

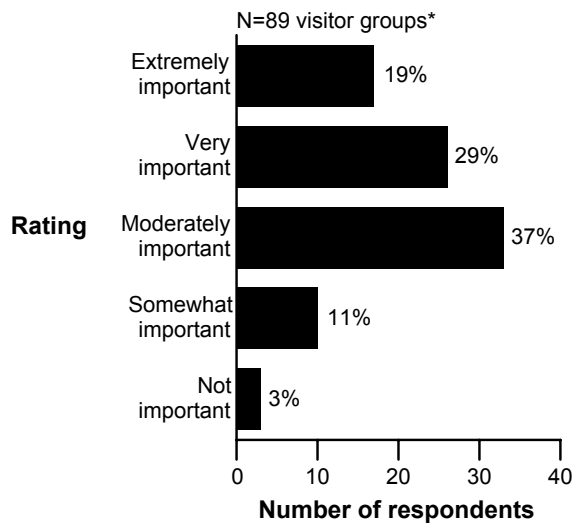


Figure 82: Importance of concession services (snack bar, gift shop)

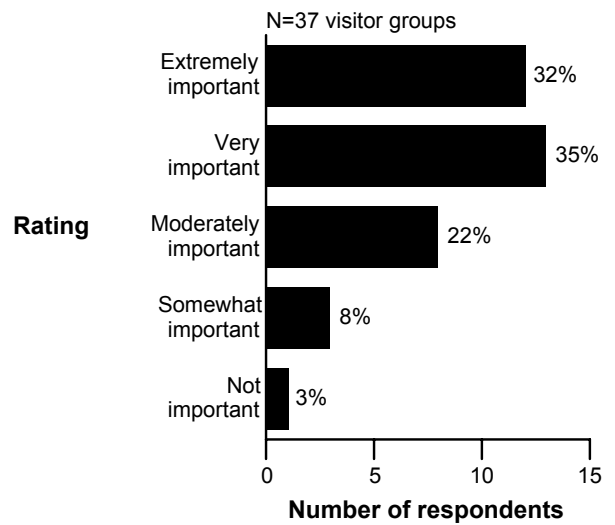


Figure 83: Importance of Swinging Bridge picnic area

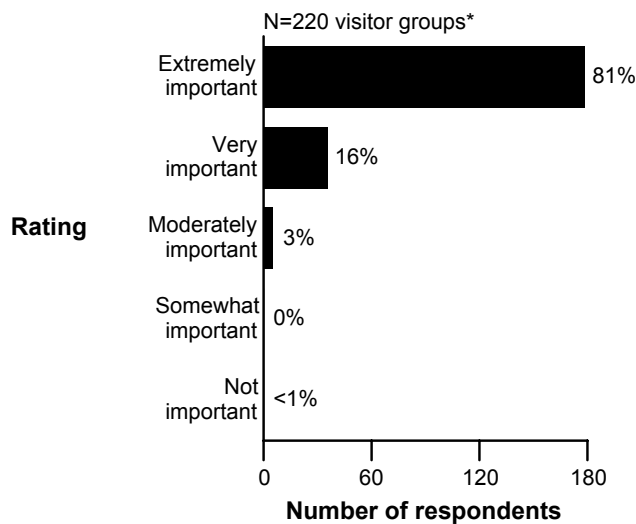


Figure 84: Importance of trail to cave

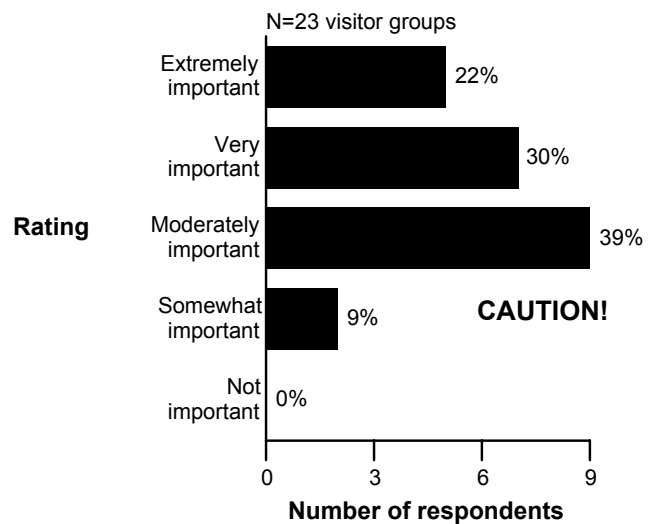


Figure 85: Importance of Canyon Nature Trail

* total percentages do not equal 100 due to rounding

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

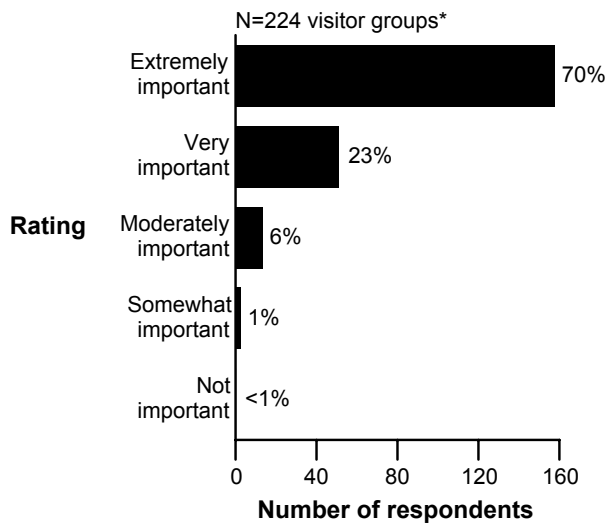


Figure 86: Importance of parking areas

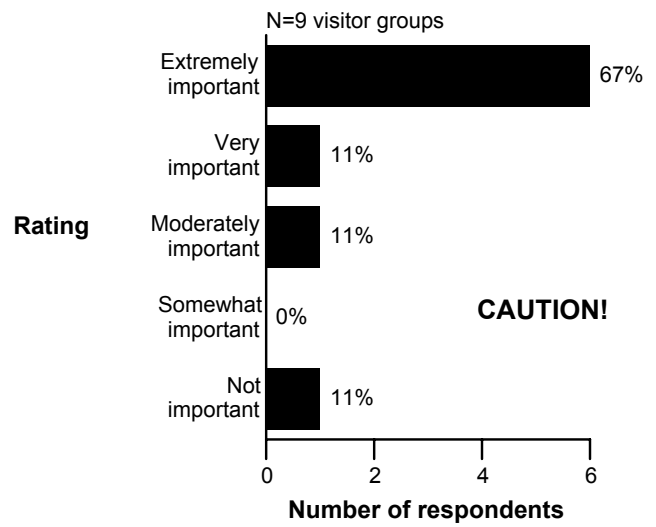


Figure 87: Importance of access for disabled persons

* total percentages do not equal 100 due to rounding

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

Quality ratings of visitor services and facilities

Question 12c

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

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

Results

- Figure 88 shows the combined proportions of “very good” and “good” quality ratings for services and facilities that were rated by enough visitor groups (N≥30).
- The services/facilities that received the highest combined proportions of “very good” and “good” quality ratings were:

- 92% Trail to cave
- 88% Assistance from monument staff
- 78% Swinging Bridge picnic area

- Figures 89 to 98 show the quality ratings for each visitor service and facility.
- The services/facilities receiving the highest “very poor” ratings were:

- 3% Picnic area restrooms
- 3% Concession services

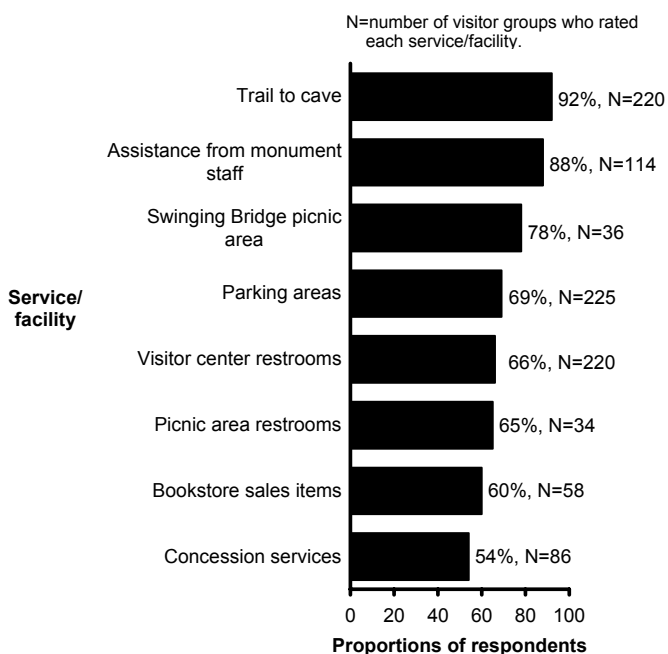


Figure 88: Combined proportions of “very good” and “good” quality ratings for visitor services and facilities

* total percentages do not equal 100 due to rounding

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

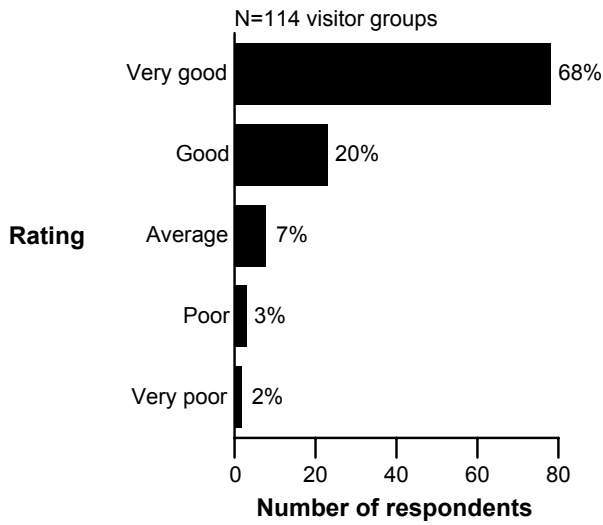


Figure 89: Quality of assistance from monument staff

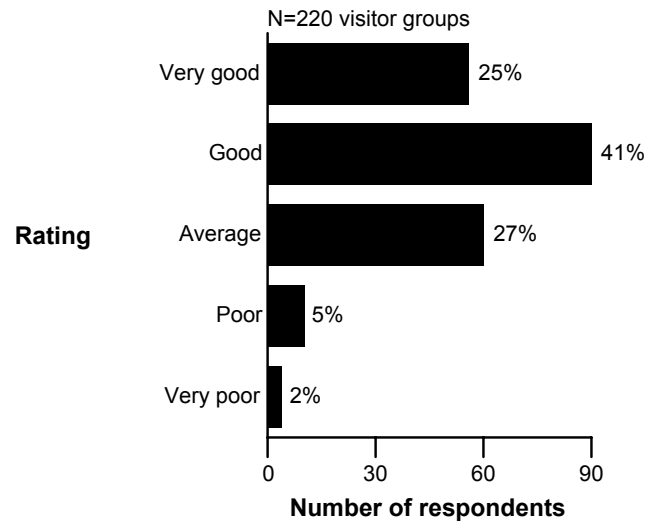


Figure 90: Quality of visitor center restrooms

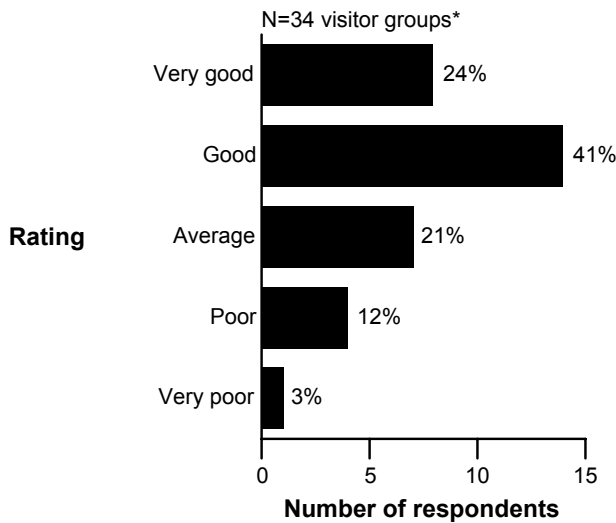


Figure 91: Quality of picnic area restrooms

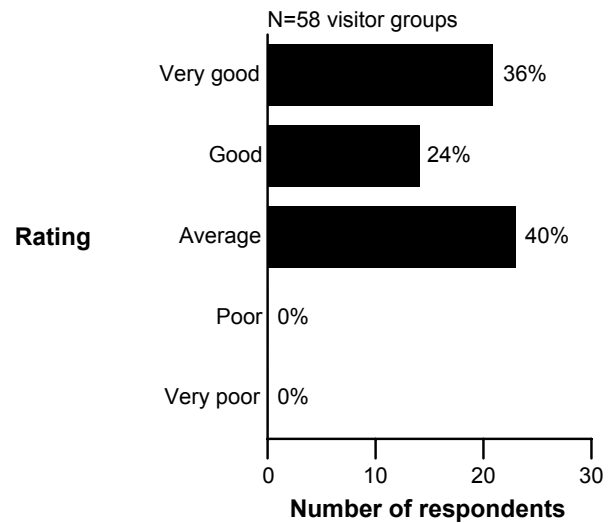


Figure 92: Quality of bookstore sales items (books/maps/posters)

* total percentages do not equal 100 due to rounding

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

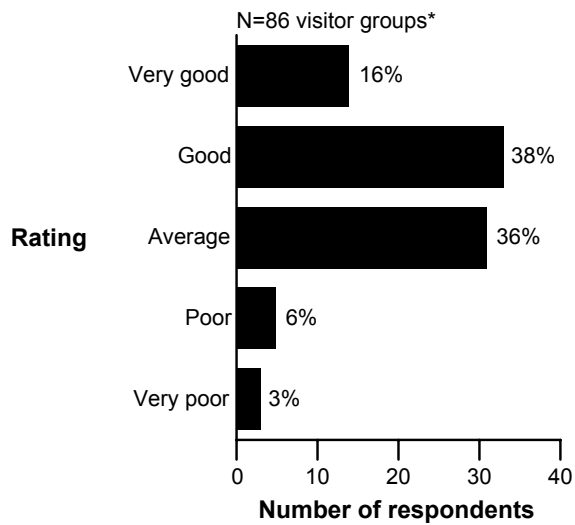


Figure 93: Quality of concession services (snack bar, gift shop)

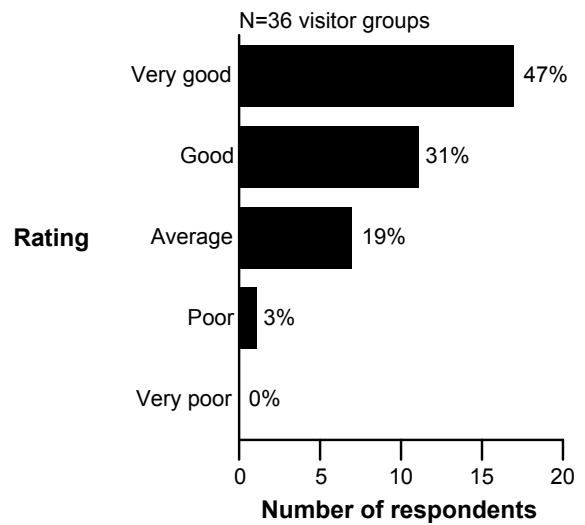


Figure 94: Quality of Swinging Bridge picnic area

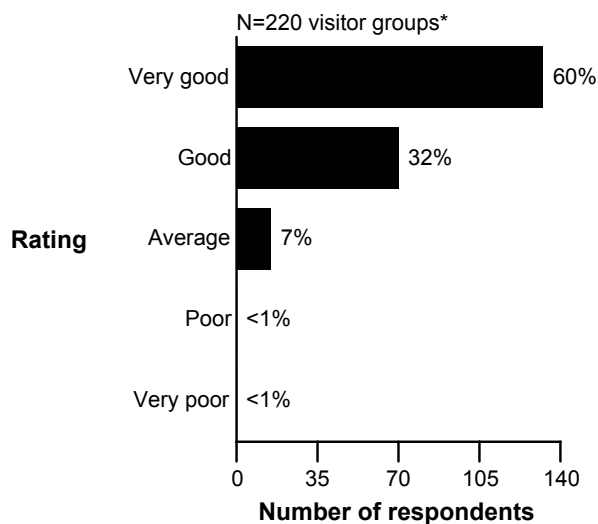


Figure 95: Quality of trail to cave

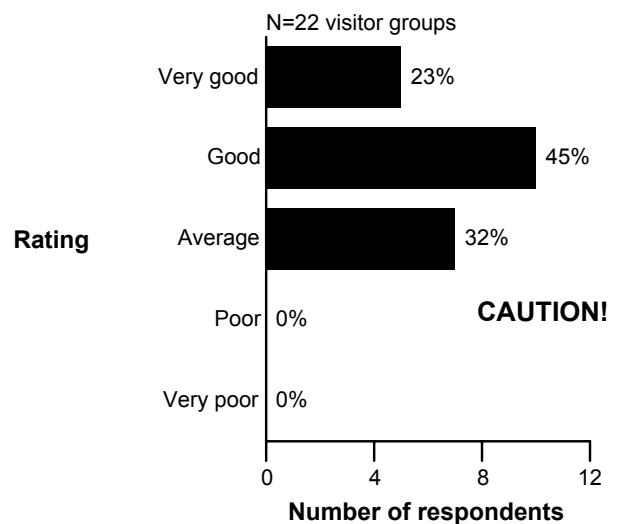


Figure 96: Quality of Canyon Nature Trail

* total percentages do not equal 100 due to rounding

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

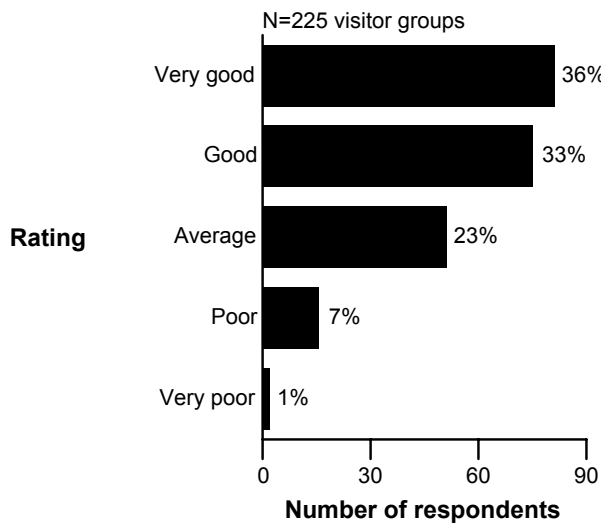


Figure 97: Quality of parking areas

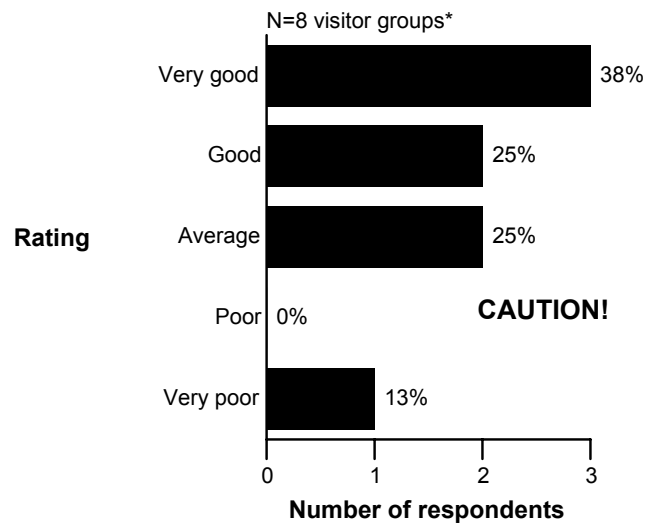


Figure 98: Quality of access for disabled persons

* total percentages do not equal 100 due to rounding

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

Mean scores of importance and quality ratings

- Figures 99 and 100 show the mean scores of importance and quality ratings for all visitor services and facilities that were rated by enough visitor groups (N≥30).
- All visitor services and facilities were rated above average in importance and quality.

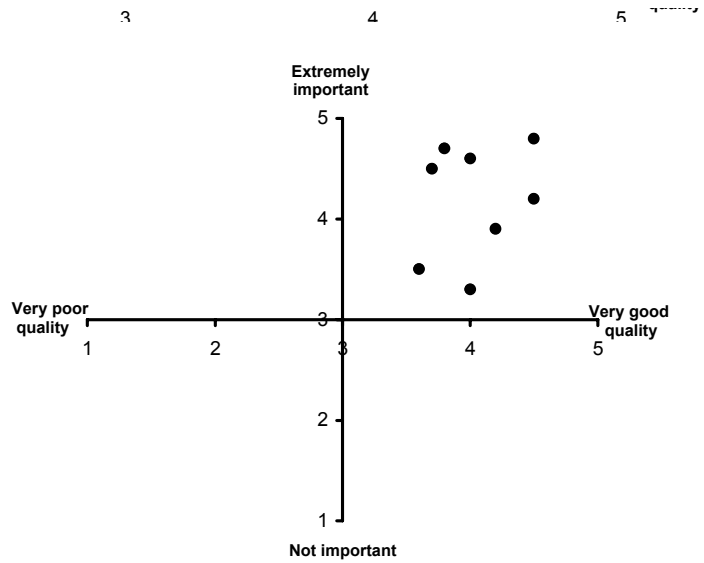


Figure 99: Mean scores of importance and quality ratings for visitor services and facilities

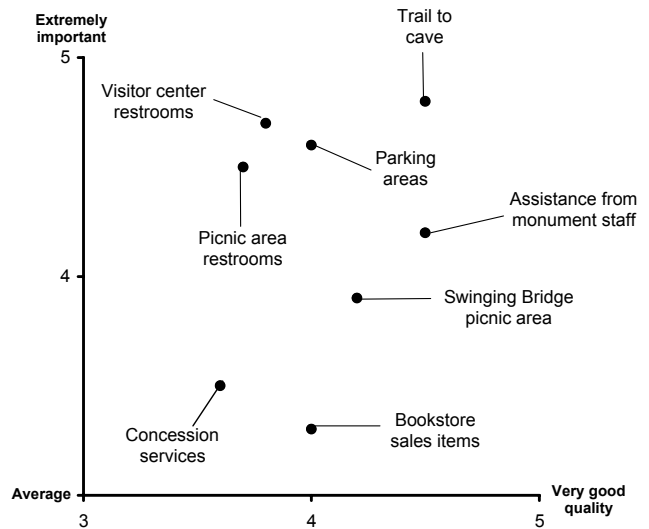


Figure 100: Detail of Figure 99

* total percentages do not equal 100 due to rounding

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

Elements affecting park experience

Question 23

On this visit to Timpanogos Cave NM, please indicate how the following elements may have affected your park experience?

Results

- 21% of visitor groups indicated large numbers of people in cave tour “detracted from” their experience the most (see Table 6).
- 71% reported quality of tour guide “added to” their park experience.
- 68% did not experience a sold out cave tour.
- 64% were not affected by noise from other visitors.
- 21% reported that large numbers of people in cave tour “detracted from” their visit.

Table 6: Elements affecting park experience*
N=number of visitor groups who rated each element

Affect your park experience?	N	Rating (%)			
		Detracted from	No effect	Added to	Did not experience
Noise from other visitors	276	18	64	4	14
Availability of parking	273	18	51	27	4
Cave access	275	5	37	50	8
Wait for cave tour	273	10	61	8	21
Sold out cave tour	267	8	23	1	68
Traffic noise	268	9	56	1	34
Large number of people in cave tour	272	21	40	3	37
Small number of people in cave tour	268	0	35	19	45
Quality of tour guide	270	4	14	71	10

* total percentages do not equal 100 due to rounding

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

Protection of monument resources and qualities

Question 22

It is the National Park Service’s responsibility to protect Timpanogos Cave NM cultural and natural resources while at the same time providing for public enjoyment. How important is protection of the following resources/qualities in the monument to you?

Results

- As shown in Table 7, the resources/qualities receiving the highest combined proportions of “extremely important” and “very important” ratings were:
 - 93% Scenic views
 - 93% Clean air
 - 93% Cave features/environment
 - 90% Natural quiet/sounds of nature
- The resource/quality receiving the highest “not important” rating was:
 - 4% Recreational opportunities

Table 7: Protection of monument resources/qualities*
N=number of visitor groups who rated each element

Resource/quality	N	Rating (%)				
		Not important	Somewhat important	Moderately important	Very important	Extremely important
Escape from urban setting	276	2	3	13	36	45
Scenic views	276	<1	<1	7	32	61
Natural quiet/sounds of nature	276	1	1	8	33	57
Clean air	277	1	1	5	31	62
Cave features/environment	277	0	2	5	22	71
Recreational opportunities	276	4	6	22	34	35
Historical context	277	3	9	27	34	27
Native plants/wildlife	275	<1	4	10	37	49

* total percentages do not equal 100 due to rounding

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

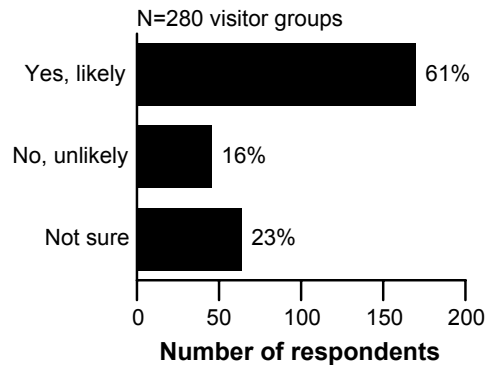
Information about Future Preferences

Proposed site for new visitor center

Question 21a

The map above shows the proposed site for a new visitor center, the current visitor center will be closed. On a future visit would you and your group be interested in visiting the new visitor center at the proposed site?

Interested in visiting new visitor center?



Results

- 61% of visitor groups indicated interest in visiting the new visitor center at the proposed site (see Figure 101).

Figure 101: Interest in visiting new visitor center at proposed site

Services and facilities at new visitor center

Question 21a

If YES, what services and facilities would you like to have available at the new visitor center?

Results

- As shown in Figure 102, the most preferred services and facilities included:

- 91% Restrooms
- 88% Cave tour ticket sales
- 82% Bookstore/gift store

- 6% of visitor groups preferred "other" services and facilities which included:

- Concessions
- Snack bar
- Food & drink, Souvenirs
- First aid station
- Geology/forestry/botany checklist for hike
- Wildflower guide

Service or facility

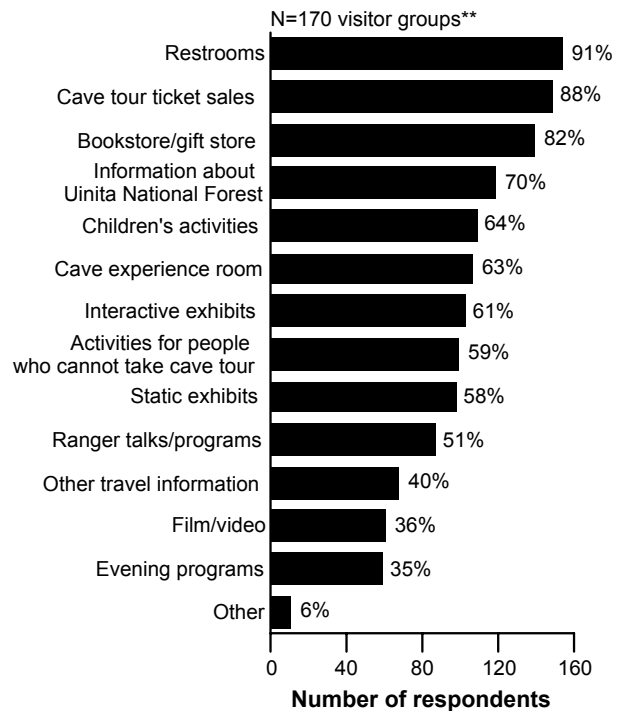


Figure 102: Services and facilities at new visitor center

* total percentages do not equal 100 due to rounding

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

Question 21a

What film/video programs would you like shown at the new visitor center?

Results

- Table 8 lists the film/video subjects that visitors would like shown at the new visitor center.

Table 8: Preferred film/video subjects to be shown at the new visitor center

N=47 comments;
some visitor groups made more than one comment.

Comment	Number of times mentioned
Cave history	10
Cave orientation	10
About the cave	8
Cave discovery	4
Geological formations	3
Cave tour	2
Geology	2
Monument history	2
Current films are fine	1
Geological history	1
Life forms	1
Surrounding area	1
Unitas information	1
Wildlife	1

* total percentages do not equal 100 due to rounding

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

Subjects to learn about on a future visit

Question 24

On a future visit, how would you and your group prefer to learn about Timpanogos Cave NM?

Results

- 93% of visitor groups were interested in learning about the monument on a future visit (see Figure 103).
- As shown in Figure 104, the most commonly mentioned methods to learn about the monument on a future visit were:

- 65% Visitor center exhibits
- 58% Visitor center info desk
- 51% Ranger-led tours
- 51% Trailside exhibits

- 2% of visitor groups preferred “other” learning methods which included:
 - Cave tour
 - More hands-on time in cave
 - Interpretive dance

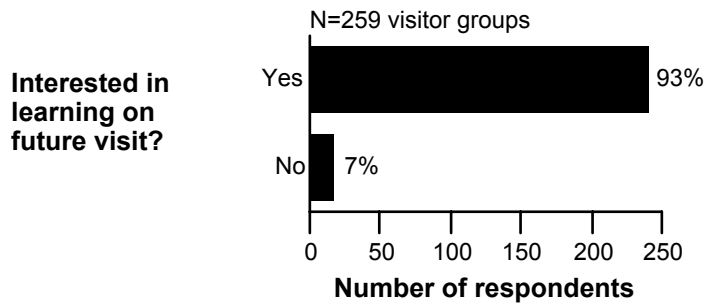


Figure 103: Interest in learning about the monument on a future visit

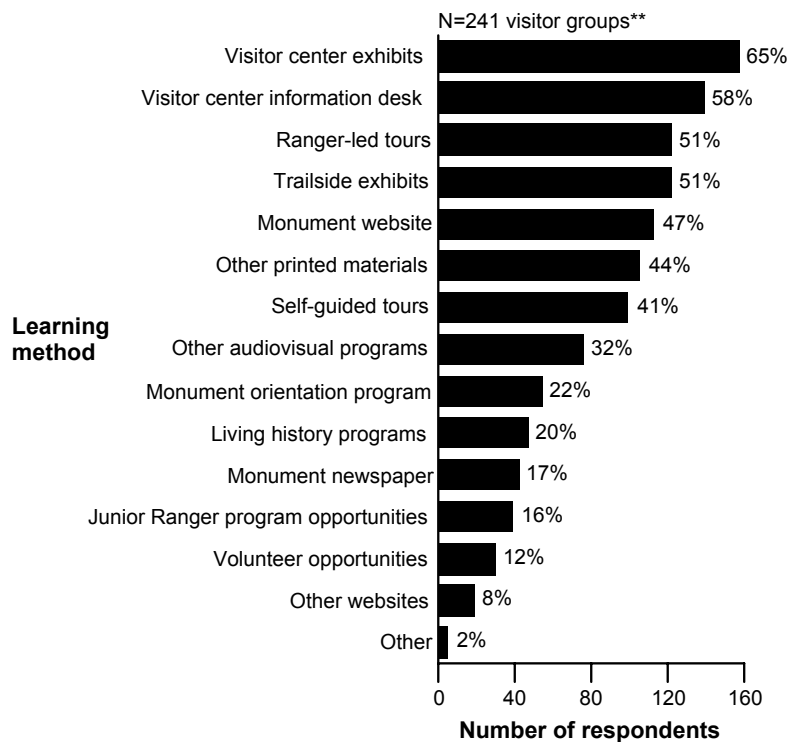


Figure 104: Preferred learning methods on a future visit

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

Overall Quality

Question 28

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

Results

- 93% of visitor groups rated the overall quality as “very good” or “good” (see Figure 105).
- No visitors groups rated the overall quality as “very poor” or “poor.”

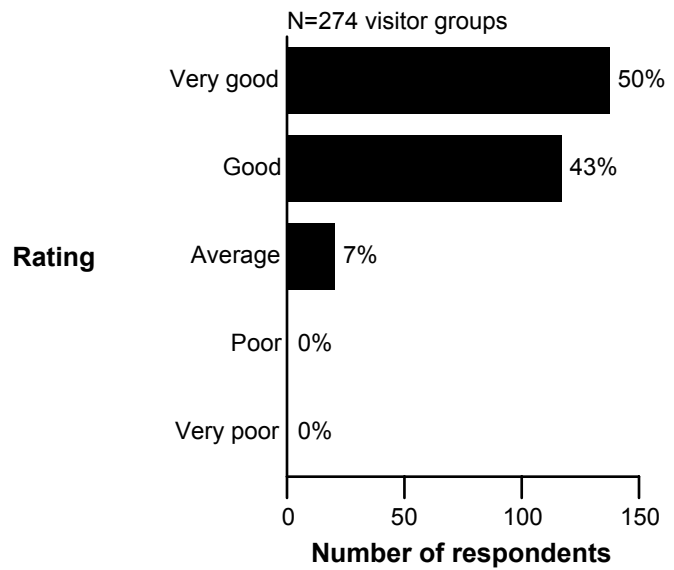


Figure 105: Overall quality of visitor facilities, services, and recreational opportunities

* total percentages do not equal 100 due to rounding

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

Visitor Comments

What visitors liked most

Question 25a

What did you and your group like **most** about your visit to Timpanogos Cave NM?

Results

- 90% of visitor groups (N=257) provided comments about what they liked most.
- Table 9 shows the summary of visitor comments. Complete comments are in the Visitor Comments Appendix.

Table 9: What visitors liked most

N=393 comments;
some visitor groups made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Excellent tour guide	15
Tour guide	9
Knowledgeable tour guide	7
Friendly tour guide	6
Other comments	2
INTERPRETIVE SERVICES	
Cave tour	78
History of cave	7
Tour was informative/interesting	7
Tour guide told great stories	3
Evening programs	2
Nature walk	2
Other comments	5
FACILITIES/MAINTENANCE	
Trails	5
Picnic areas	4
Benches for resting	2
Paved trail	2
Trail well maintained	2
Other comments	4

Table 9: What visitors liked most
(continued)

Comment	Number of times mentioned
RESOURCE MANAGEMENT	
Cave	53
Cave is amazing/beautiful	14
Cave formations/features	12
Small number in tour group	5
Uniqueness of cave	3
Preserved state of cave	2
GENERAL COMMENTS	
Hike	47
Scenery/scenic views	30
Beautiful area	10
Enjoyed challenge of hike to cave	7
Coolness of cave	6
Nature	6
River	5
Everything	4
Fresh/clean air	3
Peaceful	3
Being together	2
Natural beauty	2
Solitude	2
Surrounding mountains	2
Other comments	13

What visitors liked least

Question 25b

What did you and your group like **least** about your visit to Timpanogos Cave NM?

Results

- 79% of visitor groups (N=227) provided comments about what they liked least.
- Table 10 shows the summary of visitor comments. Complete comments are in the Visitor Comments Appendix.

Table 10: What visitors liked least
N=273 comments;
some visitor groups made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Ranger not prepared/knowledgeable	4
Tour guides	2
INTERPRETIVE SERVICES	
Long wait before going on tour	15
Children talking during cave tour	4
Adults talking during cave tour	3
Other comments	9
FACILITIES/MAINTENANCE	
Not enough parking	21
Steep drop offs along trail without protective fences/railings	9
No water along the way/at cave	7
Restrooms	4
Unclean/smell of restrooms	4
No access to restrooms near cave entrance	3
No access to restrooms	3
Falling rocks/rockslide	2
Had to park far away	2
Nature trail signs only had numbers - needs more information	2
No access to restrooms along trail	2
Roadway danger	2
Scarcity of campsites	2
Other comments	11

Table 10: What visitors liked least
(continued)

Comment	Number of times mentioned
POLICIES/MANAGEMENT	
High price of cave tour	3
Fee to access canyon and fee for cave tour	2
Fumes from bus with engine running	2
Noise from bus with engine running	2
Other comments	5
RESOURCE MANAGEMENT	
Crowded cave tour	10
Crowded	6
GENERAL COMMENTS	
Hike/walk up to/from the cave	43
Nothing to dislike	37
100+ degree weather	14
Noisy children	7
Hiking in hot weather	6
Not enough time to take tour	3
Bumping head/backpack in cave	2
Rude visitors in tour groups	2
Traffic	2
Other comments	16

Planning for the future

Question 26

If you were a park manager planning for the future of Timpanogos Cave NM, what would you propose?

Results

- 62% of visitor groups (N=178) provided comments about the future management of the monument.
- Table 11 shows the summary of visitor comments. Complete comments are in the Visitor Comments Appendix.

Table 11: Planning for the future

N=265 comments;
some visitor groups made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Had a great tour guide	2
Need more knowledgeable staff/guides	2
Other comments	7
INTERPRETIVE SERVICES	
Provide information about fitness requirements, clothing, etc.	7
More activities	6
More planned/organized activities/programs	5
Provide hands-on exhibits (touching fake stalactites and stalagmites)	5
Want option to purchase tickets online	4
Limit noise/talking while guide is talking	3
More information about cave lifeforms/geological formations	3
More information about hiking in the area	3
Provide other aids to view cave if unable to visit cave (e.g. cave room, videos, etc.)	3
Activities to do while waiting for tour	2
Specific age related tours	2
Tours, cassettes & earphones in other languages	2
Video monitors in cave showing footage of how things look from different angles and over time	2
Other comments	18
FACILITIES/MAINTENANCE	
Provide water along trail/at cave	19
More parking needed	16
More restrooms	8
Protective fences/railings along trail	7
Cable car/chairlift to cave	5
Shuttle to/from parking lot	5

Table 11: Planning for the future
(continued)

Comment	Number of times mentioned
FACILITIES/MAINTENANCE (continued)	
Improve restrooms	5
Build a new visitor center	4
Leave visitor center at current location	4
More benches along trail	3
Signs along trail stating distance traveled/how far to go	3
Build a new visitor center at current location	2
Build a new visitor center at mouth of canyon	2
Need cleaner restrooms	2
More picnic areas/tables	2
Move parking out of canyon	2
Signs identifying plants/rock formations	2
Other comments	20
POLICIES/MANAGEMENT	
No babies/young children in tour groups	3
Busses must turn off engines after parking	2
Combined fee to access park and take cave tour	2
Have yearly pass/special for local residents	2
Make prices affordable	2
Obtain more money to preserve/upkeep park	2
Other comments	8
RESOURCE MANAGEMENT	
Preserve natural beauty of cave and park	8
Smaller tour groups	8
Promote park more	3
Other comments	6
GENERAL COMMENTS	
Don't change anything - good as is	15
Keep up the good work	4
Enjoyed visit	3
Other comments	10

Additional comments

Question 27

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

Results

- 46% of visitor groups (N=132) responded with additional comments.
- Table 12 shows a summary of the comments. Complete comments are included in the Visitor Comments Appendix.

Table 12: Additional comments

N=182 comments;

some visitor groups made more than one comment.

Comment	Number of times mentioned
PERSONNEL	
Excellent tour guide	11
Knowledgeable tour guide	5
Staff is friendly	5
Excellent staff	3
Staff is helpful	3
Enthusiastic tour guide	2
Staff is knowledgeable	2
Tour guide not prepared	2
Other comments	2
INTERPRETIVE SERVICES	
Enjoyed cave tour	6
Provide information about fitness requirements, clothing, etc.	4
Other comments	10
FACILITIES/MAINTENANCE	
Park is well maintained	3
Trails are well maintained	2
Add signs along trail	2
More restrooms along trail	2
Provide water along trail/at cave	2
Need more parking	2
Other comments	4
POLICIES/MANAGEMENT	
Cost of tickets too expensive	2
Other comments	4
RESOURCE MANAGEMENT	
Hope park stays open for future use	2
Publicize park more	2
Other comments	2

Table 12: Additional comments
(continued)

Comment	Number of times mentioned
GENERAL COMMENTS	
Enjoyed visit	23
Great experience	17
Thank you	8
Park is beautiful	6
Keep up the good work!	5
Amazing/fantastic	4
Park is interesting	4
Very nice	4
Will return	4
Cave/views exceeded expectations	3
Enjoyed hike	3
Hike was difficult	3
Glad park is there	2
It was fun	2
Will recommend park to friends	2
Other comments	8

APPENDICES

Appendix 1: The Questionnaire

Appendix 2: Additional Analysis

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

- Sources of information prior to visit
- Ability to obtain needed information
- Awareness of difference between a state park and a national park
- Awareness of difference between a national forest and national park
- Awareness of unit of NPS
- Primary reason for visiting the area
- Adequacy of directional signs
- Difficulty locating monument
- Monument as destination
- Activities participated in during this visit
- Safety concerns while in monument
- Appropriateness of cave tour fee
- Participation in cave tour
- Value for fee paid for cave tour
- Perceptions of crowding
- Maximum acceptable number of people in each cave tour
- Sites visited
- Information services and facilities used
- Importance of information services and facilities
- Quality of information services and facilities
- Visitor services and facilities used
- Importance of visitor services and facilities
- Quality of visitor services and facilities
- Guided tour
- School/educational group
- Family reunion group
- Corporate group
- Scouts/youth group
- Church group
- Group type
- Length of visit
- Group size
- Number of vehicles used
- Visitor age
- Zip code/state of residence
- Country of residence
- Number of times visited the monument in the past 12 months
- Number of times visited the monument in visitor lifetime
- Visitors with disabilities/ impairments
- Type of disability/impairment
- Encounter access/service problems?
- Visitor level of education
- English as primary language
- Visiting proposed visitor center in future
- Preferred services/facilities at proposed new visitor center
- Importance of protecting monument resources/qualities
- Elements affecting park experience
- Preferred learning methods on a future visit
- Overall quality of visitor facilities, services, and recreational opportunities

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Appendix 3: Decision Rules for Checking Non-response Bias

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

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. 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. Thus, a 5-year difference in average age between respondents and non-respondents is an acceptable justification.

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

1. Average age of respondents – average age of non-respondents ≤ 5
2. Average group size of respondents – average group size of non-respondents = 0

As shown in Table 2, the p-values for both of these tests are greater than 0.05 indicating insignificant difference between respondents and non-respondents. Thus, non-response bias is judged to be insignificant.

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Appendix 4: Visitor Services Project Publications

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

1982

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

1983

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

1985

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

1986

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

1987

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

1988

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

1989

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

1989 (continued)

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

1990

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

1991

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

1992

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

1993

54. Belle Haven Park/Dyke Marsh Wildlife Preserve (spring)

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

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

1994

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

1995

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

1996

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

1997

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

1998

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

1999

109. 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

Visitor Services Project Publications (continued)

1999 (continued)

- 116. Lassen Volcanic National Park
- 117. Cumberland Gap National Historical Park (fall)

2000

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

2001

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

2002

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

2003

- 141. Gateway National Recreation Area: Floyd Bennett Field (spring)
- 142. Cowpens National Battlefield (spring)

2003 (continued)

- 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
- 164. San Francisco Maritime National Historical Park
- 165. Lincoln Home National Historic Site
- 166. Chickasaw National Recreation Area
- 167. Timpanogos Cave National Monument

For more information about the Visitor Services Project, please contact University of Idaho Park Studies Unit at <http://www.psu.uidaho.edu>

Visitor Comments Appendix

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

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