

Wind Cave National Park

WIND CAVE NATIONAL PARK VISITOR USE STUDY

Final Report | April 30, 2019



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LIST OF ABBREVIATIONS

VUS Visitor Use Study
RSG Resource Systems Group, Inc.
NPS National Park Service
SSP Social Science Program
OMB Office of Management and Budget

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EXECUTIVE SUMMARY

This report describes the results of a visitor use study conducted at Wind Cave National Park from August 17 through August 26, 2018. The study was designed to meet two different objectives. The first objective was to survey recreational visitors, obtaining information such as activities pursued during the visit, amount of money spent in the local area, and demographic characteristics. The second objective was to characterize non-recreational visitation to the park, including the overall percentage of non-recreational visitors and the origins/destinations of those visitors. Study results are presented largely in the form of graphs and frequency tables. In addition, responses to select open-ended questions are summarized in the body of the report, with verbatim responses to all open-ended questions presented in the *Visitor Comments Appendix* (bound separately).

Results related to recreational visitors include:

- During the sampling period, 1,048 visitor groups were contacted to participate in the survey. Of those groups, 896 agreed to participate in the study by accepting a mail-back survey packet. Questionnaires were completed and returned by 549 visitor groups, resulting in a completion rate of 61% among those visitor groups that agreed to participate in the study and an overall response rate of 52% for the study.
- Sixty-one percent of visitor groups were groups of two, and 7% of visitor groups consisted of one member. Nearly three-quarters (71%) of visitor groups identified as family groups.
- Thirty-two percent of visitors were 65 years old or older, 22% of visitors were 55 to 64 years old, 21% of visitors were 35 to 54 years old, 10% of visitors were 20 to 34 years old, and 14% of visitors were 19 years old or younger.
- Just 2% of visitors self-identified as Hispanic or Latino. Most visitors (95%) were white. Few visitors were Asian (3%), American Indian or Alaska Native (2%), black or African American (<1%), or native Hawaiian or other Pacific Islander (<1%).
- Nearly all visitors (99%) preferred to speak and read English when visiting an area such as Wind Cave National Park.
- Individuals from the United States comprised 96% of all visitors during the survey period. At the state level, 18% of visitors were from Minnesota, 10% of visitors were from Nebraska, 9% were from South Dakota, and smaller proportions of visitors were from 41 other states and territories. International visitors comprised 4% of all visitors with 30% of international visitors from Canada and 26% from Germany.



- Seventy-seven percent of visitors indicated that this trip to the park was their only visit to the park in the last five years. Ninety-two percent of visitors indicated that they had visited another National Park Service (NPS) site within the past 5 years.
- Seventy-four percent of visitors obtained information about Wind Cave National Park prior to their trip. The most commonly reported information sources used were the park website (45%), maps/brochures (41%), and previous visits (37%). The vast majority (90%) of visitors had the information they needed about Wind Cave National Park for their trip.
- Ninety-three percent of visitors used a car, truck, or SUV to get from their home to the park. Fifty-three percent of visitors spent 10 hours or more traveling from their home to the park. Sixty-seven percent of visitors traveled 500 miles or more from their home to get to the park.
- Only 8% of visitors indicated that visiting Wind Cave National Park was the primary or sole purpose of their trip away from home. Thirty-five percent of visitors indicated that visiting Wind Cave National Park was one of several equally important destinations on their trip away from home. Fifty-seven percent of visitors indicated that they came to the local area on their trip away from home for reasons other than visiting the park and happened to visit the park while they were in the area.
- The most common primary activities for visitors to Wind Cave National Park were to participate in a cave tour (41% of visitors), and to view wildlife, natural features, scenery, wildflowers, etc. (29% of visitors).
- Thirty-eight percent of visitors participated in a cave tour. Of visitors who participated in a cave tour, 44% would prefer to have a pre-visit reservation system to obtain tickets if they visited in the future, while 56% would not.
- Of visitors who did not take a cave tour, 29% did not take a cave tour due to lack of interest, 21% did not take a cave tour due to taking a cave tour on a previous visit, and 28% did not take a cave tour for other reasons.
- Sixty-three percent of visitors stayed overnight within the park and/or the park's local area. Forty-seven percent of visitors who stayed overnight within the park and/or the park's local area stayed for one or two nights. Twenty-two percent of those who stayed overnight within the park and/or the park's local area stayed for five or more nights. Only 17% of visitors who stayed overnight within the park and/or the park's local area stayed within the park, camping in the park's campground or backcountry.
- The vast majority of visitor groups (90%) had no members with a physical condition that made it difficult to access or participate in activities or services during their visit. Of those visitor groups that did have a group member with a physical condition, the most

commonly reported physical condition was difficulty hiking, walking, or climbing stairs (53%).

- Fifty-nine percent of visitors reported going to the Visitor Center, 51% visited the park bookstore, 47% attended a ranger-led activity, 47% viewed indoor exhibits, 39% viewed an outdoor exhibit, 38% read the park brochure, and 38% talked informally with a ranger.
- Fifty-four percent of visitor groups spent \$500 or less inside the park and nearby area on their trip away from home. About one-quarter (23%) spent between \$501 and \$1,000 inside the park and nearby area on their trip away from home.

Results related to non-recreational visitor groups include:

- Non-recreational visitor groups comprised 29% of visitor groups contacted. Information was collected from 681 non-recreational visitor groups.
- The percentage of non-recreational visitor groups was highest in the early morning (47% of visitor groups contacted between 8:00AM and 9:00AM), declined steadily throughout the morning, then remained relatively constant from 11:00AM to 4:00PM (ranging from 23% to 28% of visitor groups contacted).
- Non-recreational visitor groups spent an average of 13 minutes in the park.
- By far, the most frequently mentioned origin-destination combinations for non-recreational visitor groups were Custer, SD to Hot Springs, SD (27%) and Hot Springs, SD to Custer, SD (26%).

1.0 INTRODUCTION

This report describes the results of a visitor use study (VUS) conducted at Wind Cave National Park from August 17 through August 26, 2018. The study was conducted by RSG on behalf of Wind Cave National Park and the National Park Service (NPS) Social Science Program (SSP). The study was designed to meet two different objectives. The first objective was to survey recreational visitors, obtaining information such as activities pursued during the visit, amount of money spent in the local area, and demographic characteristics. The second objective was to characterize non-recreational visitation to the park, including the overall percentage of non-recreational visitors and the origins/destinations of those visitors.

1.1 ORGANIZATION OF REPORT

This report is organized into three sections

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

Section 2: Results This section provides summary information for each question in the recreational survey questionnaire and for non-recreational visitation.

Section 3: Appendices

Appendix A. *Descriptive Statistics*. Descriptive statistics for those variables for which measures of central tendency can be computed.

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

Appendix C. *The Thank You/Reminder Postcard*. A copy of the thank you/reminder postcard mailed to visitor groups.

Appendix D. *The Replacement Mailing Cover Letter*. A copy of the replacement mailing cover letter mailed to visitor groups.

Appendix E. *Detailed Sampling Procedures*. A detailed description of sampling locations and procedures.

Visitor Comments Appendix (separate document). Visitor responses to open-ended questions. Bound separately due to appendix length.

1.2 PRESENTATION OF THE RESULTS

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

SAMPLE ONLY

1. The figure title describes the graph's information.
2. Listed above the graph, the "N" shows the number of individuals or visitor groups responding to the question. When the number of individuals or visitor groups is less than 30 the word "CAUTION!" is shown on the graph to indicate the results are statistically unreliable due to low sample size.

* 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 (y-axis) describes the response categories.
4. Horizontal information (x-axis) shows the number of responses in each category.
5. The proportion of visitor groups/visitors who responded to each category.

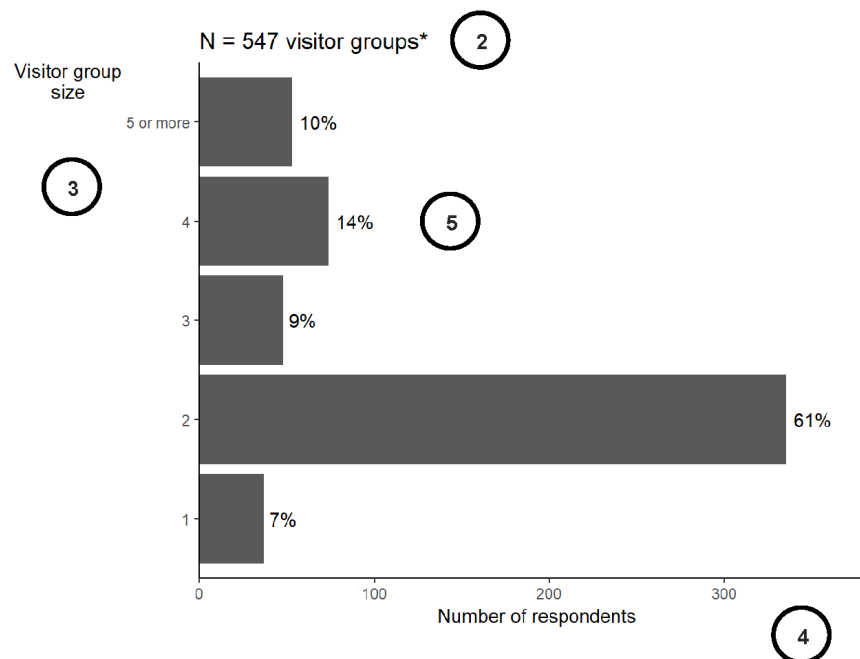


FIGURE 1. VISITOR GROUP SIZE

FIGURE 1: EXAMPLE FIGURE



2.0 METHODS

As described in the introduction, the study was designed to (1) survey recreational visitors and (2) characterize non-recreational visitation. This section of the report describes the methods used to accomplish each of these objectives.

2.1 SURVEY OF RECREATIONAL VISITORS

Survey Method

The Wind Cave National Park VUS was administered at Wind Cave National Park as a personally delivered self-administered mail-back survey, following the principles outlined in Don A. Dillman's book *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (2014). The survey method included three phases: 1) onsite distribution of a booklet-sized questionnaire, 2) a color-picture reminder postcard mailing, and 3) one replacement mailing of a booklet-sized questionnaire for those participants that had not yet returned a completed questionnaire. The study population included visitor groups with at least one group member 18 years of age or older in Wind Cave National Park during the study period. The target margin of error for summary statistics of no greater than $\pm 5\%$ (Fowler, 1993) was used to establish the target sample size at 400 completed questionnaires.

Sampling Effort

The visitor survey was administered at Wind Cave National Park from August 17 through August 26, 2018. The survey administration dates were selected to include both weekdays and weekend days. Sampling occurred near the three park entrances on each sampling day. Visitors were stopped as they exited the park at each sampling location and asked to participate in the survey.

The visitor survey was administered from 8:00AM to 4:30PM on all sampling days and at all locations. This time period of survey administration was selected in consultation with park staff to capture a broad range of user types and maximize sampling efficiency. The final sampling effort is presented in Table 1.

TABLE 1: SAMPLING EFFORT

DATE	NORTH ENTRANCE	SOUTH ENTRANCE	WEST ENTRANCE
Friday, August 17	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Saturday, August 18	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Sunday, August 19	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Monday, August 20	-	-	-
Tuesday, August 21	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Wednesday, August 22	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Thursday, August 23	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Friday, August 24	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Saturday, August 25	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM
Sunday, August 26	8:00AM-4:30PM	8:00AM-4:30PM	8:00AM-4:30PM

Questionnaire Design

The Wind Cave National Park VUS questionnaire was developed through a collaborative process including Wind Cave National Park staff, NPS SSP staff, and RSG. The instrument was designed to gather information about visitor and trip characteristics, trip planning efforts, motivations for visiting, visitor perceptions of park experiences, and visitor satisfaction with park services and facilities. All of the questions included in the questionnaire were selected from the NPS Programmatic Information Collection Request Pool of Known Questions. The majority of the questions included in the survey instrument ask visitors to choose answers from a list of response options, providing an open-ended option, where appropriate, to ensure that question prompts allowed for inclusive answers. A few questions were completely open-ended to collect unprompted responses from visitors in their own words. The questionnaire was reviewed and approved by the Office of Management and Budget (OMB), and correspondingly conforms to OMB standards and guidelines for questionnaire design. The questionnaire was administered to visitors in English (Appendix B).

Sampling Procedures

Mail-back survey packets were administered to visitor groups in Wind Cave National Park using onsite vehicle intercept methods. First-after-last sampling was used to intercept as many vehicles passing the sampling location as possible, with the exclusion of obviously commercial vehicles (e.g., dump trucks, semi-trailer trucks, and express delivery trucks), which were allowed to pass by the sampling location but recorded on a contact log form. Visitor groups in vehicles intercepted by field staff were identified as either recreational or non-recreational by asking what brought them to the park that day. A subset of recreational visitors was then invited to participate in the mail-back survey, based on a timed-interval (see Appendix E for additional details regarding the sampling procedures). If a visitor group agreed to participate, they were asked which member of the group (at least 18 years old) had the next birthday; the individual



with the next birthday was asked to complete the questionnaire for the group. This was done in order to randomize selection of the individual within the group to complete the questionnaire.

Individuals who agreed to complete the questionnaire were asked to provide their name and mailing address. This information was used to send follow-up mailings according to Dillman's (2014) mail-back survey methods. Participating visitors were then administered a mail-back survey packet, which included a booklet-sized questionnaire placed inside of a pre-addressed envelope affixed with a U.S. first class postage stamp. Visitors were asked to complete the questionnaire after completing their trip to the park and to return the questionnaire by mail using the self-addressed postage-paid envelope provided. International visitors were asked to mail their completed questionnaires before leaving the country due to the U.S. first class postage affixed to the return envelope.

Two weeks after field survey administration concluded (on September 10, 2018), all survey participants were sent a color-picture postcard (Appendix C) thanking them for participating in the study and/or reminding them to complete and return the questionnaire. Approximately two weeks after mailing the postcards (on September 24, 2018), a replacement mail-back survey packet was sent to each individual who agreed to participate in the study but had not yet returned his or her questionnaire (Appendix D). Two distinct replacement mail-back survey packets were sent, depending on whether the provided address was a U.S. address or an international address. U.S. addresses were sent a packet that included a pre-addressed return envelope affixed with a U.S. first class postage stamp. International addresses were sent a packet that included a pre-addressed return envelope printed with international business reply mail postage.

Sampling Results¹

During the sampling period, 1,048 visitor groups were invited to participate in the survey. Of these groups, 896 agreed to participate in the study by accepting a mail-back survey packet (86% cooperation rate) (Table 2). Questionnaires were completed and returned by 549 visitor groups (Table 3), resulting in a completion rate of 61% among those visitor groups that agreed to participate in the study and an overall response rate of 52% for the study.

¹ Sampling results are reported using three metrics: cooperation rate, completion rate, and overall response rate. Cooperation rate is the proportion of onsite acceptances to total onsite contacts. Response rate is the proportion of completed survey questionnaires to total onsite contacts. Calculation of cooperation rate and response rate follow American Association for Public Opinion Research (2015) definitions. Completion rate is the proportion of completed survey questionnaires to onsite acceptances — completion rate is the metric in this study that is directly comparable to response rates reported in the Visitor Services Project (VSP) and is therefore included for reference. See Rookey et al. (2012) for a complete description of VSP response rate calculation.

TABLE 2: NUMBER OF QUESTIONNAIRES DISTRIBUTED, BY SAMPLING LOCATION

Sampling site	SAMPLING DATE										TOTAL QUESTIONNAIRES DISTRIBUTED	
	8/17	8/18	8/19	8/20	8/21	8/22	8/23	8/24	8/25	8/26	N	Percent
North Entrance	49	31	30	-	33	30	28	31	33	25	290	32%
South Entrance	50	29	36	-	35	33	30	33	44	27	317	35%
West Entrance	38	34	31	-	28	30	29	28	41	25	284	32%
Unknown*	-	-	-	-	-	-	-	-	-	-	5	1%
All sites	137	94	97	-	96	93	87	92	118	77	896	100%

*Five questionnaires were completed and returned but were not recorded on log sheets to determine when or where they were distributed.

TABLE 3: NUMBER OF COMPLETED QUESTIONNAIRES, BY SAMPLING LOCATION

SAMPLING SITE	N	PERCENT
North Entrance	179	33%
South Entrance	198	36%
West Entrance	167	30%
Unknown*	5	1%
Total	549	100%

*Five questionnaires were completed and returned but were not recorded on log sheets to determine where they were distributed.

Data Entry and Data Cleaning

Data from returned questionnaires were entered into an electronic data entry software by two separate data entry technicians. After independent double entry of the survey data was completed, the results were compared to identify any differences. A data entry supervisor reviewed any differences, identified the correct values by referencing the original paper questionnaires, and entered the correct values into the database.

Overall data entry accuracy was assessed by comparing the database values to the original paper questionnaires for a random sample of 40 completed surveys. The observed data entry error rate was less than 1.5%.² All errors that were identified through this process were corrected in the database prior to analysis.

² The U.S. Census Bureau has used a data entry error rate standard of 1.5% for the American Community Survey (Williams, Garret, & Petroni, 2004).



The double-entered, reviewed, and corrected dataset was subjected to additional cleaning and proofing using R-Studio statistical software. Data cleaning and proofing included identification and correction of invalid values and replacement of ambiguous question responses with missing value codes.

Non-Response Bias

Non-response bias is the bias that results when respondents differ in meaningful ways from non-respondents. Non-response bias affects the ability to generalize survey results, to some degree for some questions, from the sample to the study's target population (Salant & Dillman, 1994; Dillman, 2014; Stoop, 2004; Fillion, 1976; Dey, 1997). If non-respondents are found to differ from respondents in meaningful ways, care should be taken when interpreting survey responses, as they may over-represent some segments of the target population to some degree for some questions and may under-represent other segments of the population to some degree for some questions.

To check for non-response bias and help inform the interpretation of results that may be affected by non-response bias, this study used answers to five, pre-selected non-response bias questions and one observable characteristic of the contacted visitor to compare respondents with non-respondents. After being contacted to participate in the survey, an interview, lasting approximately two minutes, was conducted with all contacted visitor groups regardless of whether or not they agreed to participate in the study. The interview included the following five questions used for evaluation of non-response bias:

1. How many adults, 18 years and older, are in your group?
2. How many children (under 18 years) are in your group?
3. On this visit to Wind Cave National Park, did you, or do you plan to participate in a cave tour?
4. On this trip, how much time did you spend within Wind Cave National Park?
5. What is your state of residence (if you live in the U.S.) or country of residence (if do not live in the U.S.)?

In addition to the five, pre-selected non-response bias questions, the gender of the person in the group who was first contacted by the survey administrator was observed and recorded.

An effort was made to obtain answers to the non-response bias questions from all visitor groups contacted, including those that declined to participate in the survey. Responses were obtained from most of the participating visitor groups and from many, but not all, of those that declined to participate in the study. When the survey administrator was unable to obtain responses to the non-response bias questions, it was often because the approached contact refused all further contact from the administrator after the initial refusal, usually with no reason provided. These

instances were defined as “hard refusals”. Additionally, due to the use of vehicle-based intercept methods for this study, there were times when study administrators were unable to pull vehicles over despite employing best practices for conducting a vehicle-based survey intercept. These instances were defined as “drive-by refusals”. Both “hard refusals” and “drive-by refusals” were recorded as refusals without non-response bias questions for the non-response bias analysis.

Ideally, responses or observed estimates for non-response bias variables should be collected from all respondents and non-respondents. The collection of information from all contacted individuals provides the best comparison of characteristics between the respondent and non-respondent populations. More practically, a majority of responses or observed estimates must be present to adequately characterize both the respondent and non-respondent populations. In this study, 70% was identified as the minimum percentage of valid values for non-response variables needed for both respondent and non-respondent populations in order to adequately characterize the populations on a given non-response variable.³

There were fewer than 70% valid values among respondents and/or non-respondents for number of children within group (77% and 62%, respectively); therefore, this variable was excluded from the non-response bias analysis (Table 4). There were 70% or more valid values among respondent and non-respondents for all other variables. Correspondingly, these five variables were used for non-response bias analysis.

TABLE 4: NUMBER AND PERCENTAGE OF RESPONDENTS AND NON-RESPONDENTS WITH VALID VALUES FOR NON-RESPONSE VARIABLES

Variable	RESPONDENTS (N=544)		NON-RESPONDENTS (N=499)	
	Valid N	Valid Percent	Valid N	Valid Percent
Initial Contact Gender	539	99%	411	82%
Number of Adults in Group	543	100%	386	77%
Number of Children in Group	418	77%	310	62%
Participation in Cave Tour	539	99%	385	77%
Trip Length	540	99%	382	77%
State or Country of Residence	542	100%	384	77%

Chi-square tests of independence were used to test for differences between respondents and non-respondents. Values for the number of adults in the visitor group were collapsed into the following four categories: groups with one adult, groups with two adults, groups with three or four adults, and groups with five or more adults. Values for trip length were collapsed into two

³ The Office of Management and Budget Standards and Guidelines for Statistics Surveys (2006) suggest that any survey item with at least 70% non-missing data can be presumed to reflect the entire data set (i.e., for such items, any differences between the subjects with data and those without data are negligible).



categories: less than one day and one day or more. Responses for state or country of residence were collapsed into three categories: in state visitor, out of state visitor, and international visitor.

A Bonferroni correction was applied to account for the fact that five simultaneous statistical tests were conducted with the same data set. The Bonferroni correction minimizes the likelihood of concluding from the results of the statistical tests that there are differences between respondents and non-respondents, when there actually are no differences (i.e., minimizes the probability of making a Type I error). With the Bonferroni correction applied in this analysis, statistical test results with p-values of less than 0.010 are assumed to be statistically significant.

Results of the chi-square tests in Table 5 through Table 9 suggest that respondents and non-respondents do not differ significantly, with respect to initial contact gender ($p = 0.742$), number of adults within group ($p = 0.187$), planned or actual participation in a cave tour ($p = 0.016$), trip length ($p = 0.013$), or state or country of residence ($p = 0.023$). These results provide no compelling evidence of non-response bias related to the initial contact gender, the number of adults in visitor groups, planned or actual participation in a cave tour, trip length, or state or country of residence within the survey sample.

TABLE 5: INITIAL CONTACT GENDER COMPARISON BETWEEN RESPONDENTS AND NON-RESPONDENTS

RESPONDENTS (N=539)			NON-RESPONDENTS (N=411)	
Response	Frequency	Percent	Frequency	Percent
Male	327	61%	245	60%
Female	212	39%	166	40%
p-value (Chi-square)			0.742 (0.109)	

TABLE 6: NUMBER OF ADULT GROUP MEMBERS COMPARISON BETWEEN RESPONDENTS AND NON-RESPONDENTS

RESPONDENTS (N=543)			NON-RESPONDENTS (N=386)	
Response	Frequency	Percent	Frequency	Percent
1 adult	52	10%	37	10%
2 adults	407	75%	271	70%
3 or 4 adults	68	13%	68	18%
5 or more adults	16	3%	10	3%
p-value (Chi-square)			0.187 (4.797)	

TABLE 7: ACTUAL OR PLANNED PARTICIPATION IN CAVE TOUR COMPARISON BETWEEN RESPONDENTS AND NON-RESPONDENTS

RESPONDENTS (N=531)			NON-RESPONDENTS (N=382)	
Response	Frequency	Percent	Frequency	Percent
Yes	205	39%	118	31%
No	326	61%	264	69%
p-value (Chi-square)			0.016 (5.786)	

TABLE 8: TRIP LENGTH COMPARISON BETWEEN RESPONDENTS AND NON-RESPONDENTS

RESPONDENTS (N=540)			NON-RESPONDENTS (N=382)	
Response	Frequency	Percent	Frequency	Percent
Less than 1 day	295	55%	240	63%
1 day or more	245	45%	142	37%
p-value (Chi-square)			0.013 (6.173)	

TABLE 9: STATE OR COUNTRY OF RESIDENCE COMPARISON BETWEEN RESPONDENTS AND NON-RESPONDENTS

RESPONDENTS (N=542)			NON-RESPONDENTS (N=384)	
Response	Frequency	Percent	Frequency	Percent
In state	56	10%	40	10%
Out of state	464	86%	312	81%
International	22	4%	32	8%
p-value (Chi-square)			0.023 (7.553)	

In summary, no significant differences were found between respondents and non-respondents, with respect to initial contact gender, number of adults in group, planned or actual participation in a cave tour, trip length, and state or country of residence. However, the non-response bias analysis conducted in this study is limited to testing for differences between respondents and non-respondents based on five of six characteristics for which there were sufficient valid values to conduct statistical tests.

Data Analysis

R-Studio was used for data analysis. For all questions where pre-defined response options were provided, frequencies are reported. Descriptive statistics (mean, median, standard deviation) are presented in Appendix A for those variables for which measures of central tendency can be computed. For all open-ended questions and questions with open-ended response options, verbatim visitor comments are reported in the stand-alone *Visitor Comments Appendix*.

Limitations

This study has limitations that should be considered when interpreting the results.

1. The survey was self-administered. Respondents completed the questionnaire after an unknown amount of time after the visit, which may have affected recall to some degree. To the extent respondents' recall was affected, it is possible some of their responses may not fully reflect actual behavior.
2. The data reflect visitor use patterns as collected during the study period of August 17 through August 26, 2018. The results present a 'snapshot-in-time' and do not necessarily apply to visitor groups during other times of the year.
3. Caution is advised when interpreting any data with a sample size of less than 30, as the results are statistically unreliable. Whenever the sample size is less than 30, the word "CAUTION!" is included in the graph, figure, table, or text.
4. Sample size may vary for some questions, due to item non-response (i.e., one or more questions left blank by a respondent). Therefore, refer to both the percentage and sample sizes when interpreting the results.

Special Conditions

On several occasions on August 19 and August 26, bison wandered close to survey intercept locations and disrupted survey administration for up to 16 minutes while the survey administrator waited for the animals to clear the area. Survey administration was interrupted in a similar fashion by a coyote for 8 minutes on August 22.

2.2 CHARACTERIZATION OF NON-RECREATIONAL VISITORS

During all days and times when on-site sampling was conducted for the recreational visitor survey (see Table 1), field staff collected additional data needed to characterize non-recreational visitors. As noted, first-after-last sampling was used to intercept as many vehicles passing the sampling location as possible, with the exclusion of obviously commercial vehicles (e.g., dump trucks, semi-trailer trucks, and express delivery trucks), which were allowed to pass by the sampling location but recorded on a contact log form. Visitor groups in vehicles intercepted by field staff were identified as either recreational or non-recreational by asking what brought them to the park that day. All visitor groups classified as non-recreational were asked to answer a short series of questions about their trip origin, trip destination, trip purpose, and length of stay in the park. All responses were recorded by the survey administrator directly on the contact log form.

Data from contact log forms were entered into an Excel spreadsheet by two separate data entry technicians. After independent double entry of the survey data was completed, the results were compared. A data entry supervisor noted any differences, identified the correct values by referencing the original paper forms, and entered the correct values into the database. The double-entered dataset was subjected to additional cleaning and proofing using R-Studio statistical software, which included identification and correction of invalid values.

Data analysis was conducted using R-Studio. First, the contact log data were evaluated to determine the number of commercial vehicles that passed by during survey administration (i.e., vehicles that field staff did not attempt to intercept because they were obviously commercial). Second, for visitor groups that were intercepted, the percentage that were in the park for non-recreational purposes was determined. Finally, for non-recreational visitor groups intercepted, frequencies were generated for trip origin/destination, arrival time, and length of stay.

3.0 RESULTS

This section of the report describes the results of the statistical analyses. The recreational survey results are presented first, followed by the results of the characterization of non-recreational visitation.

3.1 RECREATIONAL SURVEY RESULTS

Group and Visitor Characteristics

Visitor group size

Question 1

Including yourself, how many people were in your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey? (Please include only direct travel companions; do not include people that are part of a larger tour group.) Fill in the blank.

Results (Figure 2)

- 61% of visitor groups consisted of two members.

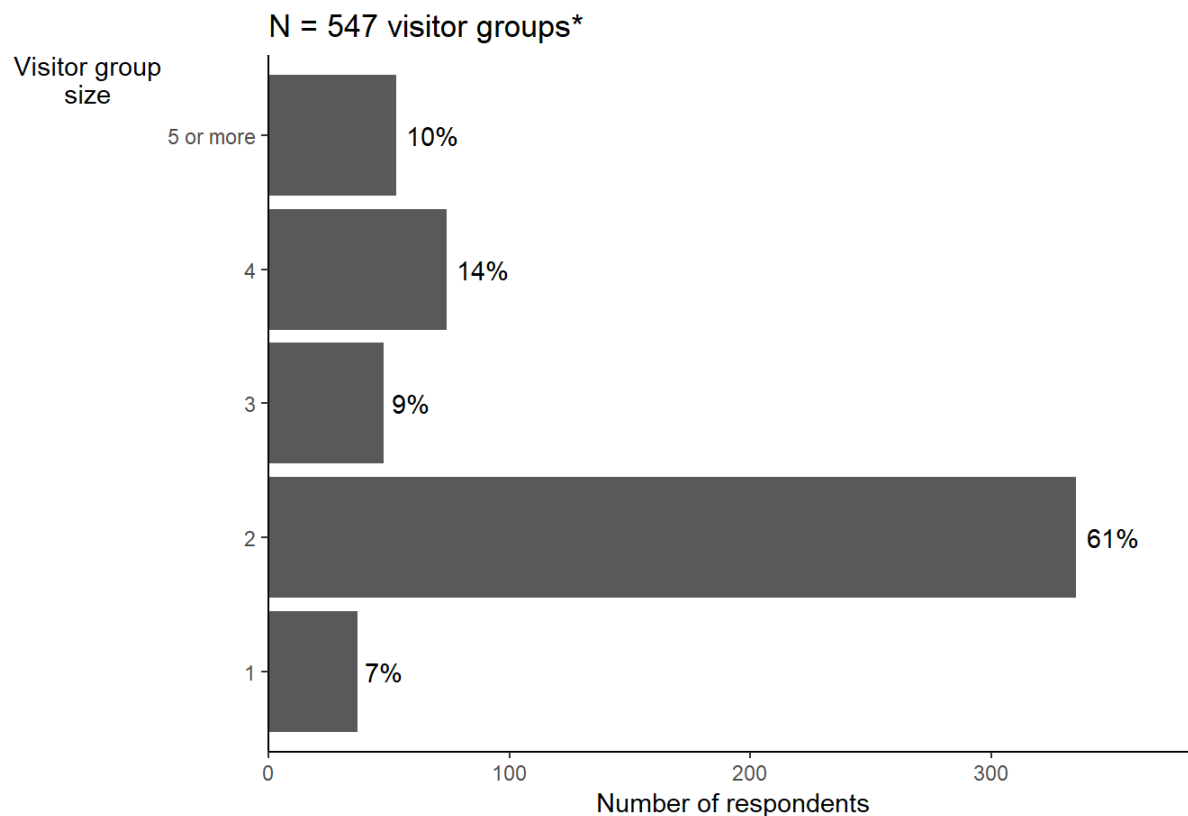


FIGURE 2: VISITOR GROUP SIZE



Number of adults within group

Question 1

Including yourself, how many adults were in your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey? (Please include only direct travel companions; do not include people that are part of a larger tour group.) Fill in the blank.

Results (Figure 3)

- 76% of visitor groups consisted of two adults.

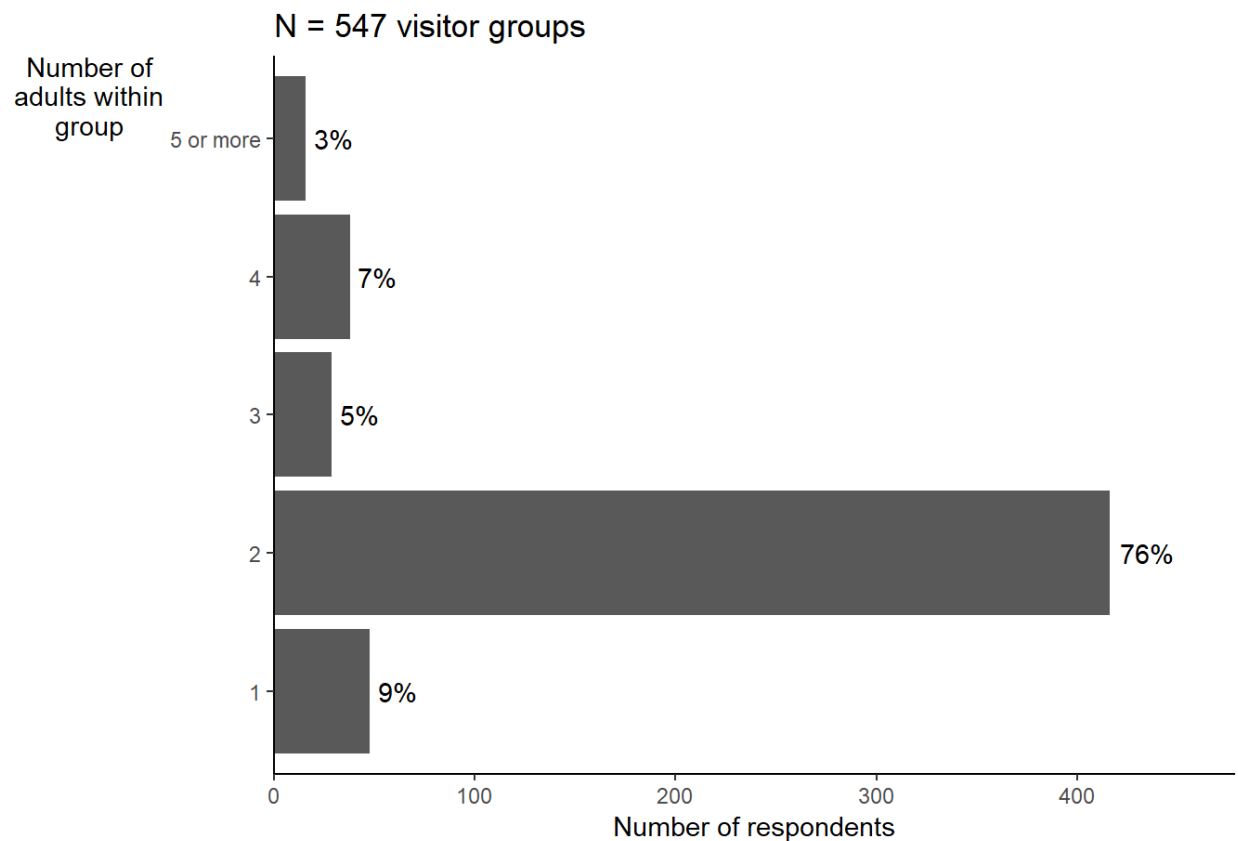


FIGURE 3: NUMBER OF ADULTS WITHIN GROUP

Number of children within group

Question 1

Including yourself, how many children were in your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey? (Please include only direct travel companions; do not include people that are part of a larger tour group.) Fill in the blank.

Results (Figure 4)

- The majority of visitor groups (78%) did not have children.

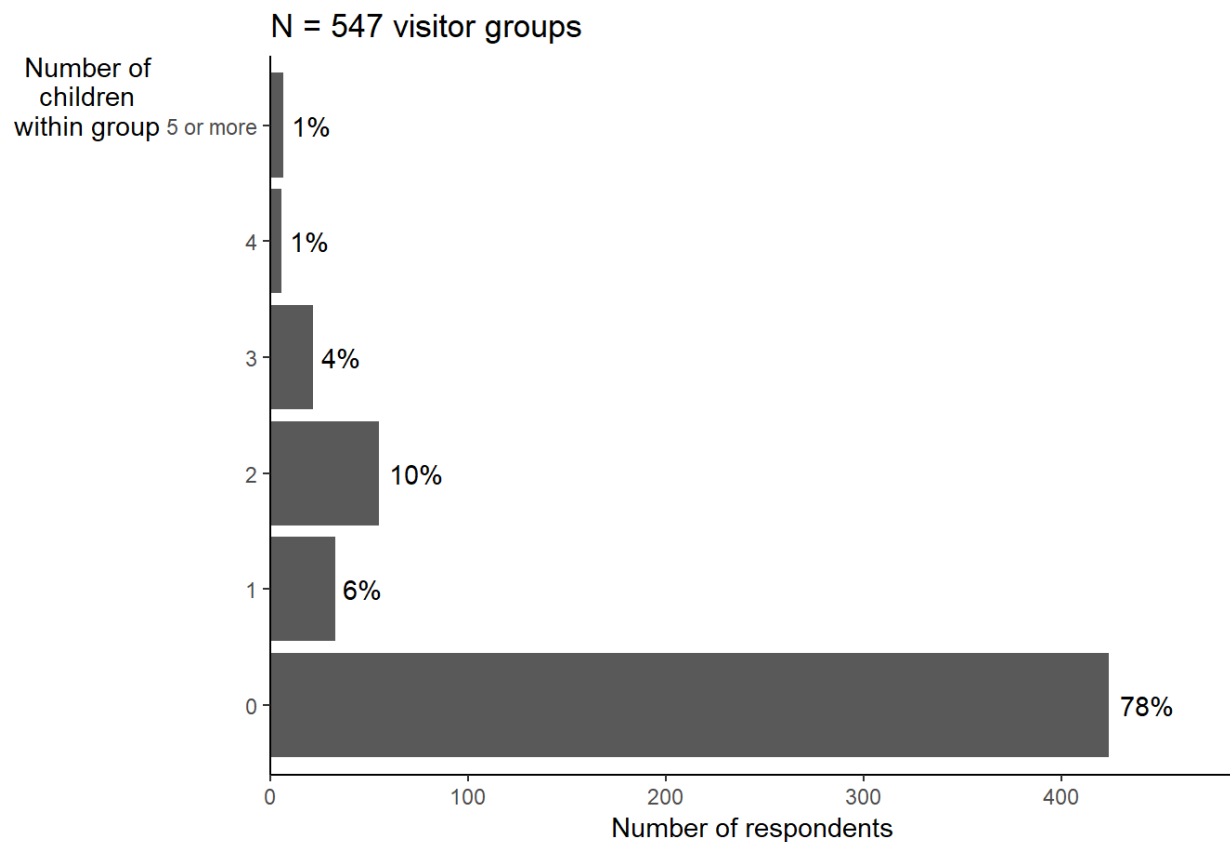


FIGURE 4: NUMBER OF CHILDREN WITHIN GROUP

Visitor group type

Question 2

What type of group were you with, during your visit to Wind Cave National Park on the day you were contacted for this survey? Please mark one.

Results (Figure 5)

- 71% of visitor groups were made up of family.
- 15% of visitor groups consisted of individuals.

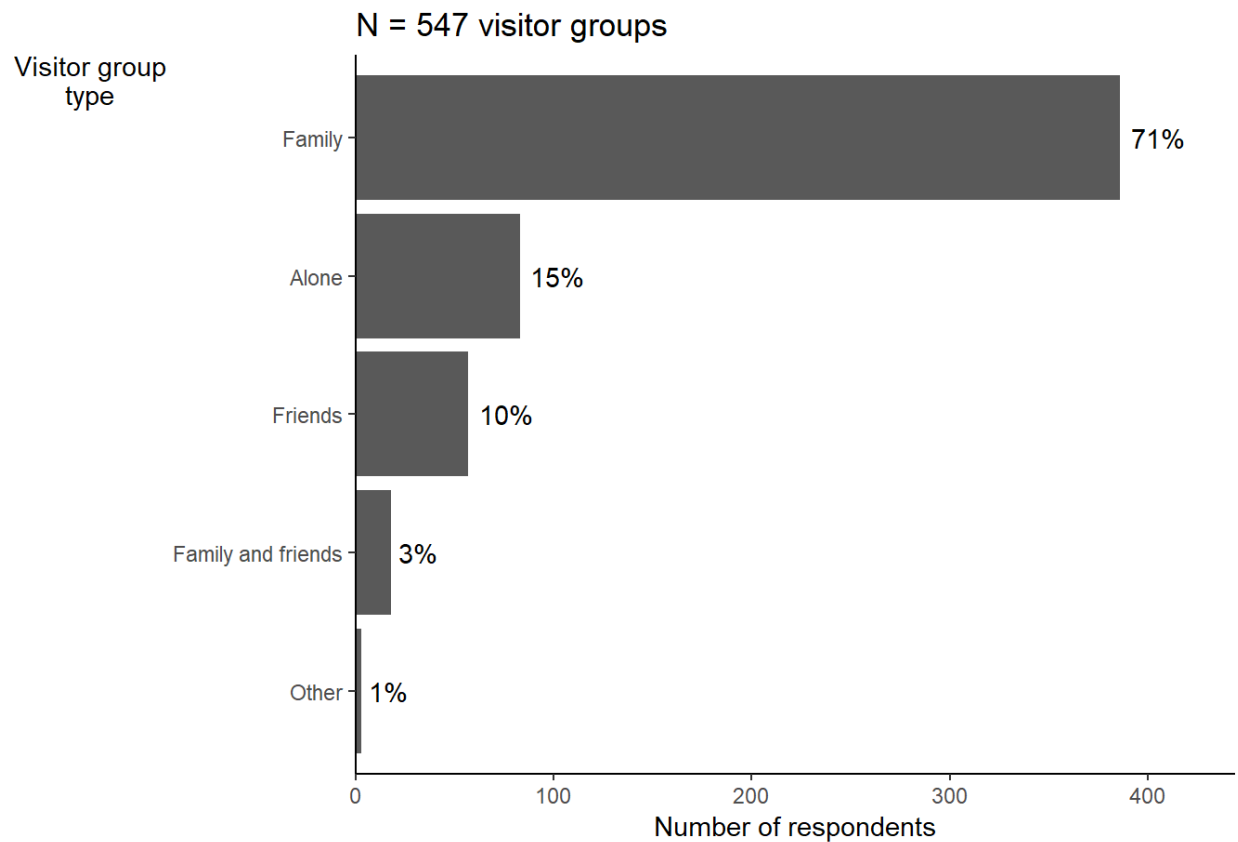


FIGURE 5: VISITOR GROUP TYPE

Visitor age

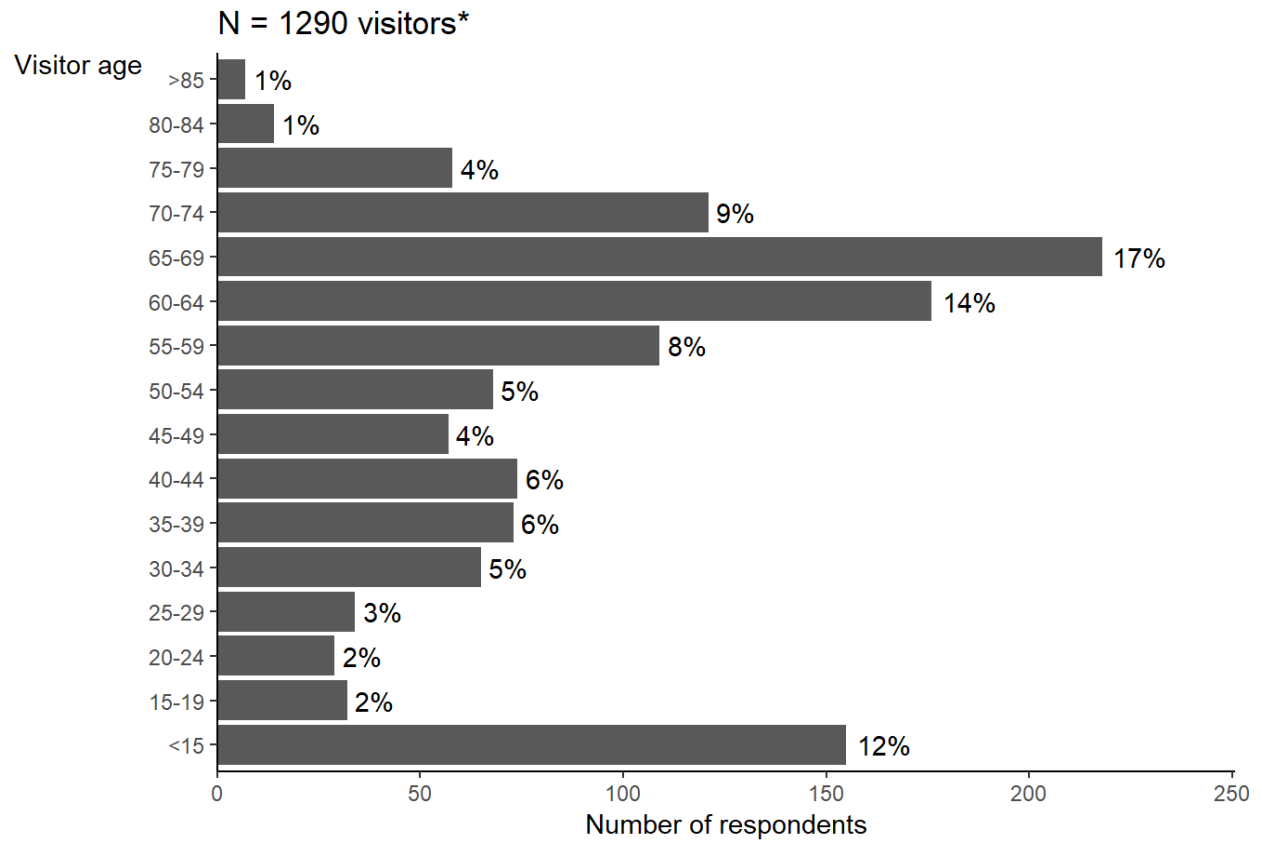
Question 27

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. Fill in the blank.

Note: Respondents were asked to report current age for themselves and up to three other members from their visitor group.

Results (Figure 6)

- Visitor ages ranged from less than one year old to 95 years old.
- 32% of visitors were 65 years old or older.
- 22% of visitors were 55 to 64 years old.
- 21% of visitors were 35 to 54 years old.
- 10% of visitors were 20 to 34 years old.
- 14% of visitors were 19 years old or younger.

**FIGURE 6: VISITOR AGE**

Visitor gender

Question 28

For your personal group during your visit to Wind Cave National park on the day you were contacted for this survey, what is the gender and ethnicity of each member of your group? Please mark one for each group member, including yourself.

Note: Respondents were asked to report gender for themselves and up to three other members from their visitor group.

Results (Figure 7)

- 49% of visitors were female.
- 51% of visitors were male.

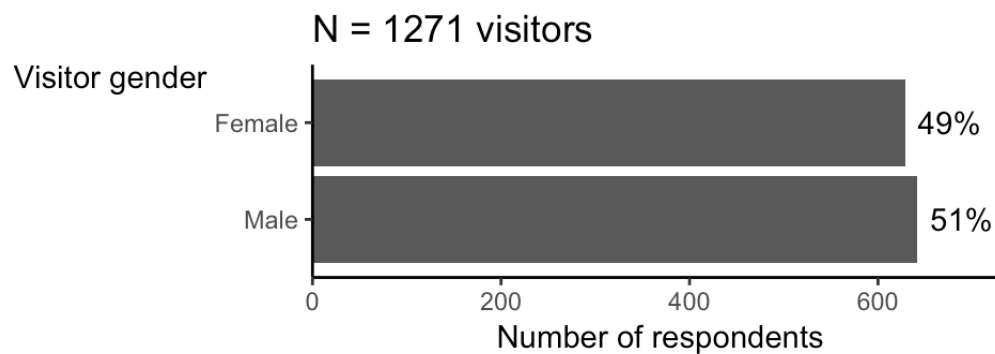


FIGURE 7: VISITOR GENDER

Visitor ethnicity

Question 28

For your personal group during your visit to Wind Cave National park on the day you were contacted for this survey, what is the gender and ethnicity of each member of your group? Please mark one for each group member, including yourself.

Note: Respondents were asked to report ethnicity for themselves and up to three other members from their visitor group.

Results (Figure 8)

- 2% of visitors were Hispanic or Latino.

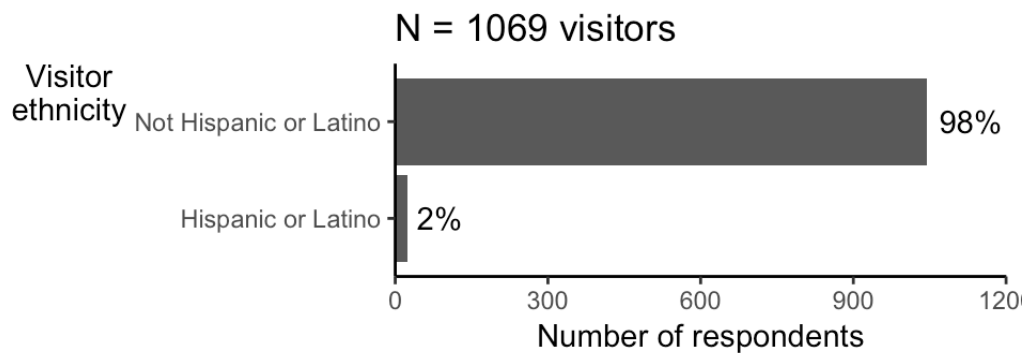


FIGURE 8: VISITOR ETHNICITY

Visitor race

Question 29

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, what is the race of each member of your group? Please mark one or more for each group member, including yourself.

Note: Respondents were asked to report race for themselves and up to three other members from their visitor group.

Results (Figure 9)

- 95% of visitors were white.
- Very few visitors were Asian (3%), American Indian or Alaska Native (2%), black or African American (<1%), or native Hawaiian or other Pacific Islander (<1%).

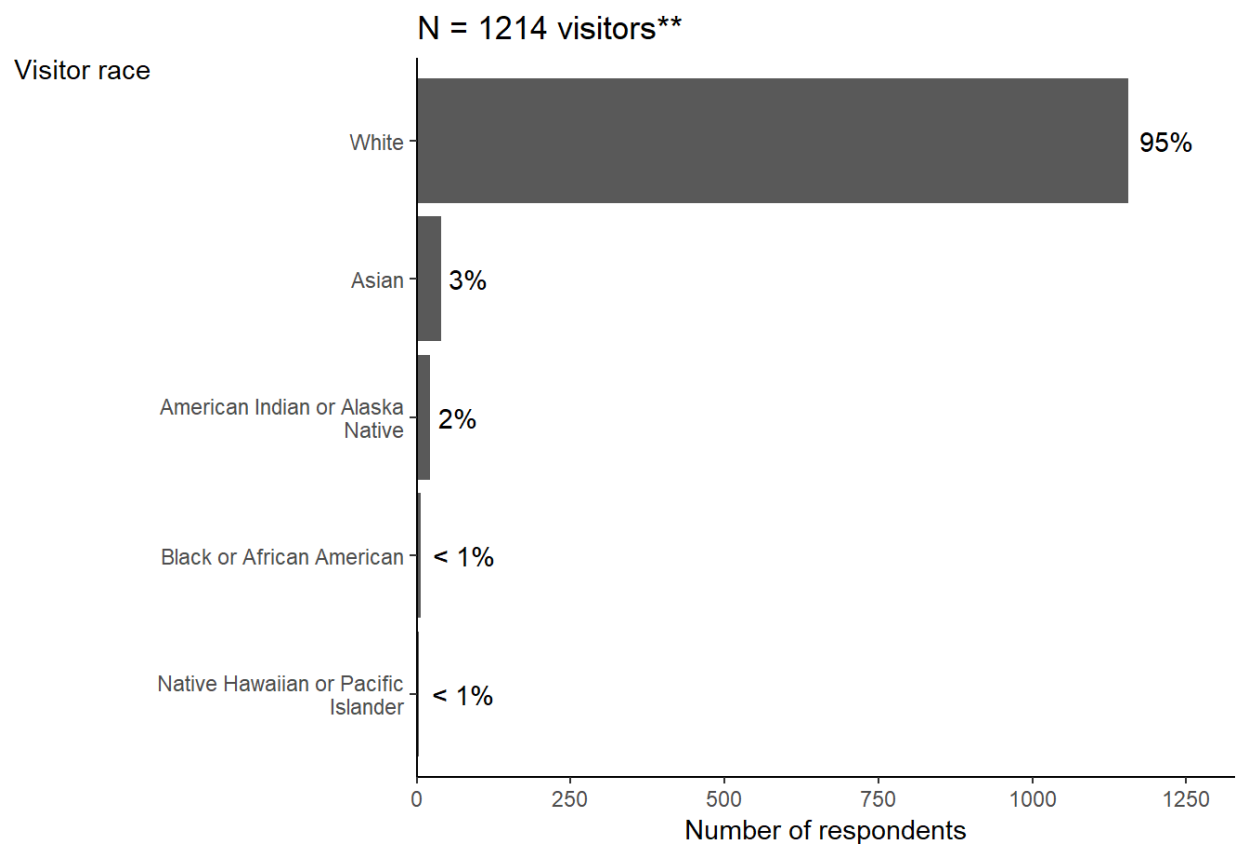


FIGURE 9: VISITOR RACE

Visitor speaking language

Question 36

When visiting an area such as Wind Cave National Park, what language do you personally prefer to use? Please mark one.

Results (Figure 10)

- 99% of visitors reported that English was their preferred language for speaking.

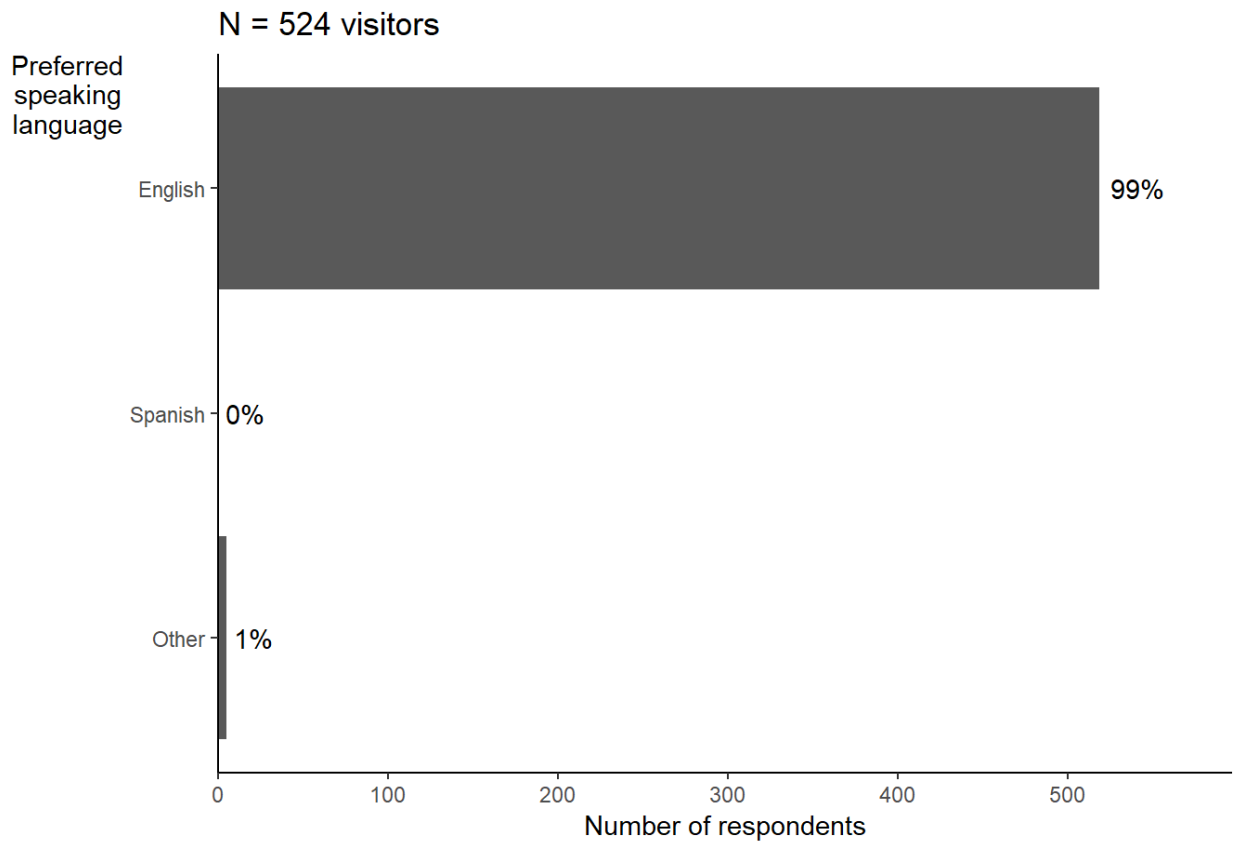


FIGURE 10: PREFERRED SPEAKING LANGUAGE

Visitor reading language

Question 36

When visiting an area such as Wind Cave National Park, what language do you personally prefer to use? Please mark one.

Results (Figure 11)

- 99% of visitors reported that English was their preferred language for reading.

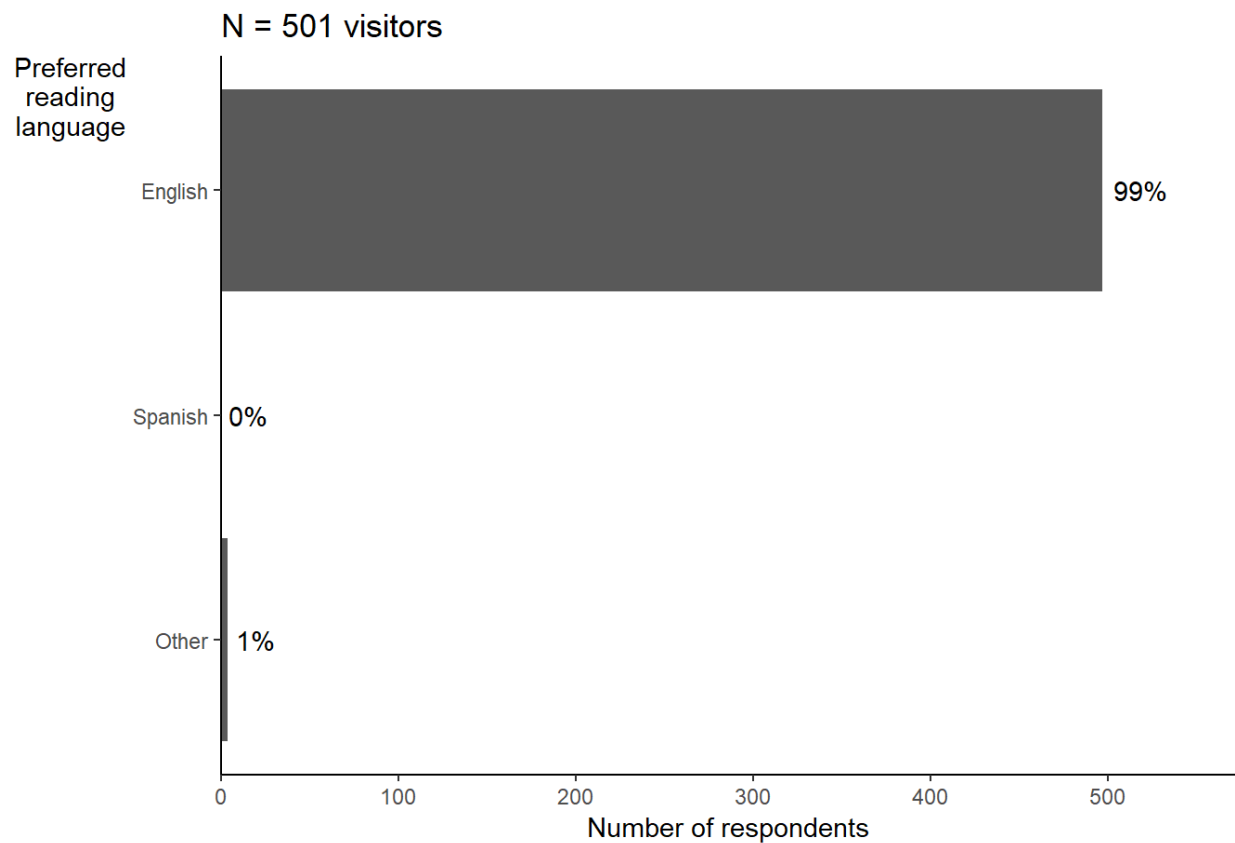


FIGURE 11: PREFERRED READING LANGUAGE

U.S. visitors' state of residence

Question 27

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. Fill in the blank.

Note: Respondents were asked to report the "U.S. ZIP code or name of country other than U.S." for themselves and up to three other members from their visitor group.

Results (Table 10 and Figure 12)

- U.S. visitors were from 44 states and comprised 96% of recreational visitors.
- 18% of U.S. visitors were from Minnesota.
- 10% of U.S. visitors were from Nebraska.
- Smaller proportions of visitors were from other U.S. states.

TABLE 10: UNITED STATES VISITORS BY STATE OF RESIDENCE

STATE	NUMBER OF VISITORS	PERCENT OF U.S. VISITORS N=1154 VISITORS*	PERCENT OF ALL VISITORS N=1201 VISITORS
Minnesota	212	18%	18%
Nebraska	116	10%	10%
South Dakota	104	9%	9%
Wisconsin	65	6%	5%
Colorado	63	5%	5%
Iowa	52	5%	4%
Texas	49	4%	4%
California	42	4%	3%
Michigan	38	3%	3%
Illinois	37	3%	3%
Kansas	36	3%	3%
Florida	25	2%	2%
Pennsylvania	22	2%	2%
Arizona	21	2%	2%
Washington	20	2%	2%
Ohio	19	2%	2%
Missouri	17	1%	1%
New York	17	1%	1%
North Dakota	16	1%	1%
Wyoming	15	1%	1%

STATE	NUMBER OF VISITORS	PERCENT OF U.S. VISITORS N=1154 VISITORS*	PERCENT OF ALL VISITORS N=1201 VISITORS
Indiana	14	1%	1%
North Carolina	14	1%	1%
Montana	13	1%	1%
Virginia	13	1%	1%
Oregon	12	1%	1%
Tennessee	12	1%	1%
Georgia	10	1%	1%
Oklahoma	10	1%	1%
16 other states	70	6%	6%

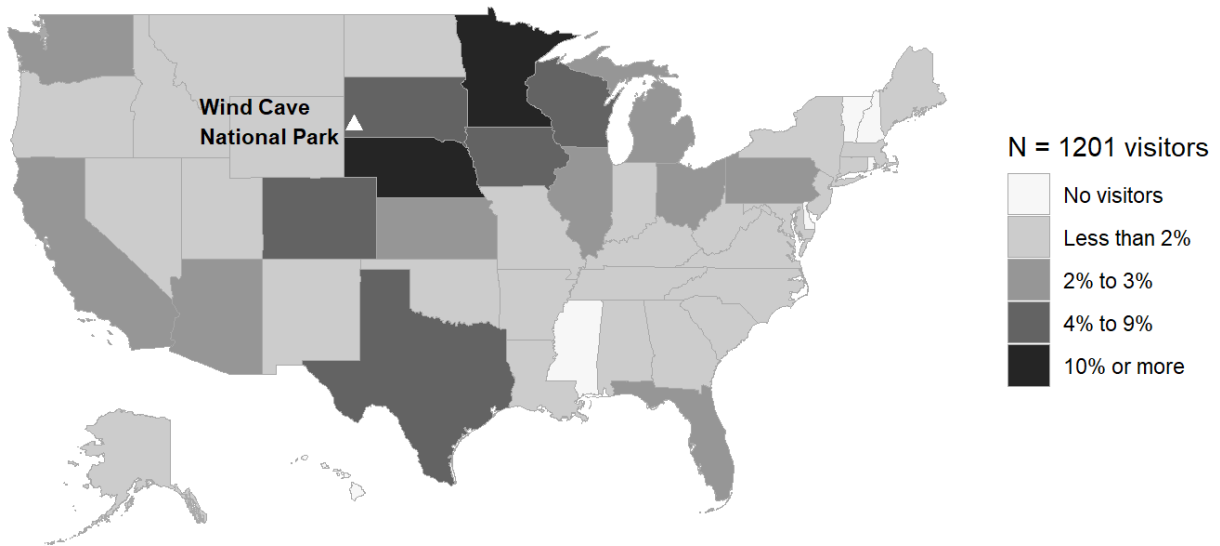


FIGURE 12: PROPORTION OF VISITORS BY STATE OF RESIDENCE

International visitors' country of residence

Question 27

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. Fill in the blank.

Note: Respondents were asked to report "U.S. ZIP code or name of country other than U.S." for themselves and up to three other members from their visitor group.

Results (Table 11)

- International visitors were from four countries and comprised 4% of recreational visitors.
- 30% of international visitors were from Canada.
- 26% of international visitors were from Germany.
- Smaller proportions were from other countries.

TABLE 11: INTERNATIONAL VISITORS BY COUNTRY OF RESIDENCE

COUNTRY	NUMBER OF VISITORS	PERCENT OF INTERNATIONAL VISITORS N=47 VISITORS*	PERCENT OF ALL VISITORS N =1201 VISITORS
Canada	14	30%	1%
Germany	12	26%	1%
Italy	9	19%	1%
United Kingdom	5	11%	<1%
South Africa	2	4%	<1%
Sweden	2	4%	<1%
Switzerland	2	4%	<1%
Poland	1	2%	<1%



Visitors who lived within local area surrounding the park

Question 19

Do you live within the defined 60-mile local area surrounding Wind Cave National Park? Please mark one.

The local area includes all communities within approximately 60 miles of Wind Cave National Park including Hot Springs, Custer, Edgemont, Keystone, Hill City, and the Rapid City area.

Results (Figure 13)

- 8% of visitors lived within the defined 60-mile local area surrounding the park.

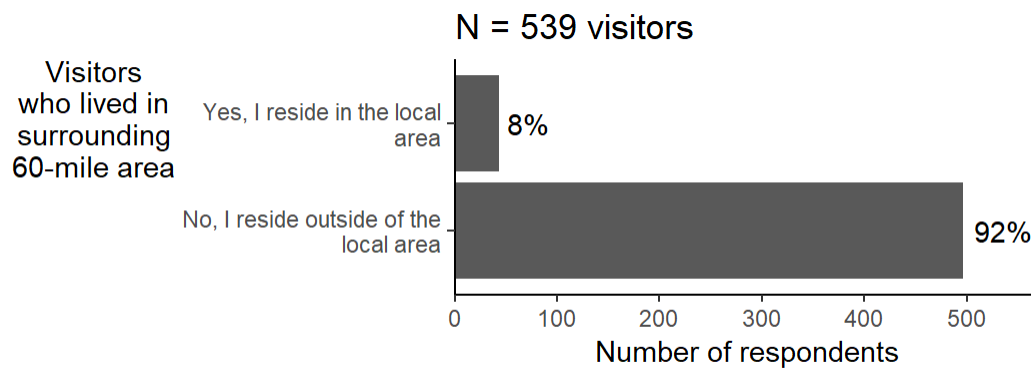


FIGURE 13: VISITORS WHO LIVED WITHIN LOCAL AREA SURROUNDING THE PARK

Visitor level of education

Question 30

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, what is the highest level of formal education completed by each member of your group? Please mark one for each group member, including yourself.

Note: Respondents were asked to report level of education for themselves and up to three other members from their visitor group.

Results (Figure 14)

- 34% of visitors graduated from a college, business, or trade school.
- 20% of visitors completed a master's, doctoral, or professional degree.
- 16% of visitors completed some college, business, or trade school.

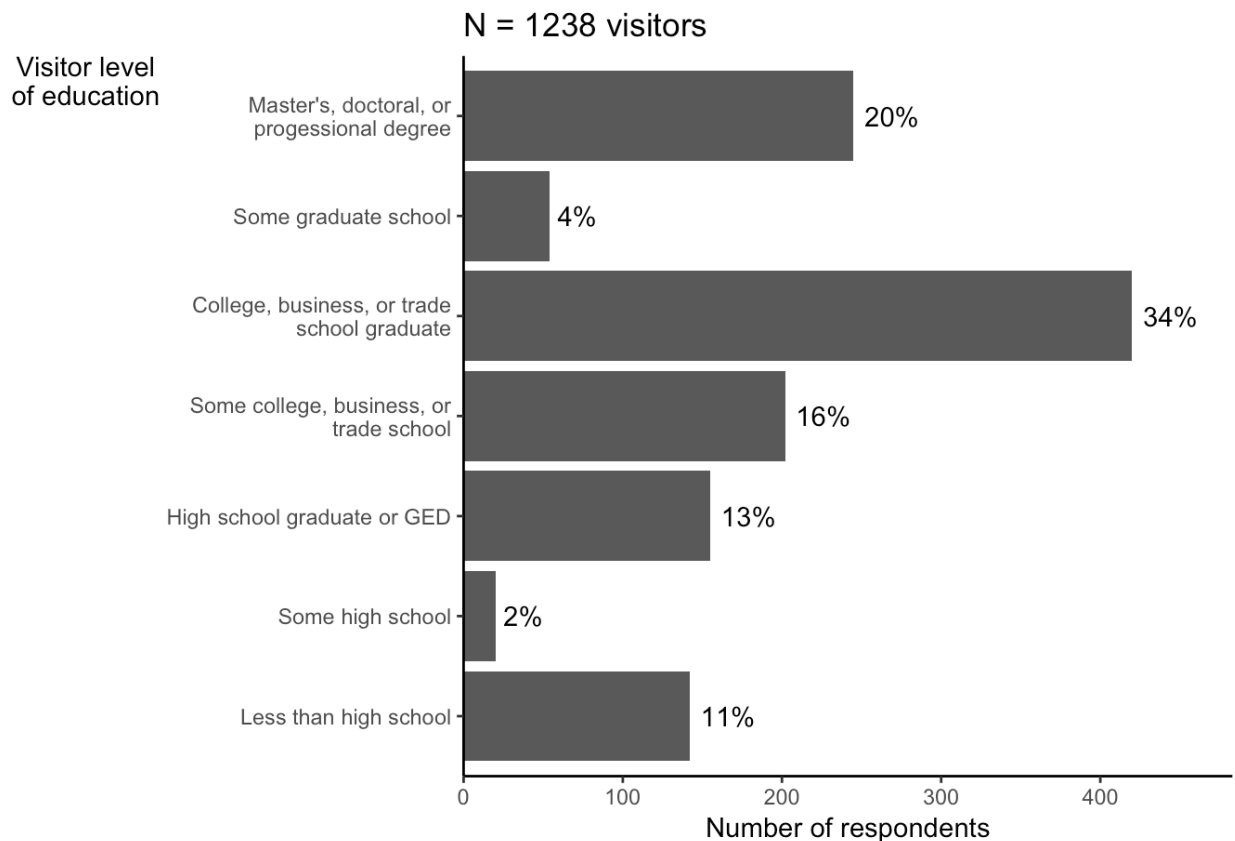


FIGURE 14: VISITOR LEVEL OF EDUCATION

Household income

Question 31

Which category best represents your (personal) annual household income? Please mark one.

Results (Figure 15)

- 19% of visitors did not wish to report their annual household income.
- 18% of visitors had an annual household income between \$75,000 and \$99,999.
- 16% of visitors had an annual household income between \$100,000 and \$149,999.
- 14% of visitors had an annual household income between \$50,000 and \$74,999.

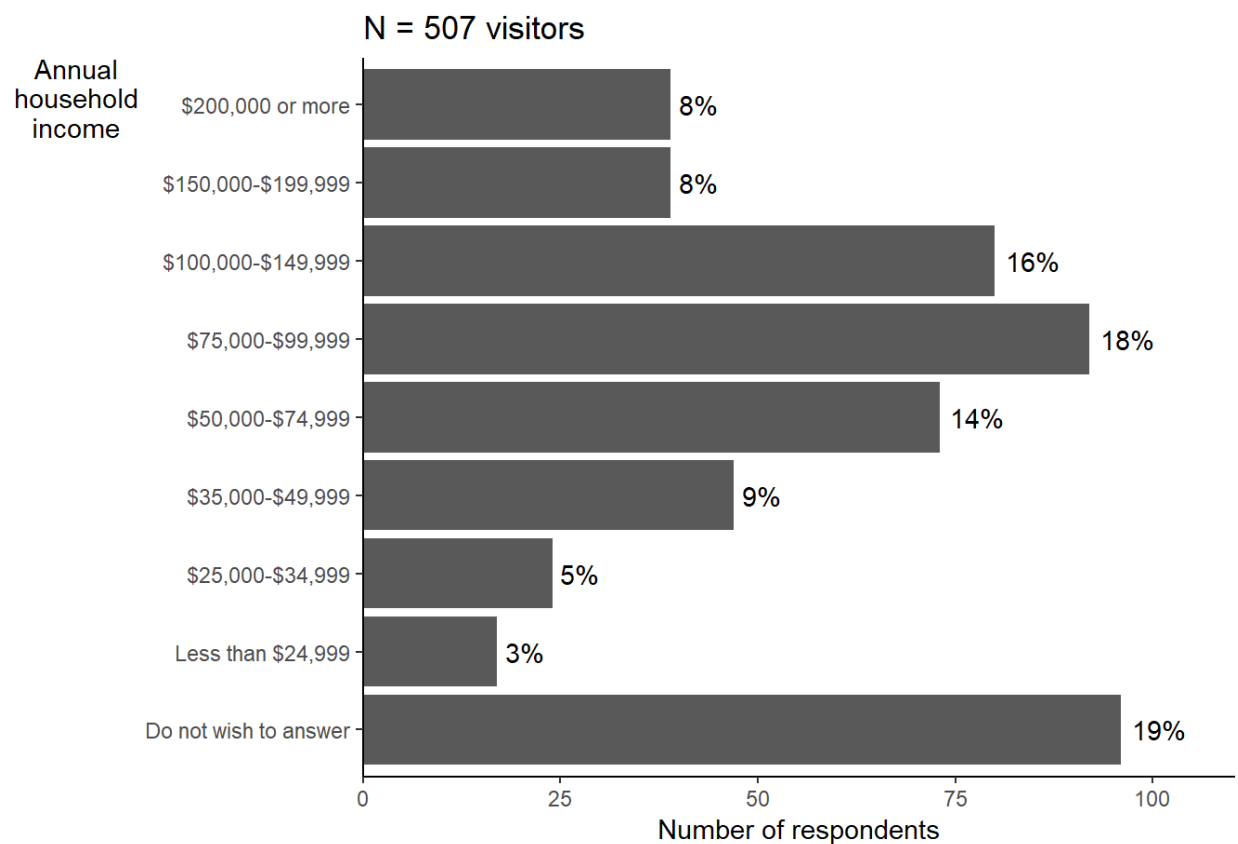


FIGURE 15: ANNUAL HOUSEHOLD INCOME



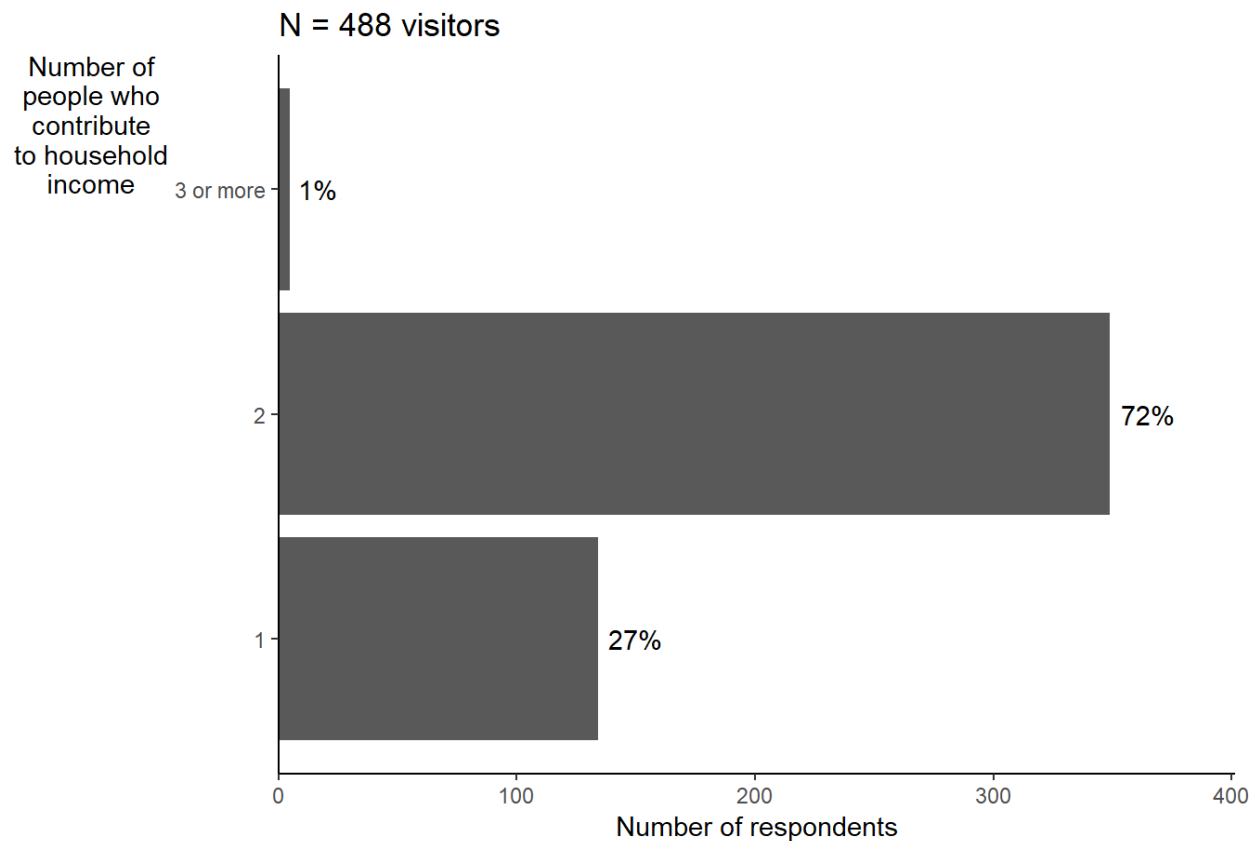
People who contribute to household income

Question 32

Including yourself, how many people contribute to this household income? Fill in the blank.

Results (Figure 16)

- 72% of visitors had two people contribute to their household income.
- 27% of visitors had one person contribute to their household income.

**FIGURE 16: NUMBER OF PEOPLE WHO CONTRIBUTE TO HOUSEHOLD INCOME**

Employment status

Question 33

Employment Status: Are you currently...? Please mark one.

Results (Figure 17)

- 44% of visitors were employed for wages.
- 43% of visitors were retired.

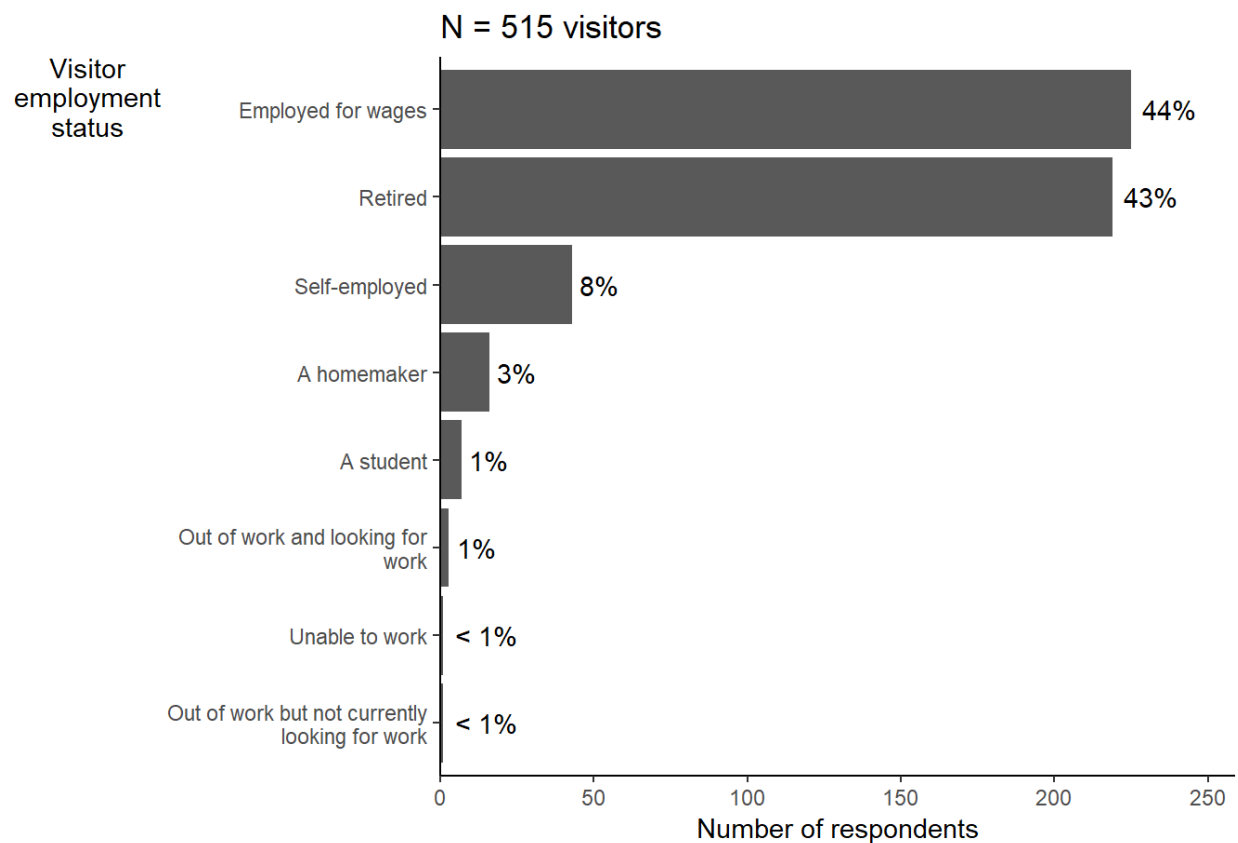


FIGURE 17: VISITOR EMPLOYMENT STATUS

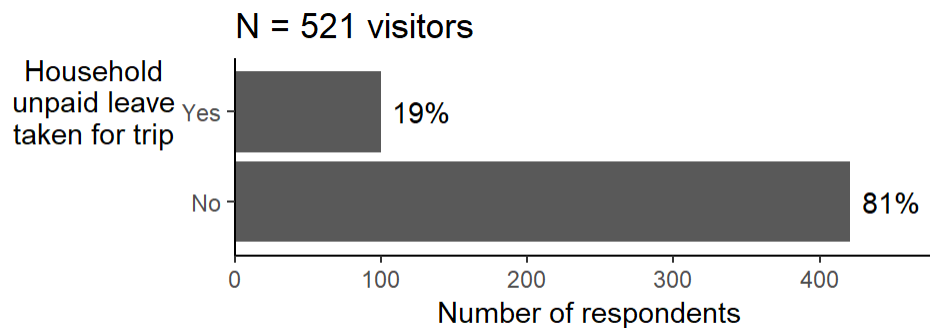
Unpaid vacation or unpaid time off from work taken by household

Question 34

Did your household take any unpaid vacation or take unpaid time off from work to come on this trip? Please mark one.

Results (Figure 18)

- 19% of visitors' households took unpaid vacation or unpaid time off from work.

**FIGURE 18: HOUSEHOLDS WHO TOOK UNPAID LEAVE**

Household size

Question 35

Including yourself, how many people are in your household? Fill in the blank.

Results (Figure 19)

- 59% of visitors reported living in a two-person household.
- 12% of visitors reported living in a one-person household.
- 12% of visitors reported living in a four-person household.

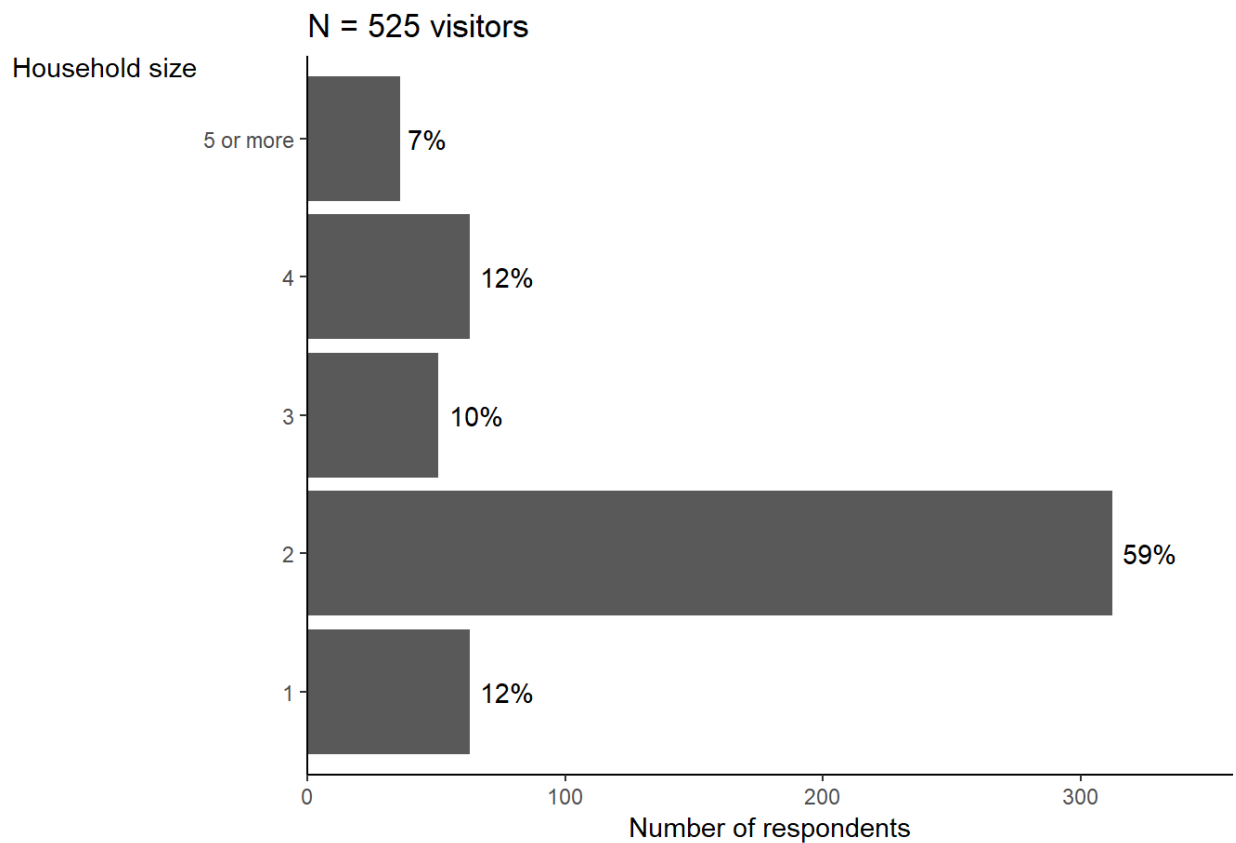


FIGURE 19: HOUSEHOLD SIZE



Frequency of visits to park

Question 27

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. Fill in the blank.

Note: Respondents were asked to report the number of visits to Wind Cave National Park in the last five years, including this trip, for themselves and for up to three other members from their visitor group.

Results (Figure 20)

- For 77% of visitors, this trip was their only visit to the park in the last five years.
- 23% of visitors visited the park one or more additional times in the last five years.

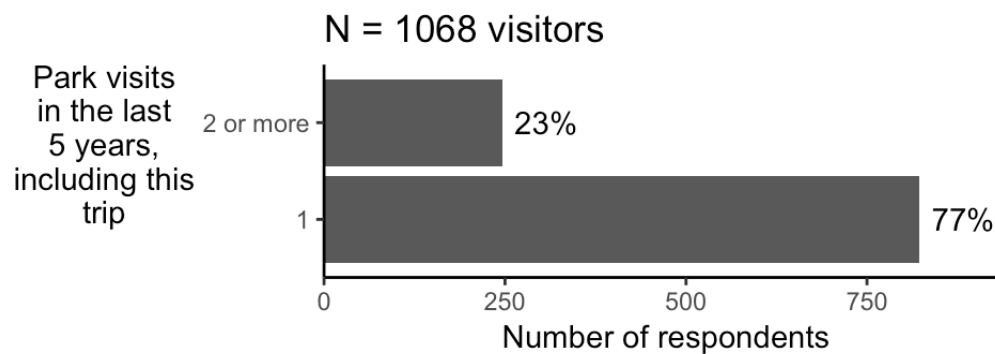


FIGURE 20: PARK VISITS IN LAST FIVE YEARS

Frequency of visits to other National Park Service sites

Question 27

For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. Fill in the blank.

Note: Respondents were asked to report the number of visits to other NPS sites in the last five years for themselves and for up to three other members from their visitor group.

Results (Figure 21)

- 92% of visitors reported visiting at least one other NPS site in the last five years.
- 56% of visitors reported visiting other NPS sites five or more times in the last five years.

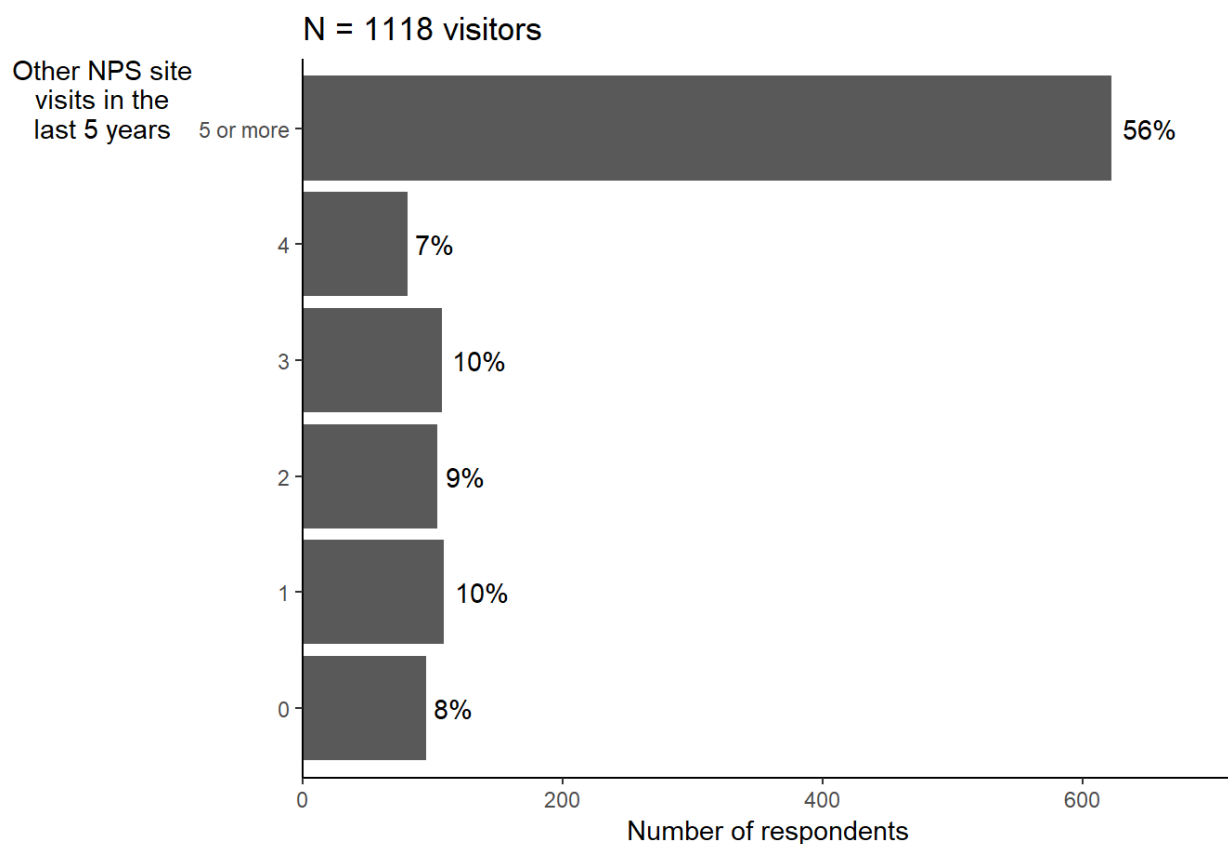


FIGURE 21: OTHER NPS SITE VISITS IN LAST 5 YEARS

Trip Description

Forms of transportation

Question 3

Please indicate all of the forms of transportation you personally used to travel from your home to Wind Cave National Park, on this trip. Please mark all that apply.

Results (Figure 22)

- 93% of visitors used a car, truck, or SUV to travel to the park.
- 13% of visitors used a recreational vehicle or motorhome to travel to the park.

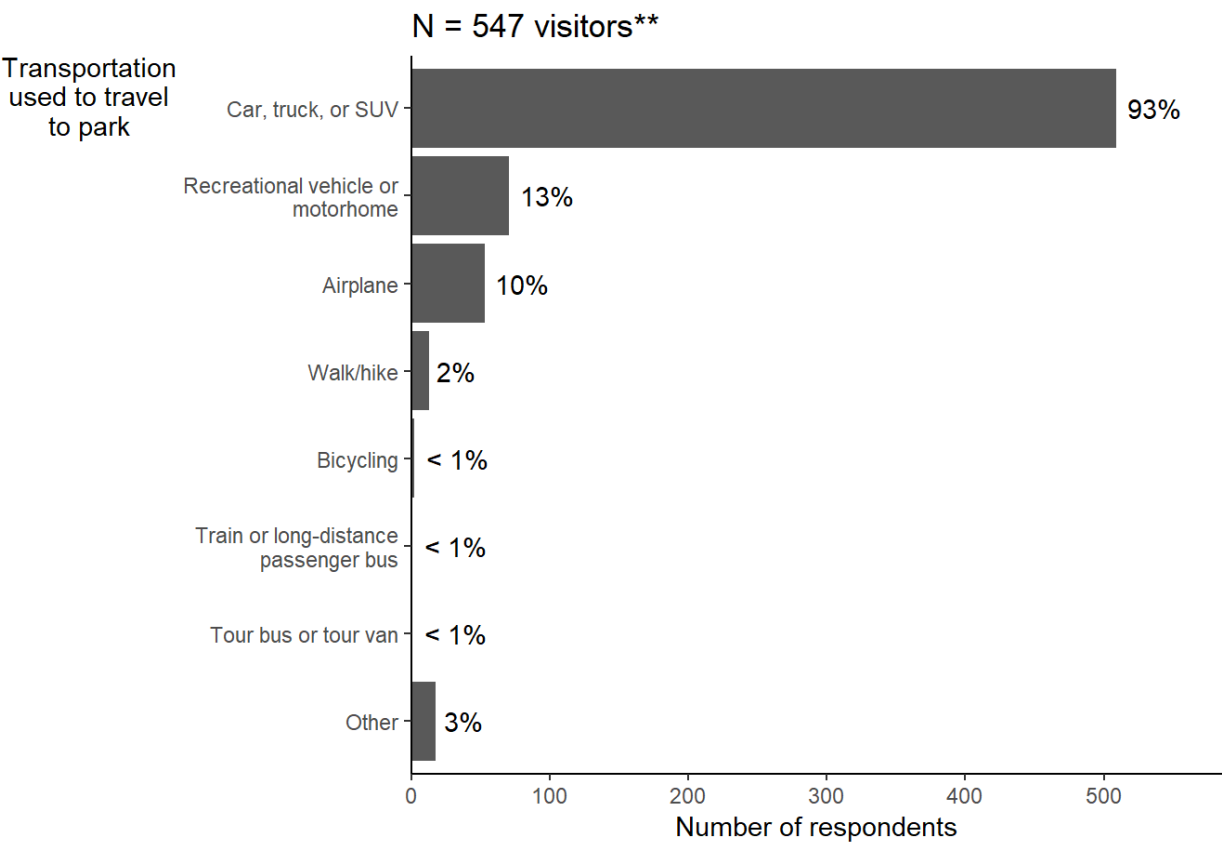


FIGURE 22: TRANSPORTATION USED TO TRAVEL TO PARK



*total percentages do not equal 100 due to rounding

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

Number of people in vehicle

Question 3 (for respondents who traveled in a car, truck, or SUV):

Number of people in vehicle, including you. Fill in the blank.

Results (Figure 23)

- Of visitors that traveled to the park in a car, truck, or SUV, 61% did so in a vehicle with two people.
- Of visitors that traveled to the park in a car, truck, or SUV, 14% did so in a vehicle with four people.

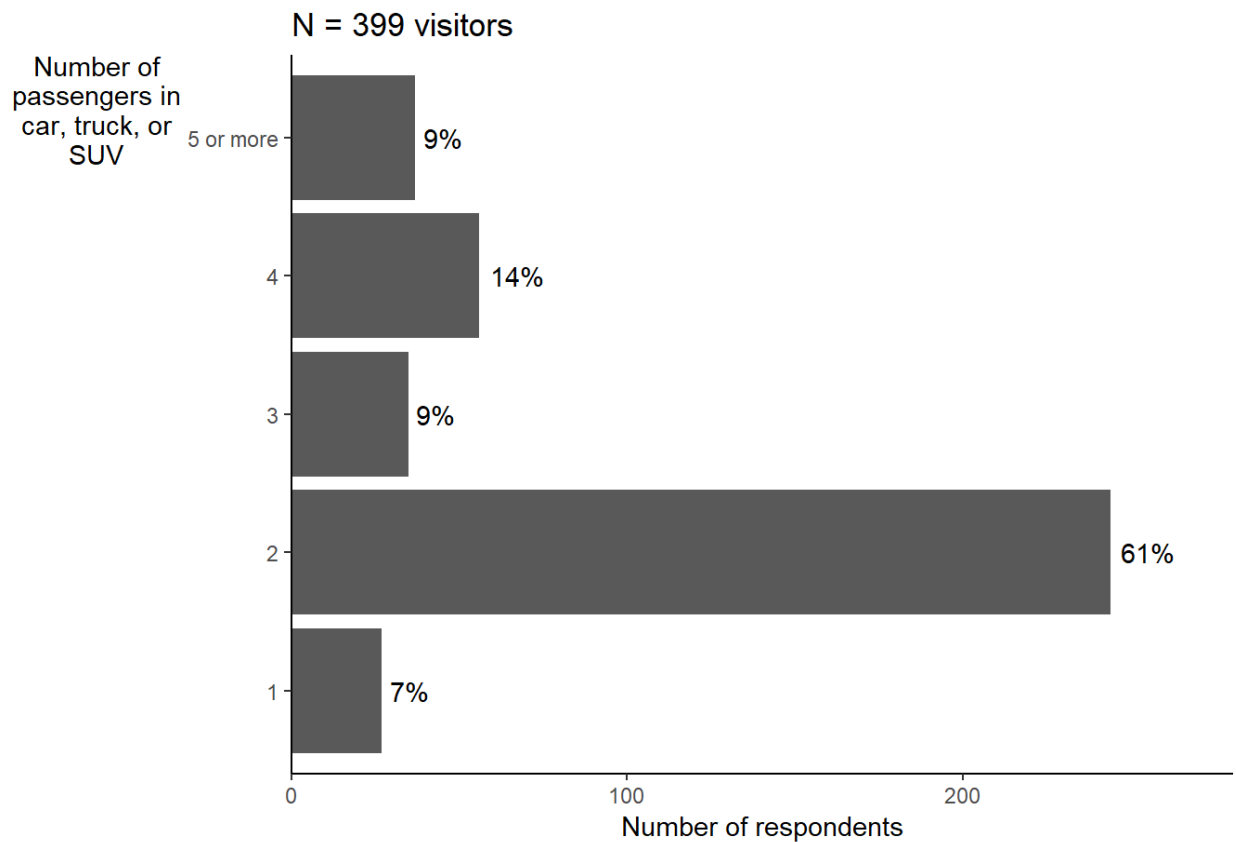


FIGURE 23: NUMBER OF PASSENGERS IN CAR, TRUCK, OR SUV



Hours traveled to park

Question 4

Approximately how many hours and miles from home did you travel one-way to get to Wind Cave National Park on this trip? Fill in the blank.

Results (Figure 24)

- 33% of visitors traveled 10 to 19 hours one-way to get to the park.
- 29% of visitors traveled 5 to 9 hours one-way to get to the park.

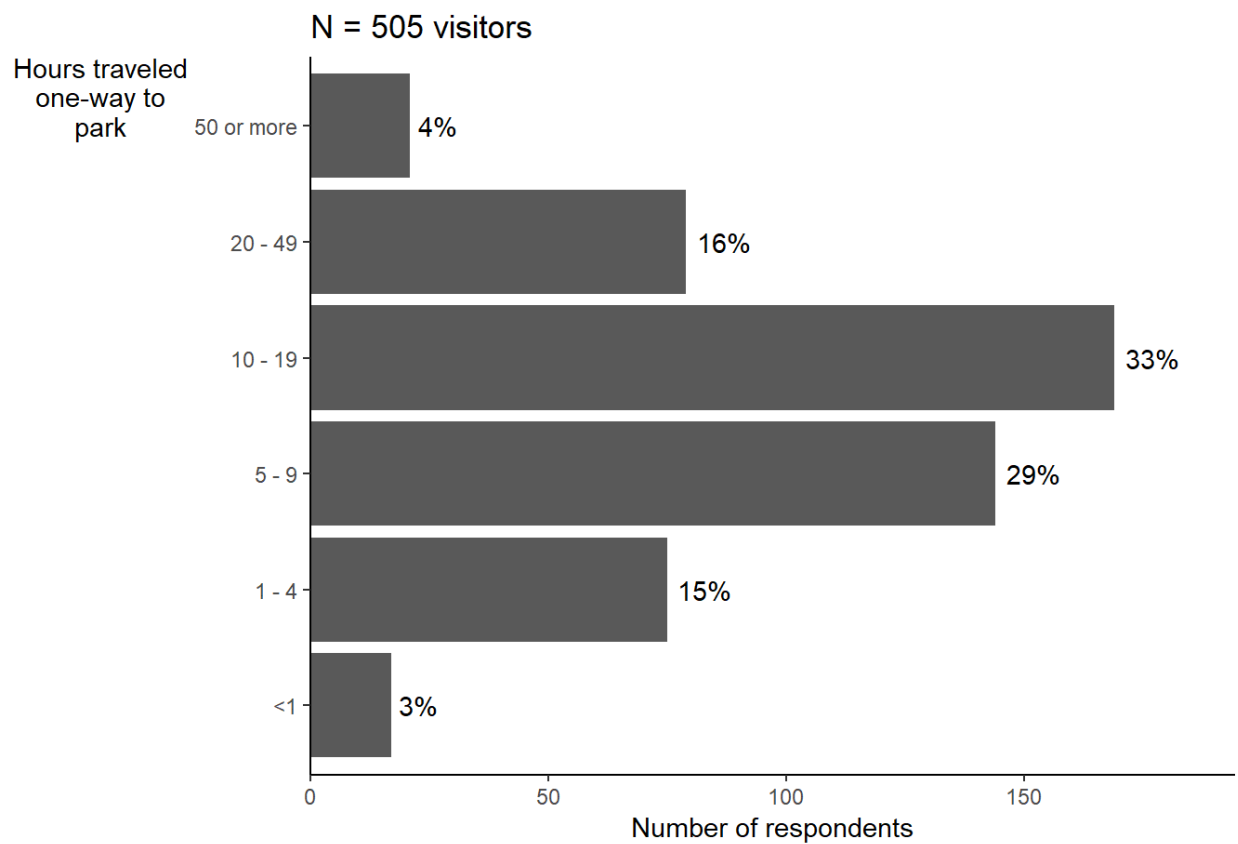


FIGURE 24: HOURS TRAVELED ONE-WAY TO PARK

Miles traveled to park

Question 4

Approximately how many hours and miles from home did you travel one-way to get to Wind Cave National Park on this trip? Fill in the blank.

Results (Figure 25)

- 32% of visitors traveled 500 to 999 miles one-way to the park.
- 25% of visitors traveled 1,000 to 1,999 one-way to the park.

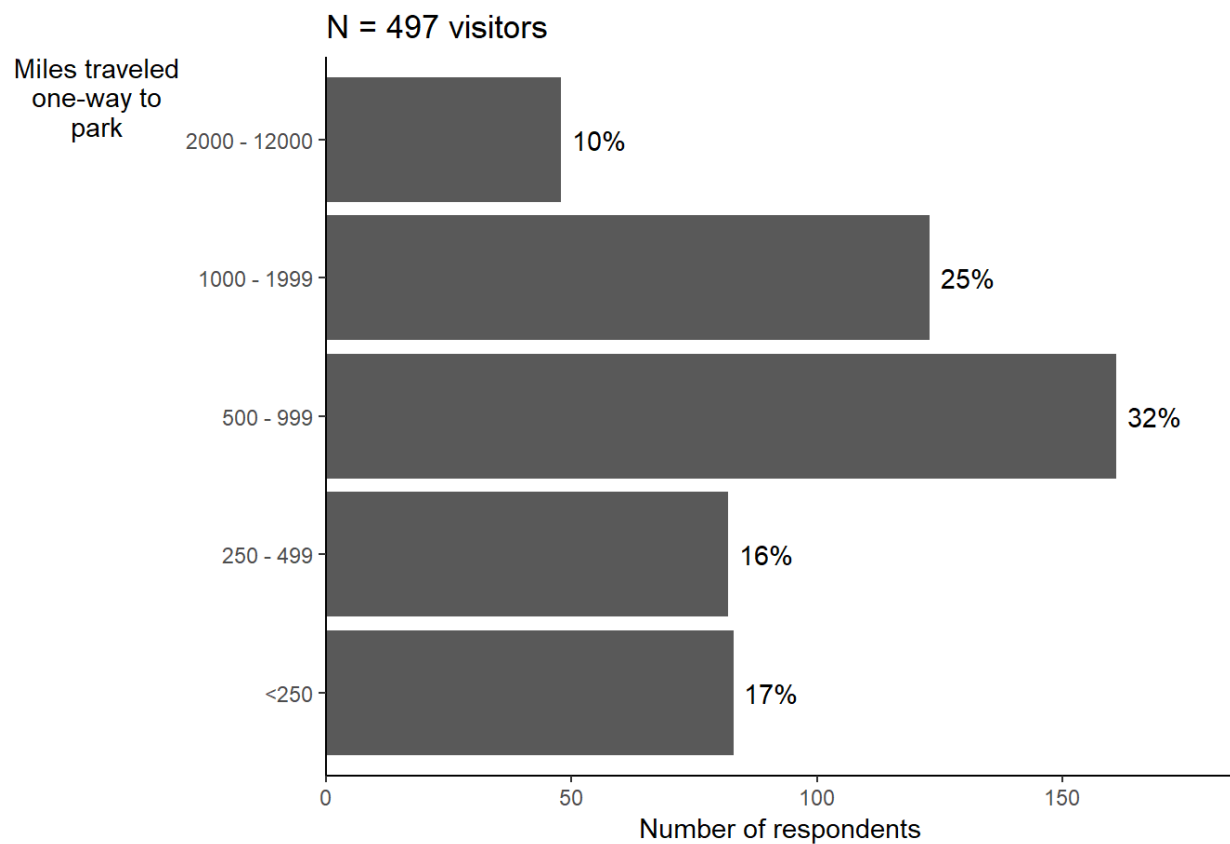


FIGURE 25: MILES TRAVELED ONE-WAY TO PARK

Length of stay in Wind Cave National Park

Question 5

On this trip, how much total time did you spend within Wind Cave National Park? Fill in the blank.

Number of hours, if one day or less

Results (Figure 26)

- 24% of visitors who spent one day or less in the park visited for one hour.

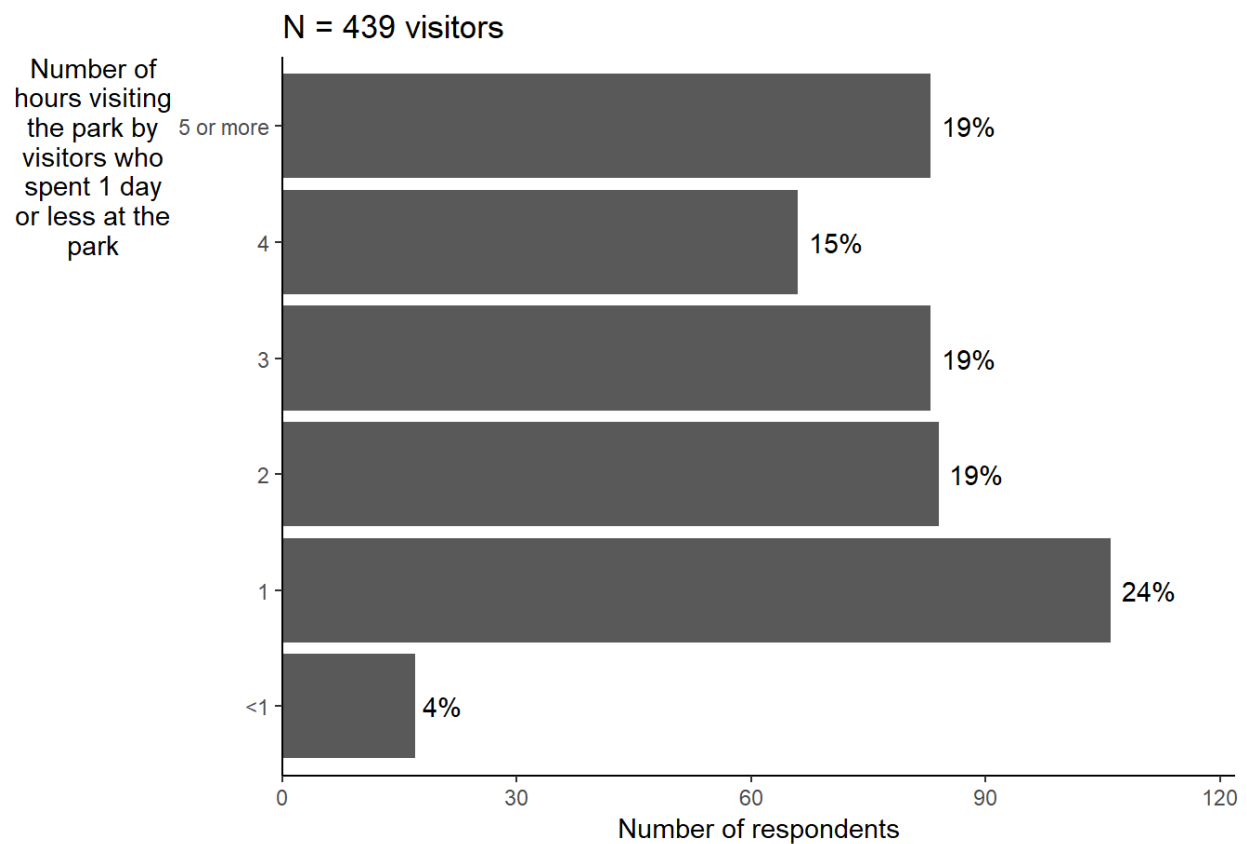


FIGURE 26: NUMBER OF HOURS VISITING THE PARK BY VISITORS WHO SPENT ONE DAY OR LESS AT THE PARK



Number of days, if multiple days

Results (Figure 27)

- 47% of visitors who reported spending multiple days at the park visited for two days.

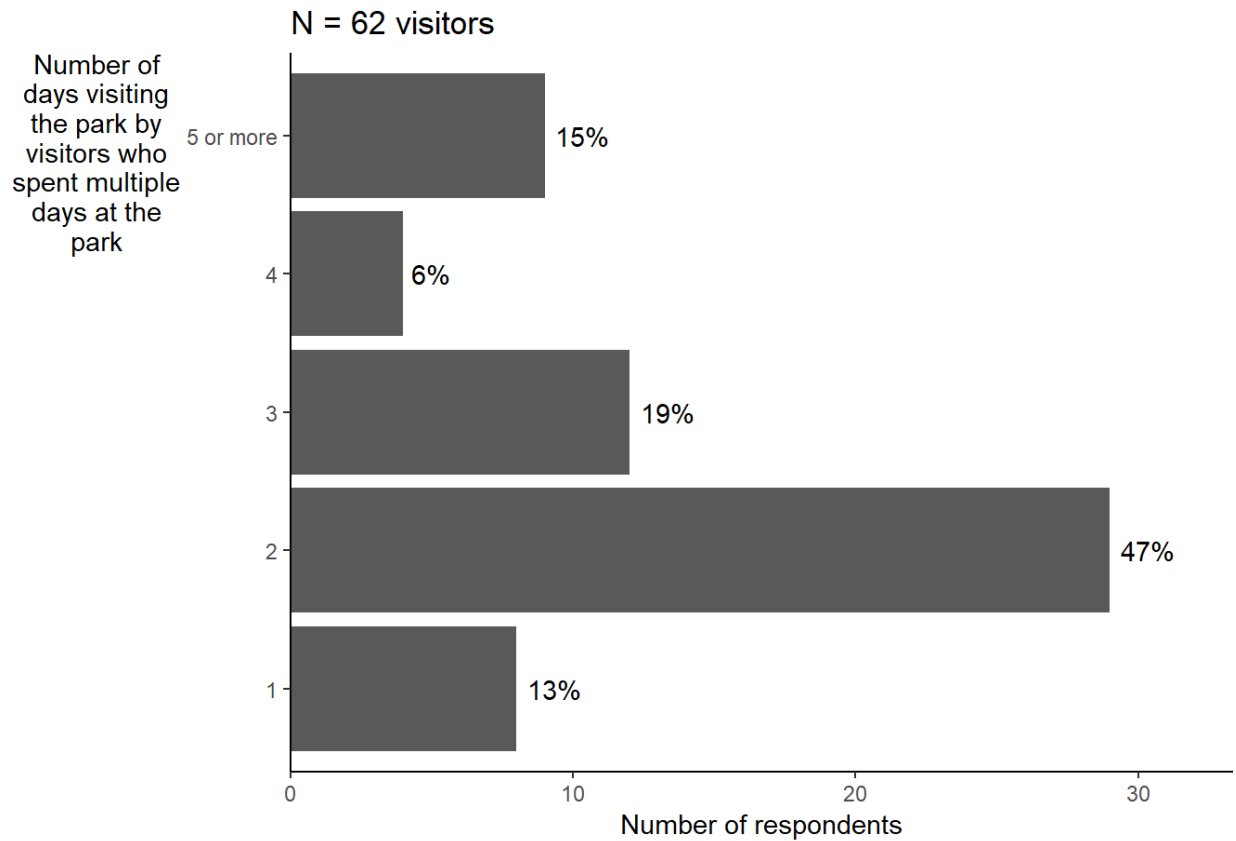


FIGURE 27: NUMBER OF DAYS VISITING THE PARK BY VISITORS WHO SPENT MULTIPLE DAYS AT THE PARK



Days passing through the park entrance

Question 5

If you spent multiple days at Wind Cave National Park, on how many different days did you pass through the park entrance? Fill in the blank.

Results (Figure 28)

- Of visitors who reported spending multiple days in the park, 50% of visitors passed through the park entrance on two days.

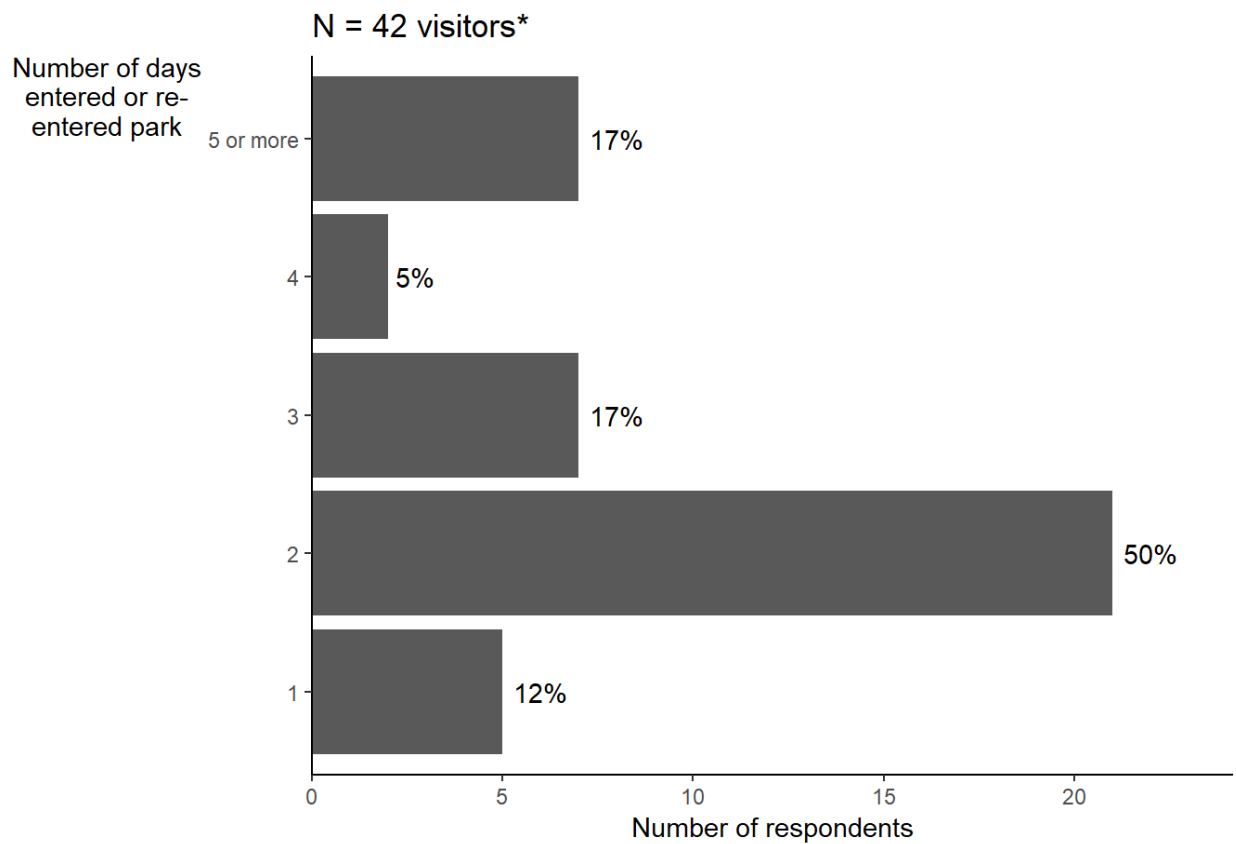


FIGURE 28: NUMBER OF DAYS PASSING THROUGH THE PARK ENTRANCE

Alternative recreation sites visited instead, if not the park

Question 6a

On this trip, if you had not chosen to visit Wind Cave National Park, what other recreation site would you have visited instead? (open-ended)

Results (Table 12)

- 78% of visitors indicated an alternative recreation site.
- 20% of visitors indicated that they were just driving through the park or didn't know an alternative recreation site.
- 2% of visitors indicated that there was no substitute for the park.
- The most frequently mentioned alternative recreation sites were:
 - Custer State Park (26% of visitors)
 - Jewel Cave National Monument (20% of visitors)



TABLE 12: OTHER RECREATION SITES VISITORS WOULD HAVE VISITED IF THEY DID NOT VISIT WIND CAVE NATIONAL PARK

N=394 VISITORS SOME VISITORS LISTED MORE THAN ONE RESPONSE.	
SITE	PERCENT OF TIMES MENTIONED
Custer State Park	26%
Jewel Cave National Monument	20%
Mount Rushmore National Memorial	8%
Badlands National Park	7%
Black Hills	5%
Sites already visited on this trip	5%
Crazy Horse Memorial	4%
Hot Springs, SD	3%
Mammoth Site and Museum	3%
Yellowstone National Park	2%
Deadwood, SD	1%
Devils Tower National Monument	1%
Needles Highway	1%
Another unspecified nearby location, other than a cave	1%
Another unspecified cave	1%
Spearfish Canyon	1%
Evan's Plunge	1%
Grand Canyon National Park	1%
Grand Teton National Park	1%
Other national park/natural area	1%
Rocky Mountain National Park	1%
Other recreation sites mentioned only once	6%



Question 6b

How far is this alternative site from your home? Fill in the blank.

Note: Outliers of 2,500 miles or more were left out of the analysis.

Results (Figure 29)

- 35% of visitors' alternative sites were less than 500 miles from their home.
- 33% of visitors' alternative sites were 500 to 999 miles from their home.

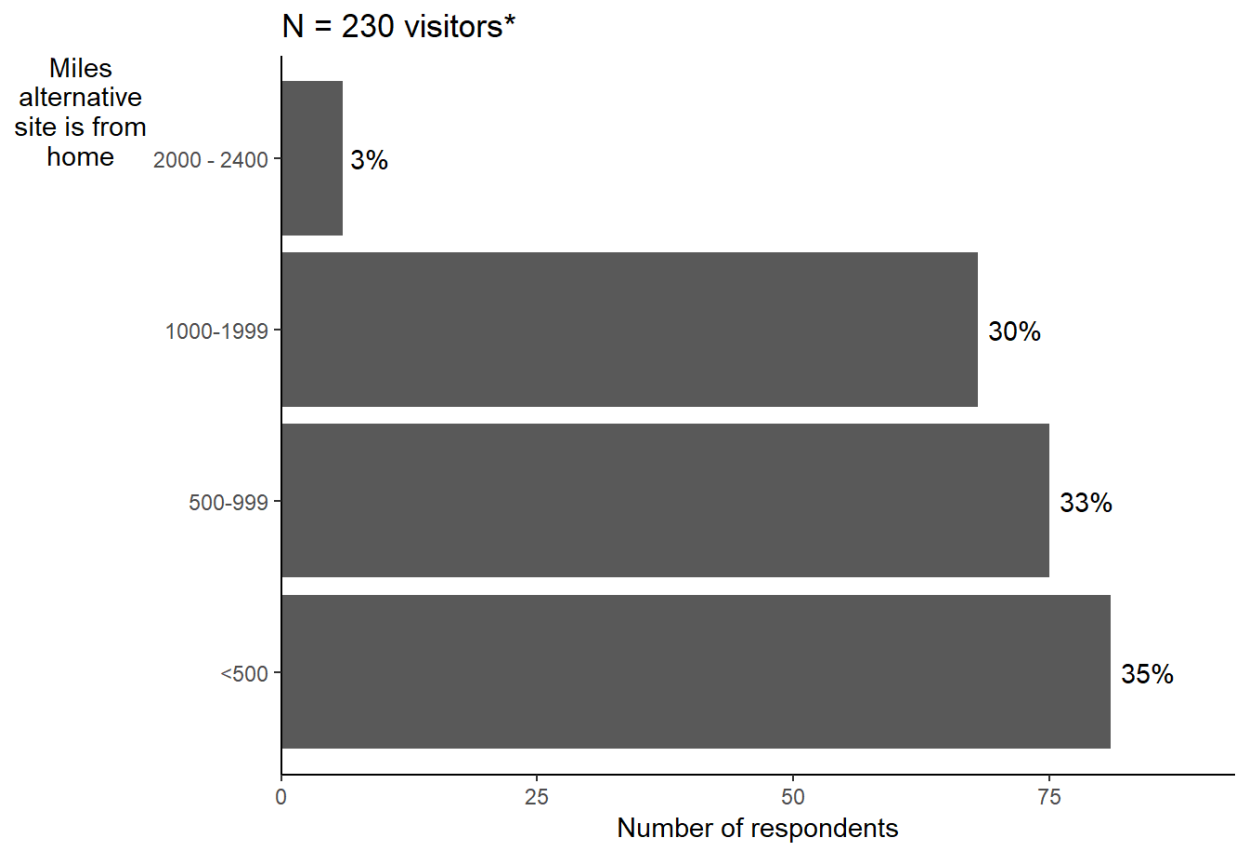


FIGURE 29: DISTANCE OF ALTERNATIVE SITE FROM HOME

Pre-Trip Planning and Motivations

Information sources prior to trip

Question 7

Prior to this trip, how did you obtain information about Wind Cave National Park? Please mark all that apply.

Results (Figure 30 and Figure 31)

- 74% of visitors obtained information about the park prior to their trip.

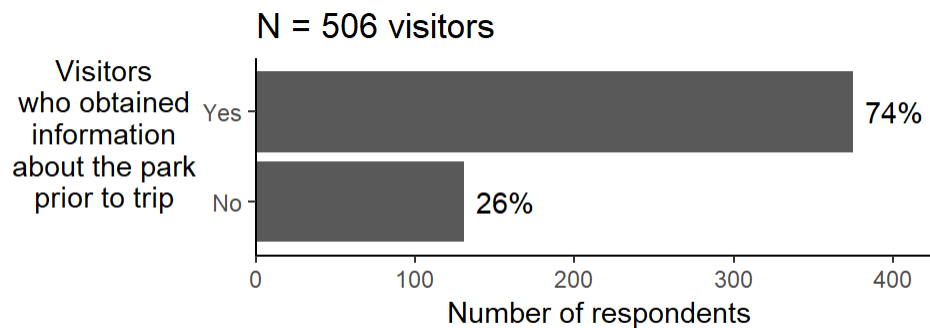


FIGURE 30: VISITORS WHO OBTAINED INFORMATION ABOUT THE PARK PRIOR TO TRIP

- As shown in Figure 31, among those visitors who obtained information about Wind Cave National Park prior to their trip, the most common information sources were:
 - Wind Cave National Park website (www.nps.gov/WICA) (45% of visitors)
 - Maps/brochures (41% of visitors)
 - Previous visits (37% of visitors)

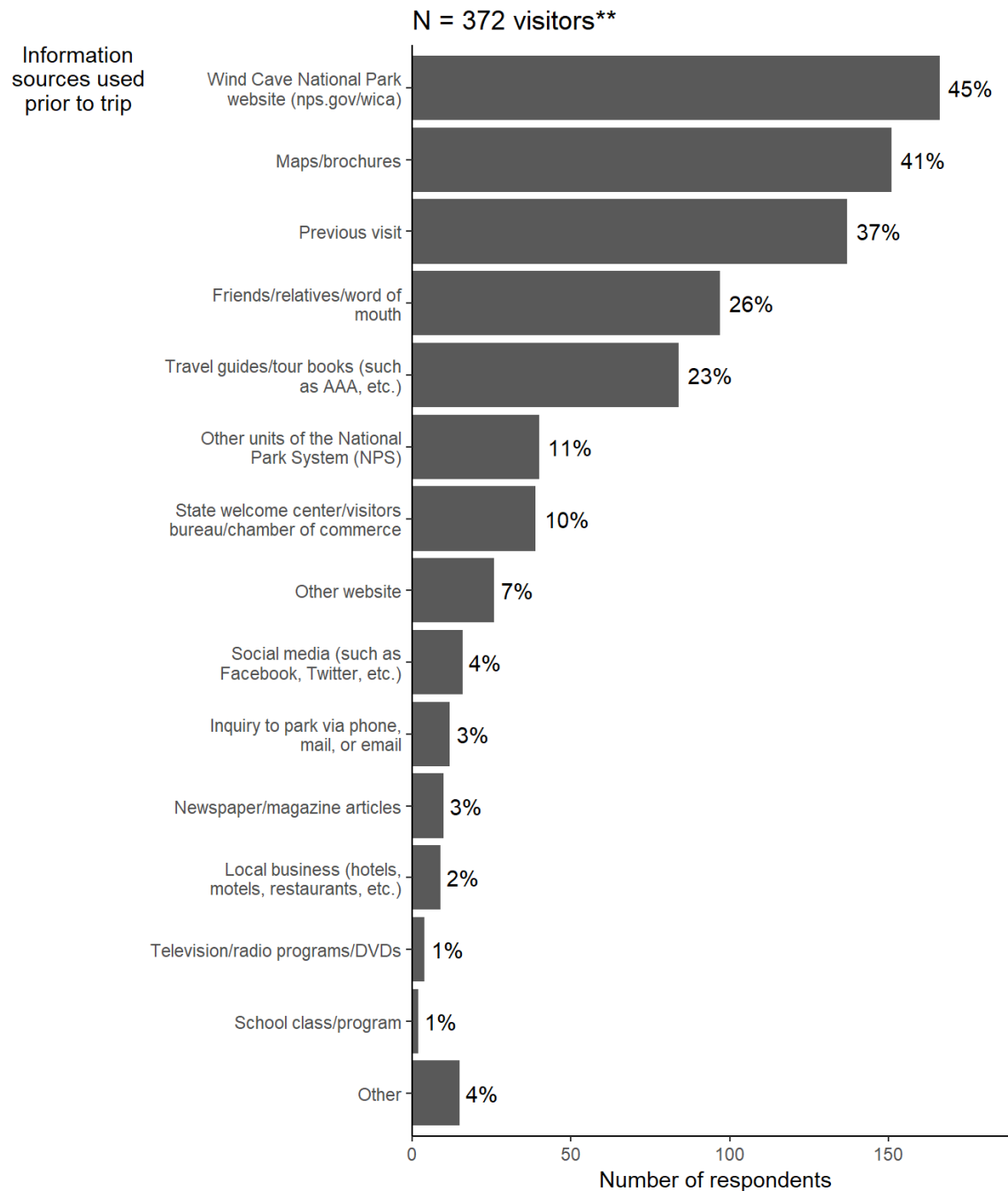


FIGURE 31: INFORMATION SOURCES USED PRIOR TO TRIP



Information needed

Question 8

Did you have the information about Wind Cave National Park you needed on this trip? Please mark one.

Results (Figure 32)

- 90% of visitors had the information they needed on their trip.
- See *Visitor Comments Appendix* (separate document) for information that visitors indicated they needed but didn't have.

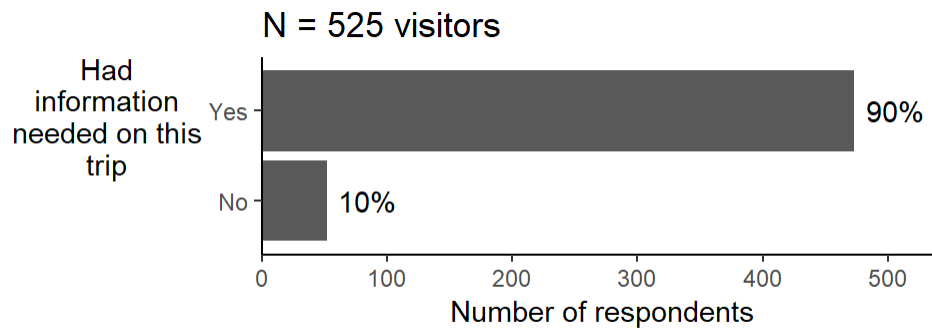


FIGURE 32: HAD INFORMATION NEEDED ON THIS TRIP

Timing of decision to visit

Question 9

*When did you and your personal group make the decision to visit Wind Cave National Park?
Please mark one.*

Results (Figure 33)

- 37% of visitor groups decided to visit the park on the same day of the visit.
- 20% of visitor groups decided to visit the park two to seven days before the visit.
- 20% of visitor groups decided to visit the park one to six months before the visit.

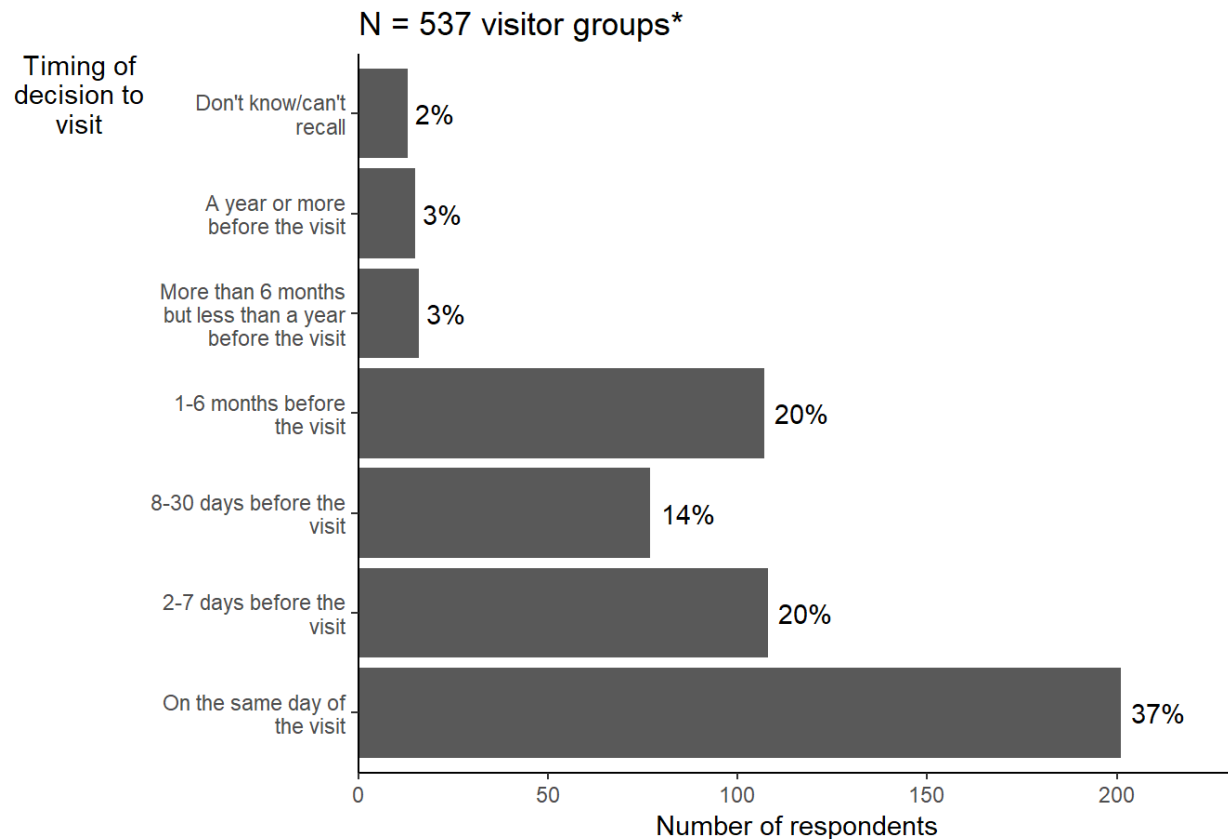


FIGURE 33: TIMING OF DECISION TO VISIT WIND CAVE NATIONAL PARK



Park Activities, Programs, and Services

Activity participation

Question 10

On this trip, in which of the following activities did you or a member of your personal group participate within Wind Cave National Park? Please mark all that apply.

Results (Figure 34)

- 89% of visitors participated in viewing wildlife, natural features, scenery, wildflowers, etc.
- 59% of visitors participated in driving for pleasure.
- 39% of visitors participated in a cave tour.

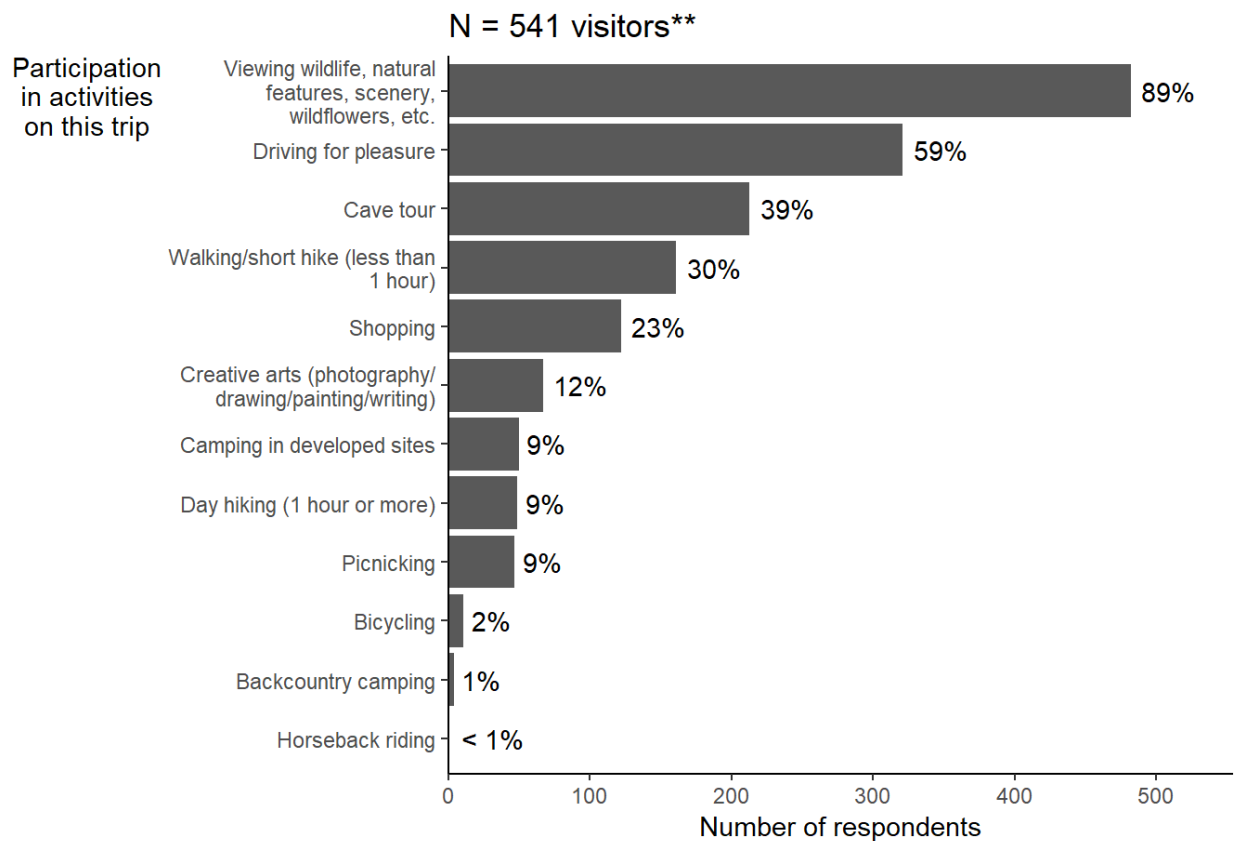


FIGURE 34: PARTICIPATION IN ACTIVITIES ON THIS TRIP



Primary activity on this trip

Question 11

Of the activities listed in Question 10, which was your primary activity during your visit to Wind Cave National Park on the day you were contacted for this survey? (open-ended)

Results (Figure 35)

- Of visitors who reported a primary activity, the most common primary activities listed by visitors were:
 - Cave tour (41% of visitors)
 - Viewing wildlife, natural features, scenery, wildflowers, etc. (29% of visitors)
- 26% of visitors did not have a primary activity.

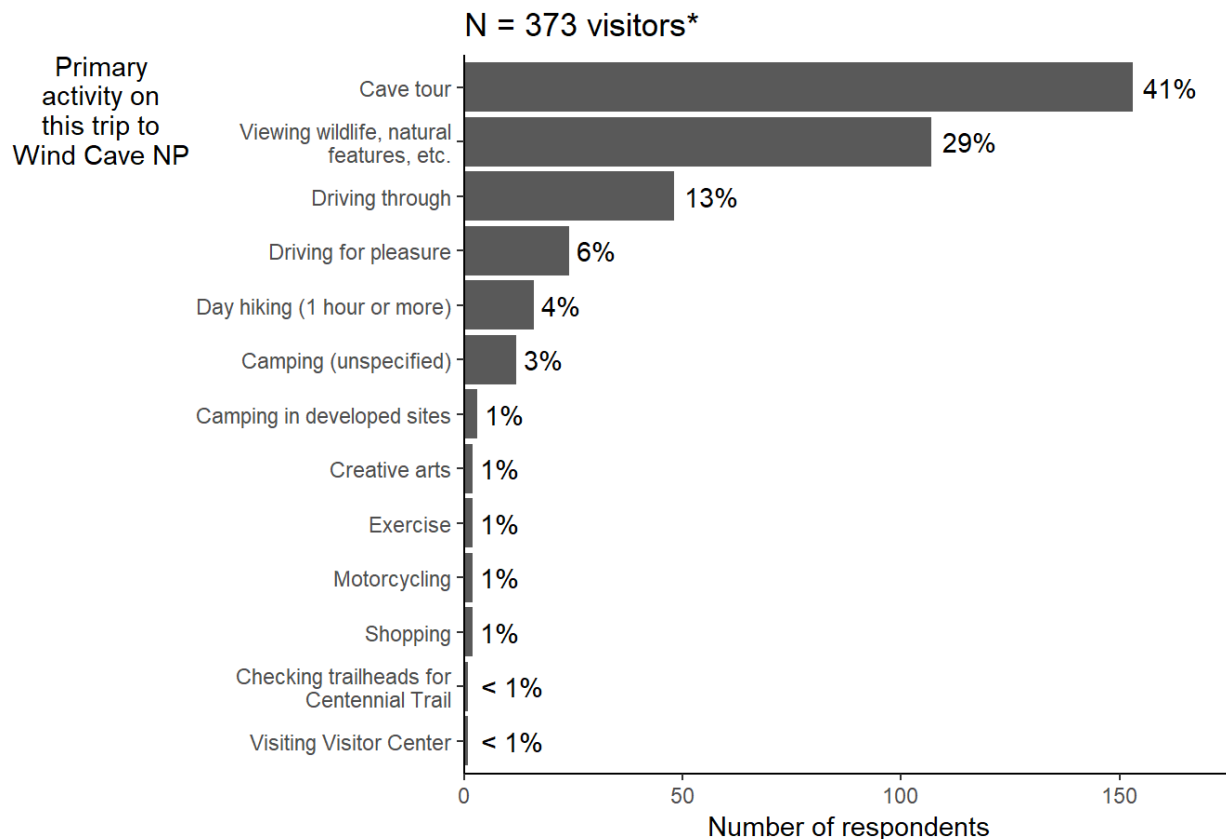


FIGURE 35: PRIMARY ACTIVITY ON THIS TRIP TO WIND CAVE NATIONAL PARK



Programs and services participation

Question 12

On this trip, in which of the following programs and services did you or a member of your personal group participate within Wind Cave National Park? Please mark all that apply.

Results (Figure 36)

- The most common programs and services in which visitors participated were:
 - Going to the Visitor Center (59% of visitors)
 - Visiting the park store in the Visitor Center (51% of visitors)
 - 47% Attending a ranger-led activity, such as a cave tour or talk (47% of visitors)
 - Viewing indoor exhibits (47% of visitors)

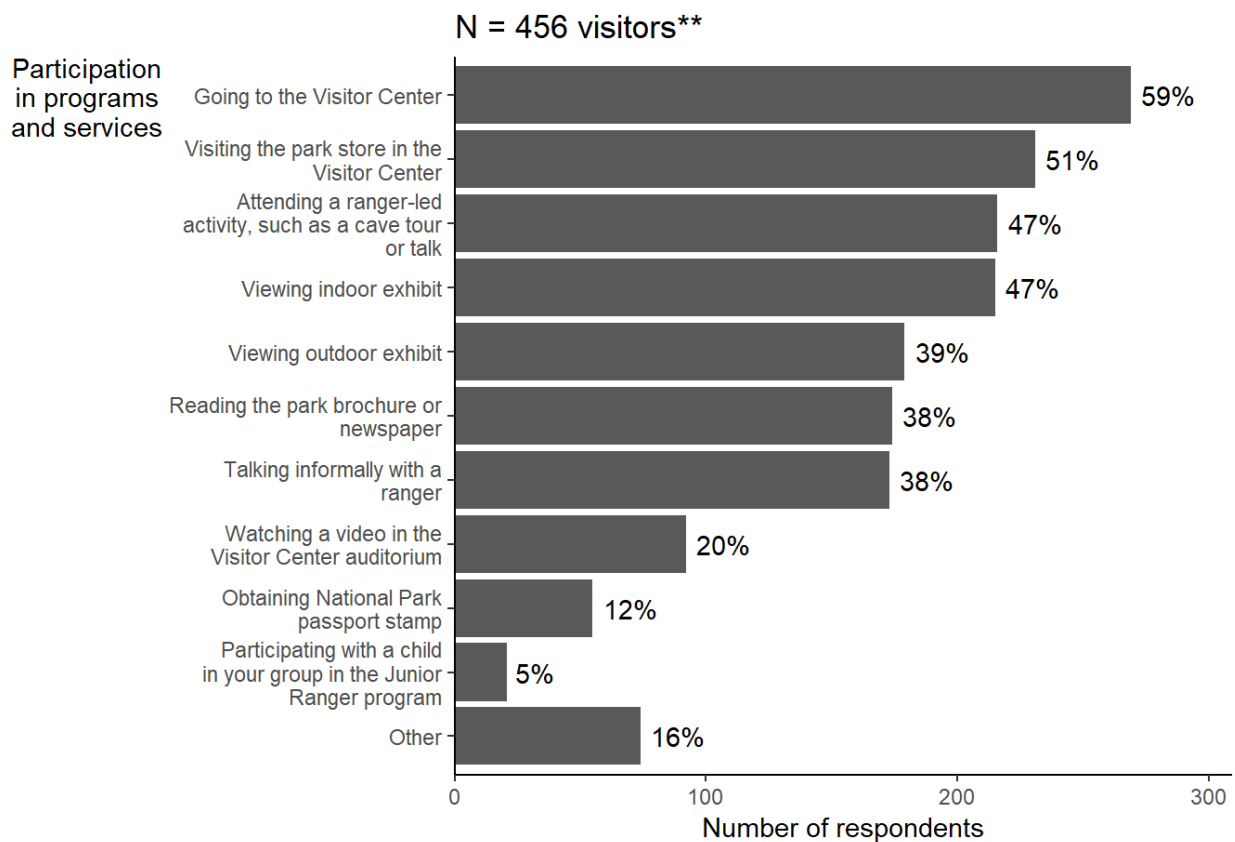


FIGURE 36: PARTICIPATION IN PROGRAMS AND SERVICES

Participation in a cave tour

Question 13

On this visit to Wind Cave National Park, did you participate in a cave tour? Please mark one.

Results (Figure 37)

- 38% of visitors participated in a cave tour.
- See *Visitor Comments Appendix* (separate document) for information on the specific cave tours that visitors participated in, the reasons they chose the tours they did, and the parts of their cave tour experiences that were particularly meaningful to them.

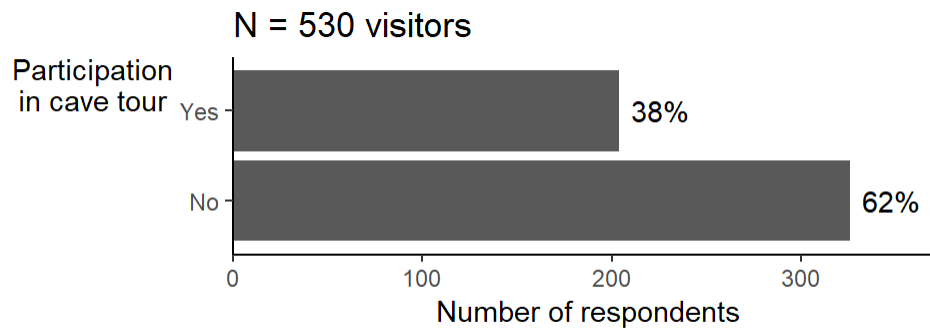


FIGURE 37: VISITORS WHO PARTICIPATED IN A CAVE TOUR



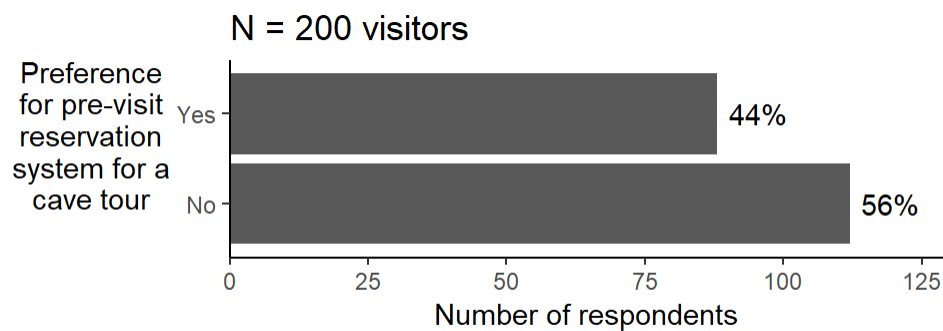
Preference for pre-visit reservation system for cave tour tickets

Question 14

If you were to visit Wind Cave National Park in the future, would you prefer to have a pre-visit reservation system to obtain tickets for a cave tour? Please mark one.

Results (Figure 38)

- Of visitors who participated in a cave tour, 44% would have preferred to have a pre-visit reservation system to obtain tickets for a cave tour, while 56% would not.

**FIGURE 38: PREFERENCE FOR PRE-VISIT RESERVATION SYSTEM FOR CAVE TOUR TICKETS**

Visitors with physical conditions

Question 17a

Did anyone in your personal group have a physical condition that made it difficult to access or participate in park activities or services (such as cave tours), during your visit to Wind Cave National Park? Please mark one.

Results (Figure 39)

- Only 10% of visitor groups had at least one group member with a physical condition that made it difficult to access or participate in park activities or services.

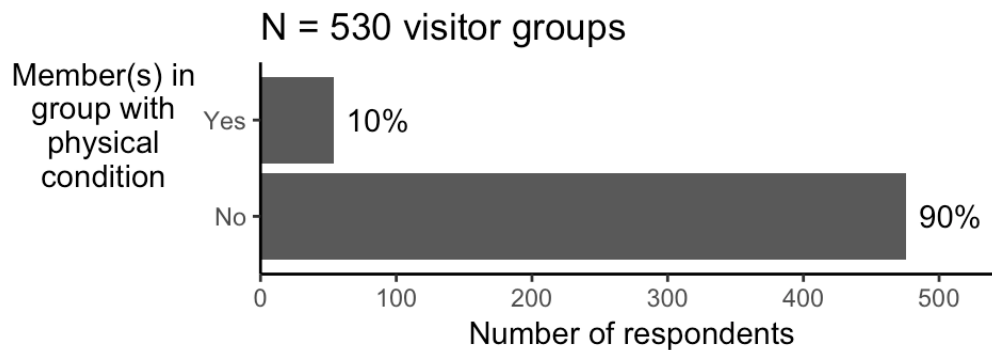


FIGURE 39: VISITOR GROUP MEMBER(S) WITH PHYSICAL CONDITION



Question 17b

If YES, what activities, services, or facilities did the person(s) have difficulty participating in or accessing? Please be specific. (open-ended)

Results (Figure 40)

- Of visitor groups that had at least one member with a physical condition, 53% had difficulty participating in “Hiking/Walking/Climbing stairs”.
- Of visitor groups that had at least one member with a physical condition, 26% had difficulty participating in a cave tour, generally.

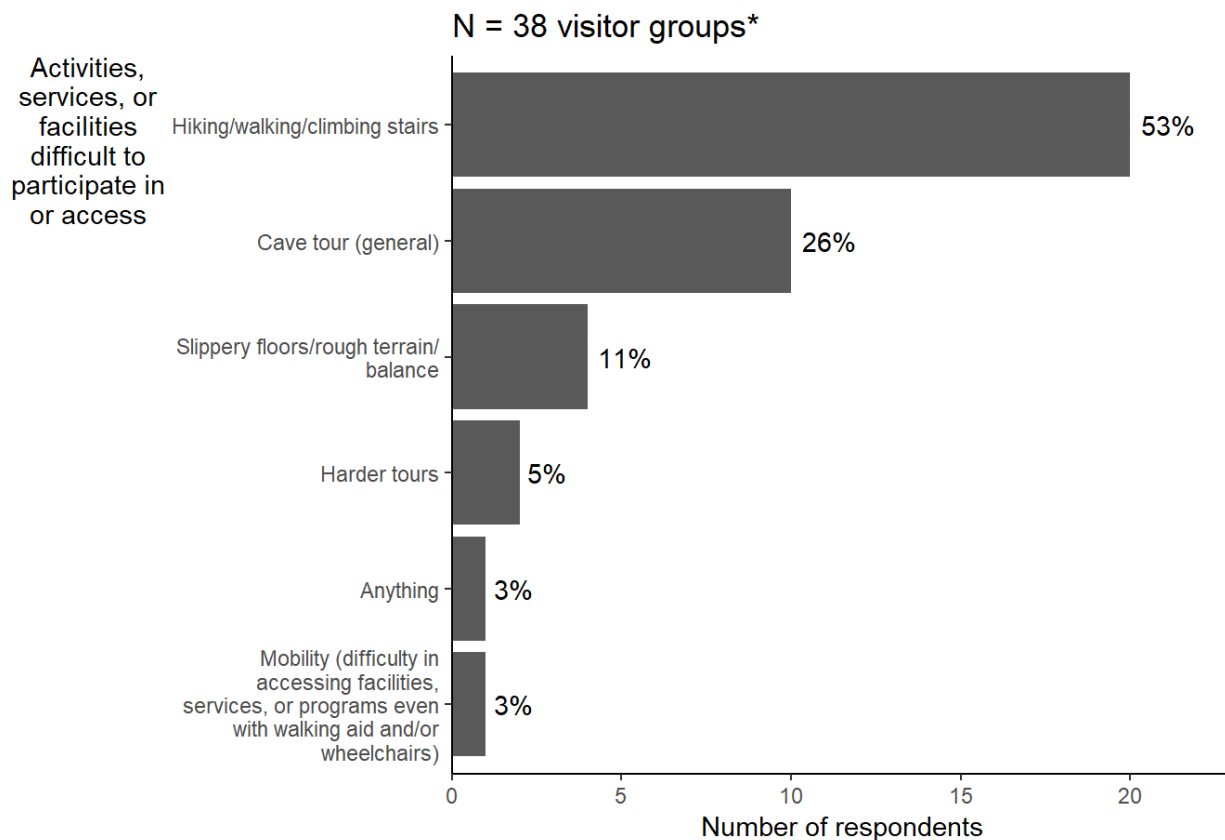


FIGURE 40: ACTIVITIES/SERVICES/FACILITIES DIFFICULT TO PARTICIPATE IN OR ACCESS

Question 17c

Because of the physical condition, which specified difficulties did the person(s) have? Please mark all that apply.

Results (Figure 41)

- Of visitor groups that had at least one member with a physical condition, 86% had specific difficulties with mobility.
- Of visitor groups that had at least one member with a physical condition, 23% had other specific difficulties (see *Visitor Comments Appendix* [separate document] for results).

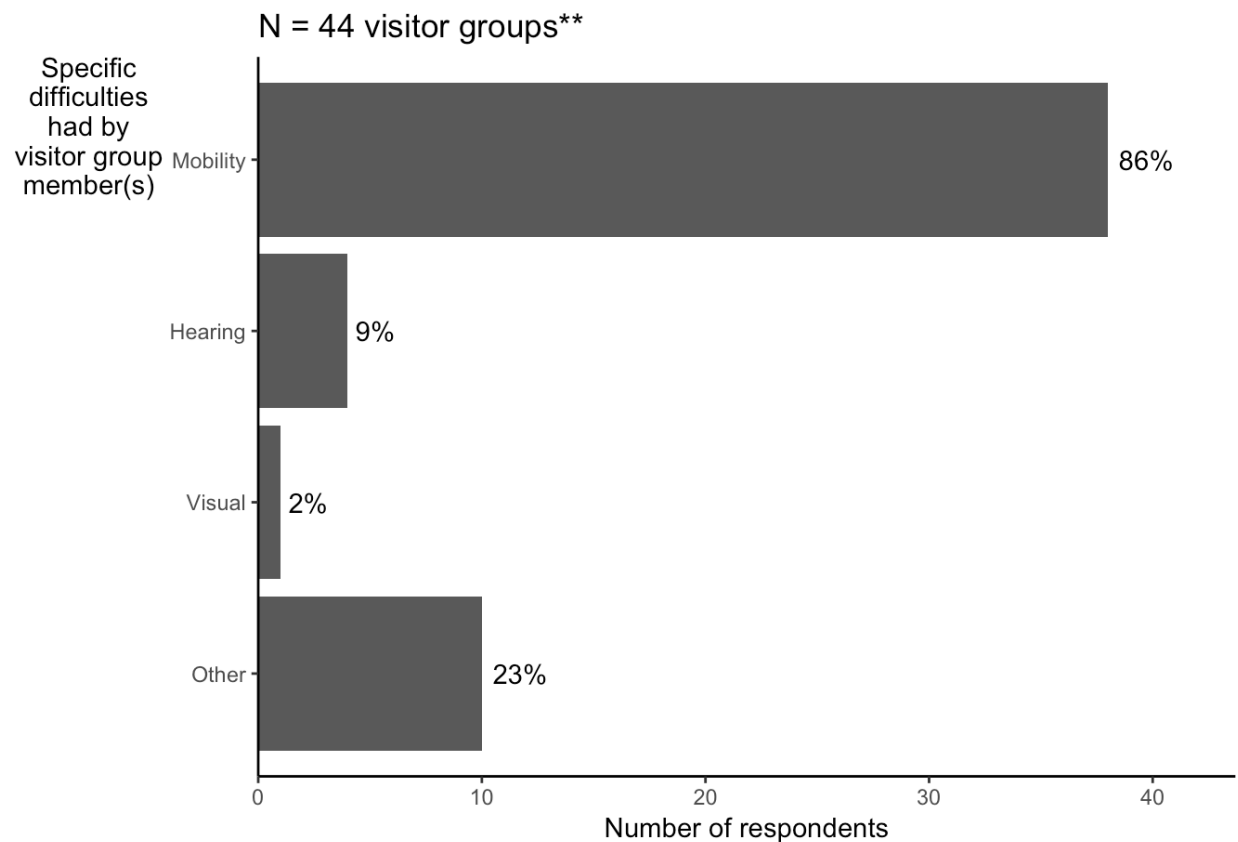


FIGURE 41: SPECIFIC DIFFICULTIES HAD BY VISITOR GROUP MEMBER(S)



Barriers to taking a cave tour

Question 18

If you did not take a cave tour in Wind Cave National Park, what reasons prevented you from taking those tours? Please mark all that apply.

Results (Figure 42)

- Of visitors who did not take a cave tour, 29% did not take a tour due to lack of interest.
- Of visitors who did not take a cave tour, 21% did not take a tour because they had taken a cave tour on a previous visit.
- Of visitors who did not take a cave tour, 28% did not take a tour due to other reasons (see *Visitor Comments Appendix* [separate document] for results).

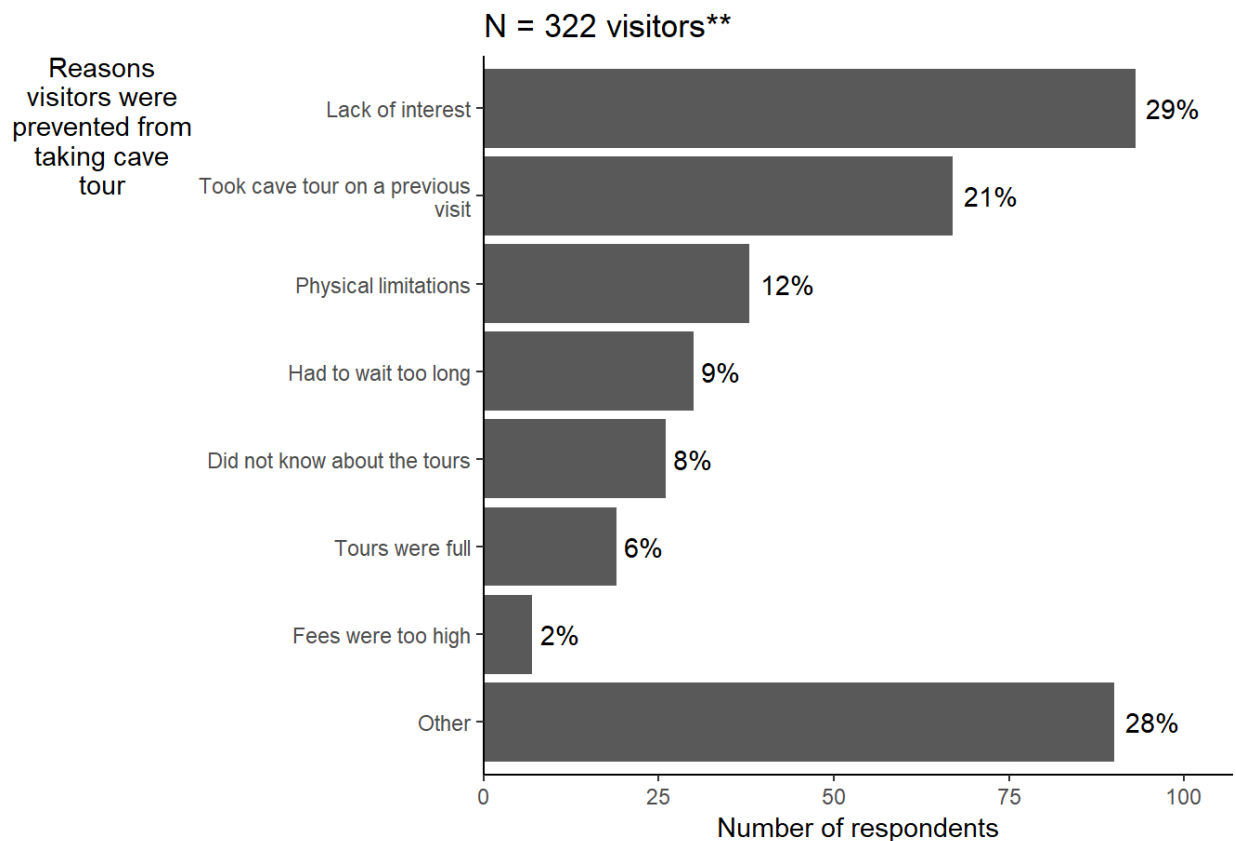


FIGURE 42: BARRIERS TO TAKING A CAVE TOUR

Expenditures

Primary reason for trip to the area

Question 20

What was the primary reason for this trip to the area? Please mark one.

Results (Figure 43)

- Very few (8%) visitors reported that visiting the park was their main reason for coming to the local area.
- 57% of visitors came to the local area for reasons other than visiting the park and happened to visit the park while they were in the area.
- 35% of visitors came to the local area with the park as one of several equally important reasons for coming to the area.

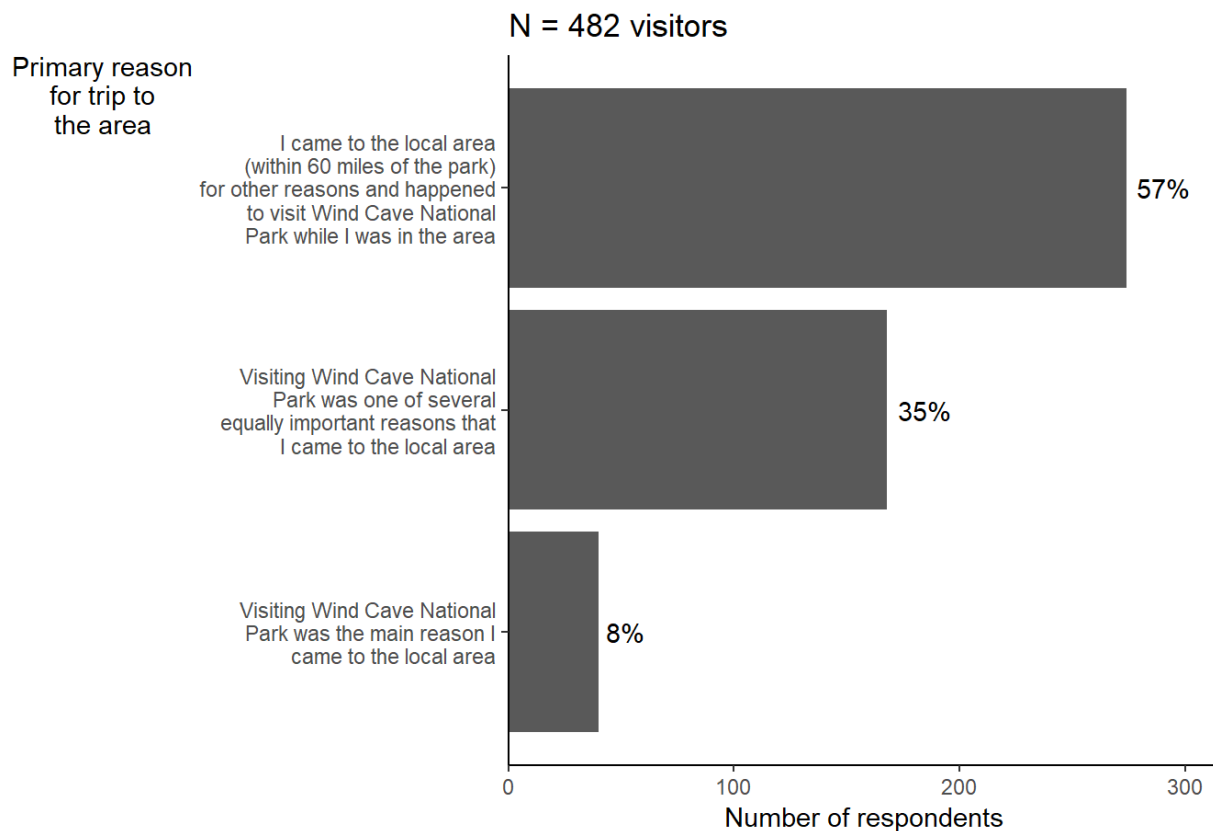


FIGURE 43: PRIMARY REASON FOR TRIP TO THE AREA

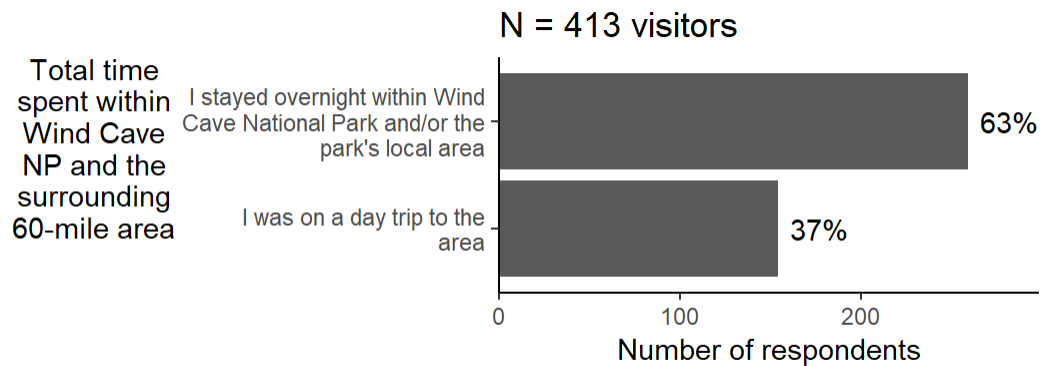
Time spent within the park and the surrounding local area

Question 21

During this trip, how much total time did you spend within Wind Cave National Park and the park's 60-mile local area? Please mark one.

Results (Figure 44)

- 63% of visitors stayed overnight within the park and/or within the park's local area.
- 37% of visitors were on a day trip to the area.

**FIGURE 44: TOTAL TIME SPENT WITHIN THE PARK AND THE SURROUNDING LOCAL AREA**

Question 21

How many total nights did you spend in the local area? Include nights spent within Wind Cave National Park and nights spent lodging or camping outside of the park but within the park's 60-mile local area. Fill in the blank.

Results (Figure 45)

- Of visitors who stayed overnight, 27% spent two nights in the local area.
- Of visitors who stayed overnight, 22% spent five or more nights in the local area.

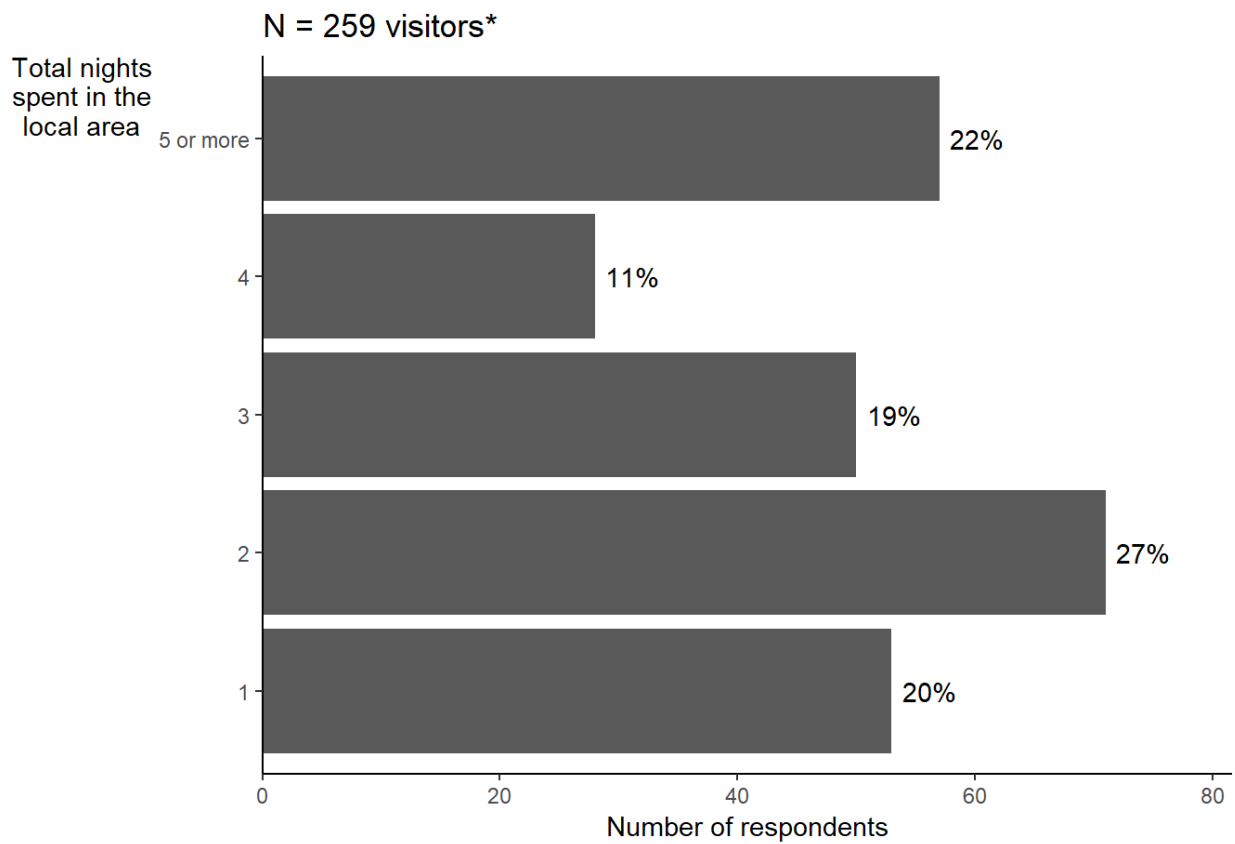


FIGURE 45: TOTAL NIGHTS SPENT IN THE LOCAL AREA

Locations stayed on night prior to arrival

Question 22

Name the town/city where you and your personal group stayed the night before your arrival at Wind Cave National Park. (open-ended)

Results (Table 13)

- The most frequently mentioned town/cities and states were:
 - Custer, South Dakota (20% of visitor groups)
 - Hot Springs, South Dakota (12% of visitor groups)
 - Rapid City, South Dakota (12% of visitor groups)



TABLE 13: TOWN/CITY AND STATE ON THE NIGHT BEFORE ARRIVAL TO WIND CAVE NATIONAL PARK

N=243 VISITOR GROUPS		
TOWN/CITY	STATE	PERCENT OF TIMES MENTIONED*
Custer	South Dakota	20%
Hot Springs	South Dakota	12%
Rapid City	South Dakota	12%
Custer State Park	South Dakota	9%
Hill City	South Dakota	7%
Keystone	South Dakota	5%
Badlands National Park	South Dakota	3%
Chadron	Nebraska	2%
Deadwood	South Dakota	2%
Cheyenne	Wyoming	2%
Scottsbluff	Nebraska	1%
Interior	South Dakota	1%
Lead	South Dakota	1%
Loveland	Colorado	1%
Hot Springs	North Dakota	1%
Black Hills National Forest	South Dakota	1%
Mount Rushmore National Memorial	South Dakota	1%
Pringle	South Dakota	1%
Spearfish	South Dakota	1%
Wall	South Dakota	1%
Devils Tower National Monument	Wyoming	1%
Douglas	Wyoming	1%
Gillette	Wyoming	1%
Yellowstone National Park	Wyoming	1%
Other towns/cities and states mentioned only once	-	16%



*total percentages do not equal 100 due to rounding

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

Locations stayed on night after departure

Question 23

In what town/city did you and your personal group stay on the night after your departure from Wind Cave National Park? (open-ended)

Results (Table 14)

- The most frequently mentioned town/cities and states were:
 - Custer, South Dakota (16% of visitor groups)
 - Rapid City, South Dakota (11% of visitor groups)
 - Custer State Park, South Dakota (7% of visitor groups)
 - Badlands National Park, South Dakota (7% of visitor groups)



TABLE 14: TOWN/CITY AND STATE ON THE NIGHT AFTER DEPARTURE FROM WIND CAVE NATIONAL PARK

N=243 VISITOR GROUPS		
TOWN/CITY	STATE	PERCENT OF TIMES MENTIONED*
Custer	South Dakota	16%
Rapid City	South Dakota	11%
Custer State Park	South Dakota	7%
Badlands National Park	South Dakota	7%
Keystone	South Dakota	6%
Hill City	South Dakota	6%
Hot Springs	South Dakota	5%
Deadwood	South Dakota	2%
North Platte	Nebraska	2%
Casper	Wyoming	2%
Cheyenne	Wyoming	2%
Denver	Colorado	1%
Fort Collins	Colorado	1%
Medora	North Dakota	1%
Spearfish	South Dakota	1%
Wall	South Dakota	1%
Devils Tower National Monument	Wyoming	1%
Loveland	Colorado	1%
Fort Robinson	Nebraska	1%
Grand Island	Nebraska	1%
Interior	South Dakota	1%
Murdo	South Dakota	1%
Pringle	South Dakota	1%
Sioux Falls	South Dakota	1%
Cody	Wyoming	1%
Other towns/cities and states mentioned only once	-	21%



*total percentages do not equal 100 due to rounding

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

Overnight accommodations

Question 24

What type(s) of accommodations did you use during your stay in the local area? Please mark all that apply.

Results (Figure 46)

- Of visitors who stayed overnight, only 17% stayed in the park, camping in the park's campground or backcountry.
- Of visitors who stayed overnight, 57% stayed in paid lodging outside of the park but within the park's 60-mile local area.
- Of visitors who stayed overnight, 26% camped (campgrounds or backcountry) outside of Wind Cave National Park but within the park's 60-mile local area.
- See *Visitor Comments Appendix* (separate document) for results for reasons why those who camped in the area but not in the park chose not to camp in the park.

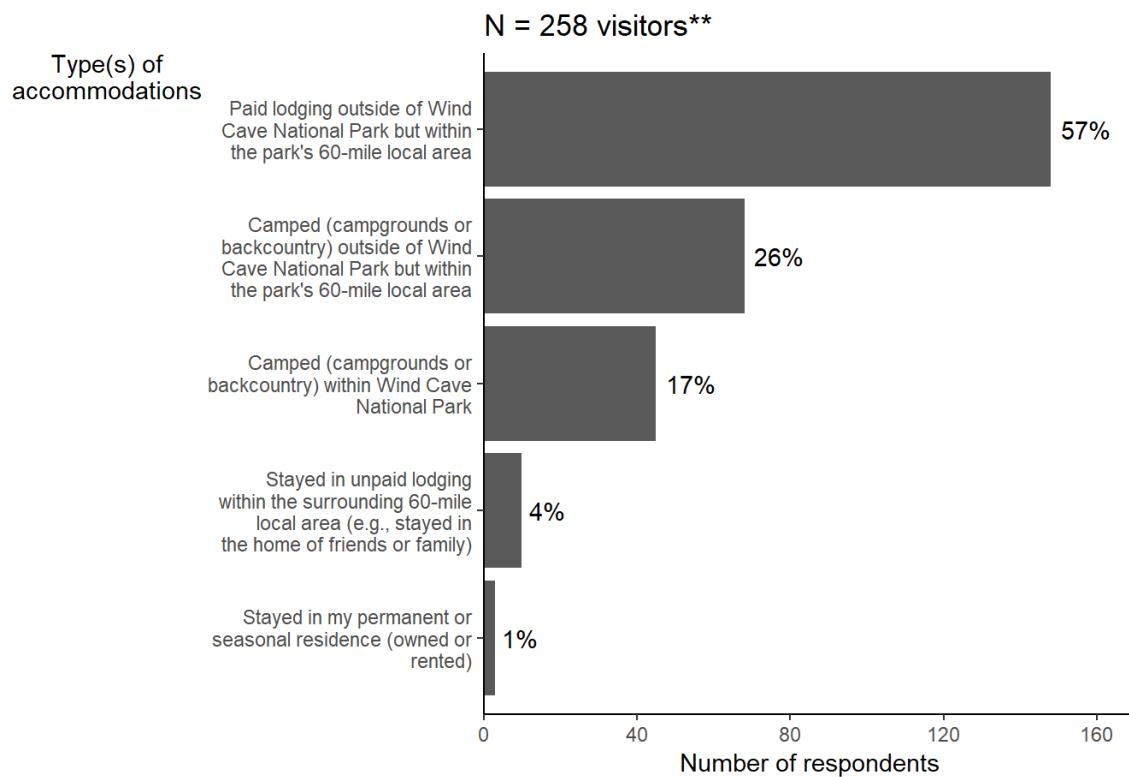


FIGURE 46: OVERNIGHT ACCOMMODATIONS



Total expenditures inside the park and surrounding area

Question 25

Please estimate how much shared expenses you and your personal group (e.g., other family members, traveling companions) spent at Wind Cave National Park and in the local communities surrounding the park. This includes your time in the park and the surrounding communities within approximately 60 miles of Wind Cave National Park (e.g., Hot Springs, Custer, Edgemont, Keystone, Hill City, and the Rapid City area). Fill in the blank.

Local Area Residents (only): If you are a permanent or seasonal resident, please only include expenditures that were directly related to this trip to Wind Cave National Park.

Results (Figure 47)

- 55% of visitor groups spent \$500 or less inside the park and surrounding area.
- 23% of visitor groups spent \$501 to \$1,000 inside the park and surrounding area.

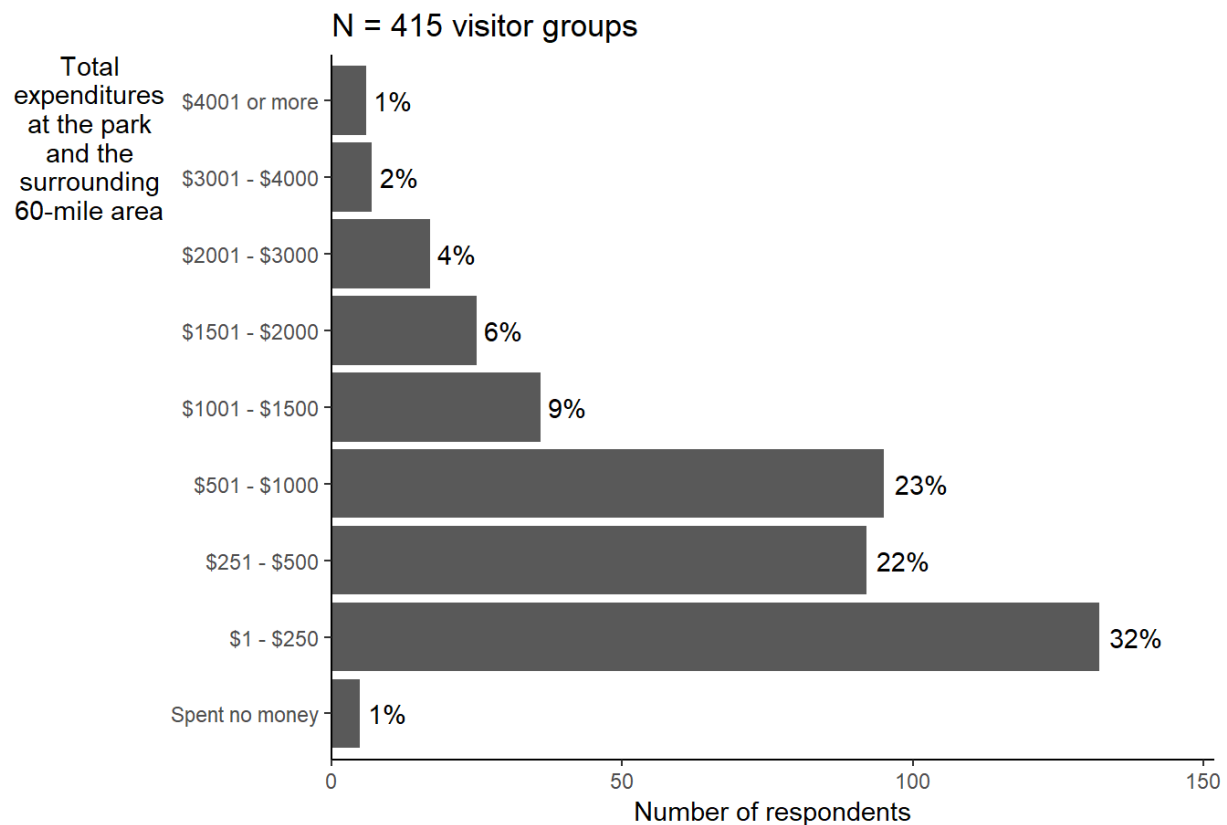


FIGURE 47: TOTAL EXPENDITURES INSIDE THE PARK AND SURROUNDING AREA

Adults covered by expenses

Question 26a

Including yourself, how many adults in your personal group were covered by the expenses for this time in the park and the surrounding 60-mile local area? Fill in the blank.

Results (Figure 48)

- 76% of visitor groups had two adults covered by expenses.

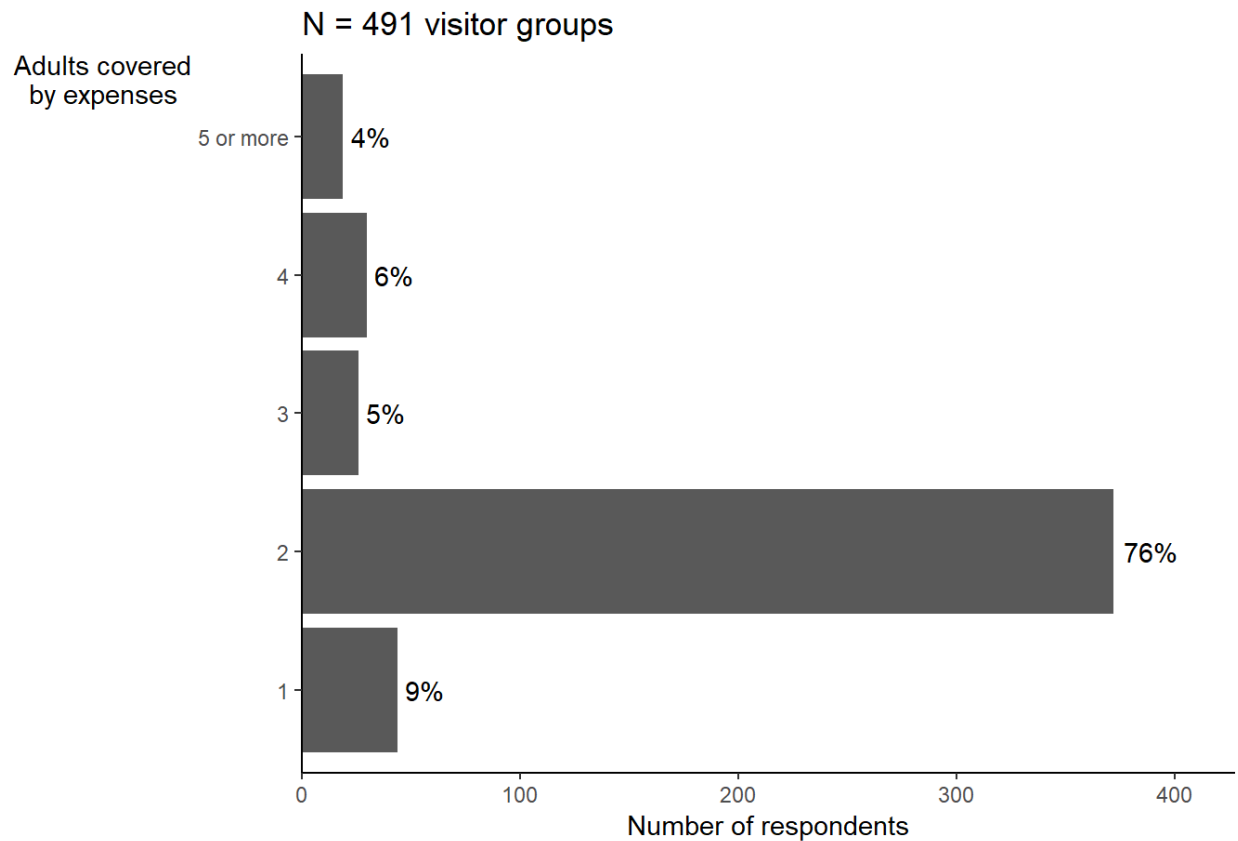


FIGURE 48: ADULTS COVERED BY EXPENSES



Children covered by expenses

Question 26a

Including yourself, how many children in your personal group were covered by the expenses for this time in the park and the surrounding 60-mile local area? Fill in the blank.

Results (Figure 49)

- 76% of visitor groups had no children covered by expenses.

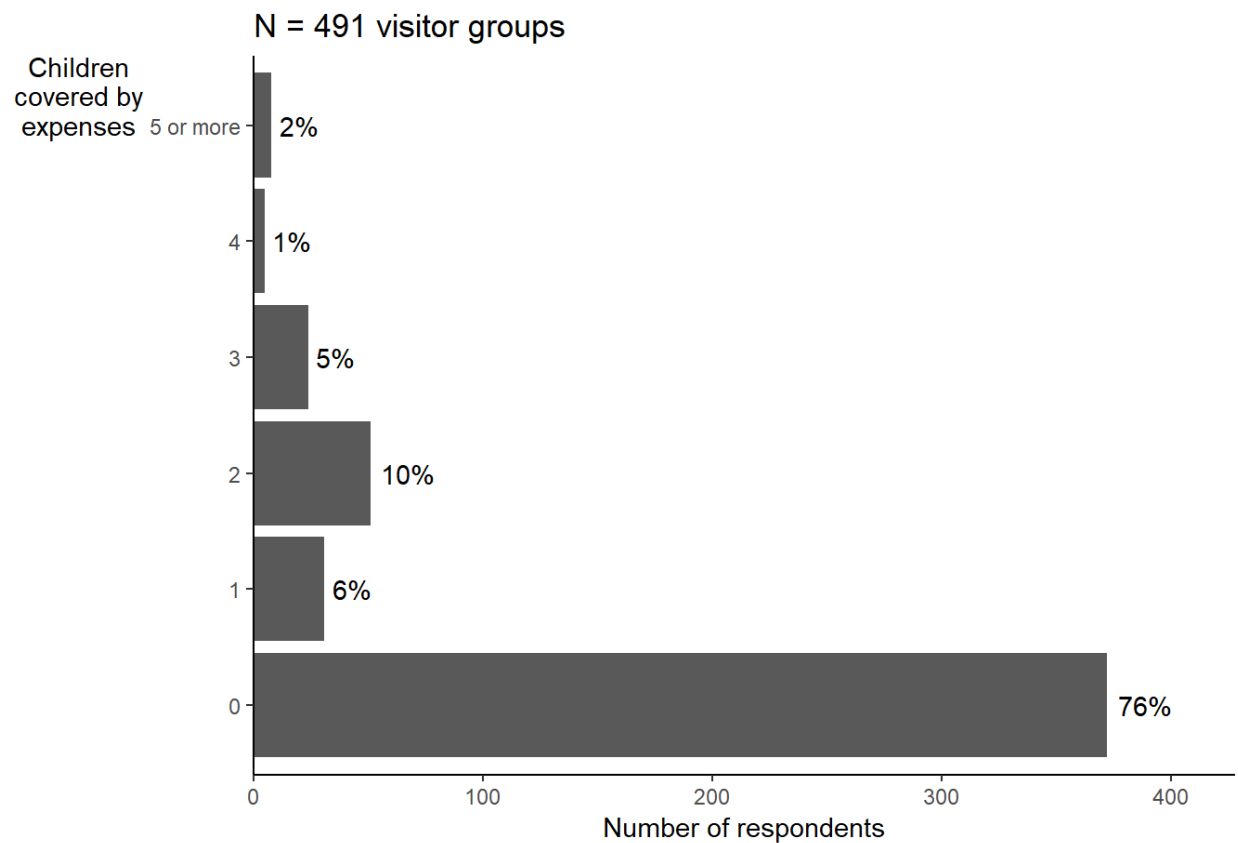


FIGURE 49: CHILDREN COVERED BY EXPENSES



Splitting of expenses

Question 26b

Including yourself, how many people in your group split these trip expenses? Fill in the blank.

Results (Figure 50)

- 62% of visitor groups split trip expenses between two members.
- 24% of visitor groups did not split trip expenses.

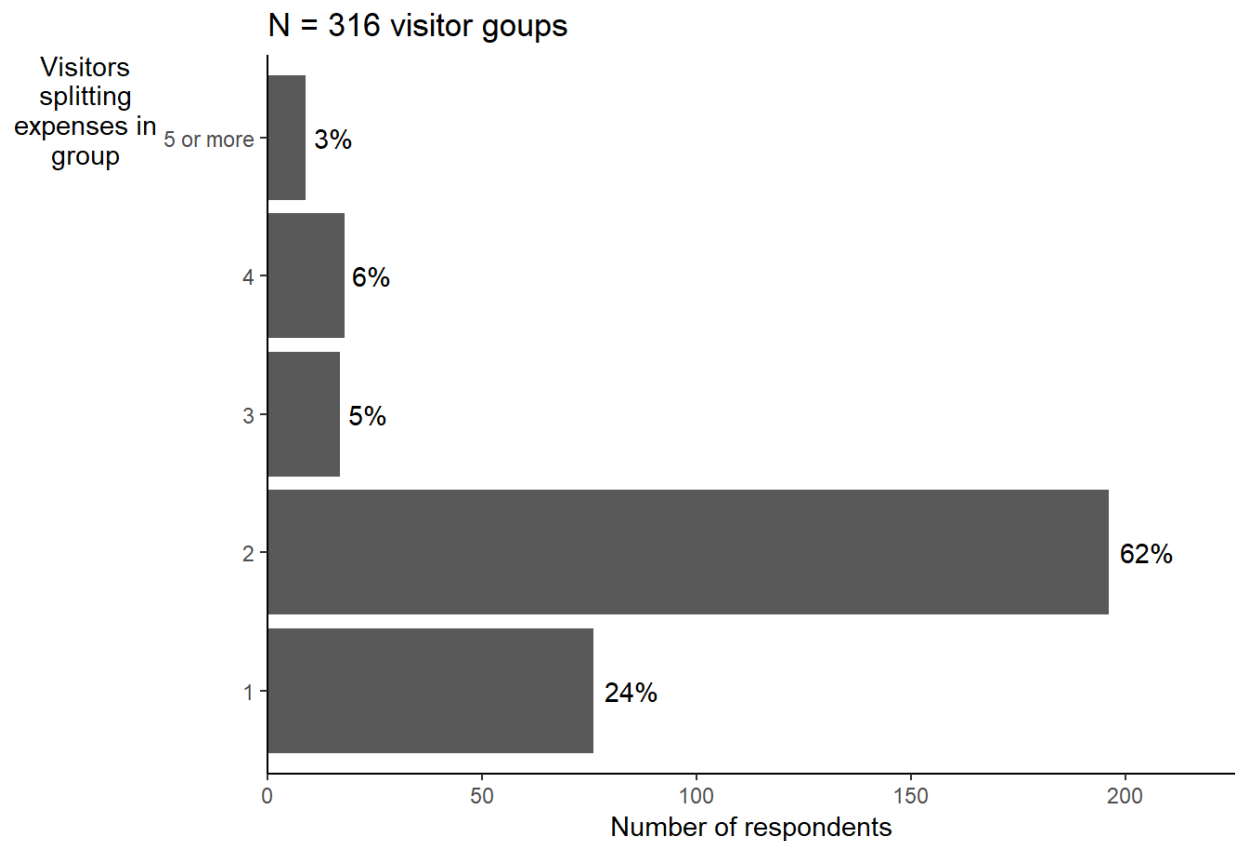


FIGURE 50: SPLITTING OF EXPENSES IN VISITOR GROUP



3.2 CHARACTERIZATION OF NON-RECREATIONAL VISITORS

This section of the report describes results relevant to the characterization of non-recreational visitors to the park.

Number of Commercial Vehicles Intentionally Excluded from Intercepts

Count of commercial vehicles entering the park.

Results (Table 15)

- During the nine days of on-site intercepts, a total of 230 obviously commercial vehicles (e.g., dump trucks, semi-trailer trucks, and express delivery trucks) were observed entering the park but were not intercepted by field staff.
- The average number of commercial vehicles observed per day was 26 vehicles. The average number of commercial vehicles observed per weekday was 43 vehicles and the average number observed per weekend day was 3 vehicles.

TABLE 15: NUMBER OF COMMERCIAL VEHICLES OBSERVED, BY DAY

DATE	NUMBER OF COMMERCIAL VEHICLES
Friday, August 17	24
Saturday, August 18	3
Sunday, August 19	7
Monday, August 20	-
Tuesday, August 21	54
Wednesday, August 22	77
Thursday, August 23	38
Friday, August 24	24
Saturday, August 25	3
Sunday, August 26	0
Total	230

Percentage of Non-Recreational Visitor Groups

What brings you to the park today?

Results (Table 16 and Figure 51)

- 70% of intercepted visitor groups were in the park for recreational purposes (Table 16).
- For intercepted visitor groups, Figure 51 shows the percentage split between non-recreational visitor groups and recreational visitor groups by hour of day.
 - The percentage of non-recreational visitor groups was highest in the early morning (47% of visitor groups contacted between 8:00AM and 9:00AM), declined steadily throughout the morning, then remained relatively constant from 11:00AM to 4:00PM (ranging from 23% to 28% of visitor groups contacted).

TABLE 16: CLASSIFICATION OF INTERCEPTED VISITOR GROUPS

TYPE OF VISITOR GROUP	NUMBER	PERCENT
Recreational	1649	69.7%
Non-Recreational	681	28.8%
Park Business	37	1.6%
Total	2367	100.0%

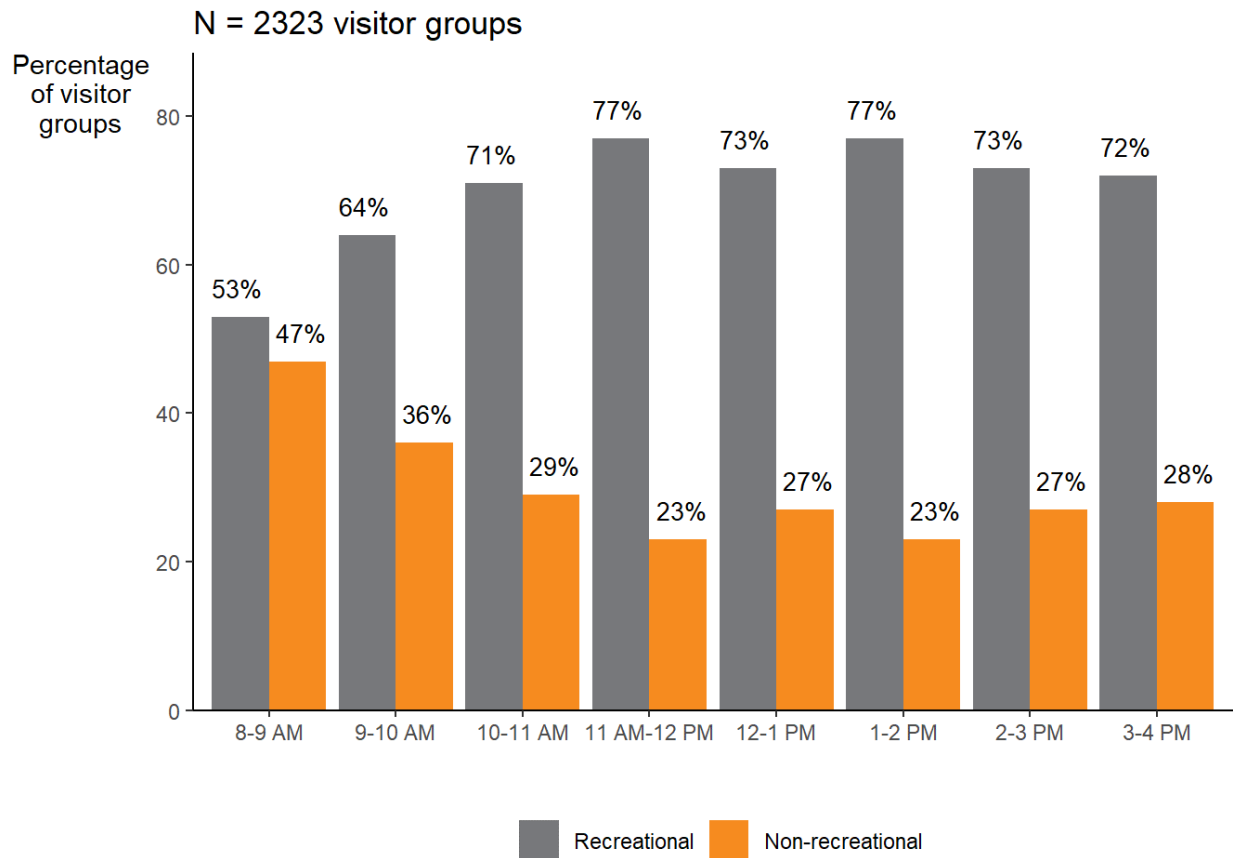


FIGURE 51: PERCENTAGE OF NON-RECREATIONAL AND RECREATIONAL VISITOR GROUPS, BY HOUR OF DAY

Time Spent in Wind Cave National Park

How long have you been traveling in Wind Cave National Park today?

Results (Figure 52)

- Of those non-recreational visitor groups intercepted during the study, 68% spent between 10 and 14 minutes in Wind Cave National Park, with an average of 13 minutes spent in the park.

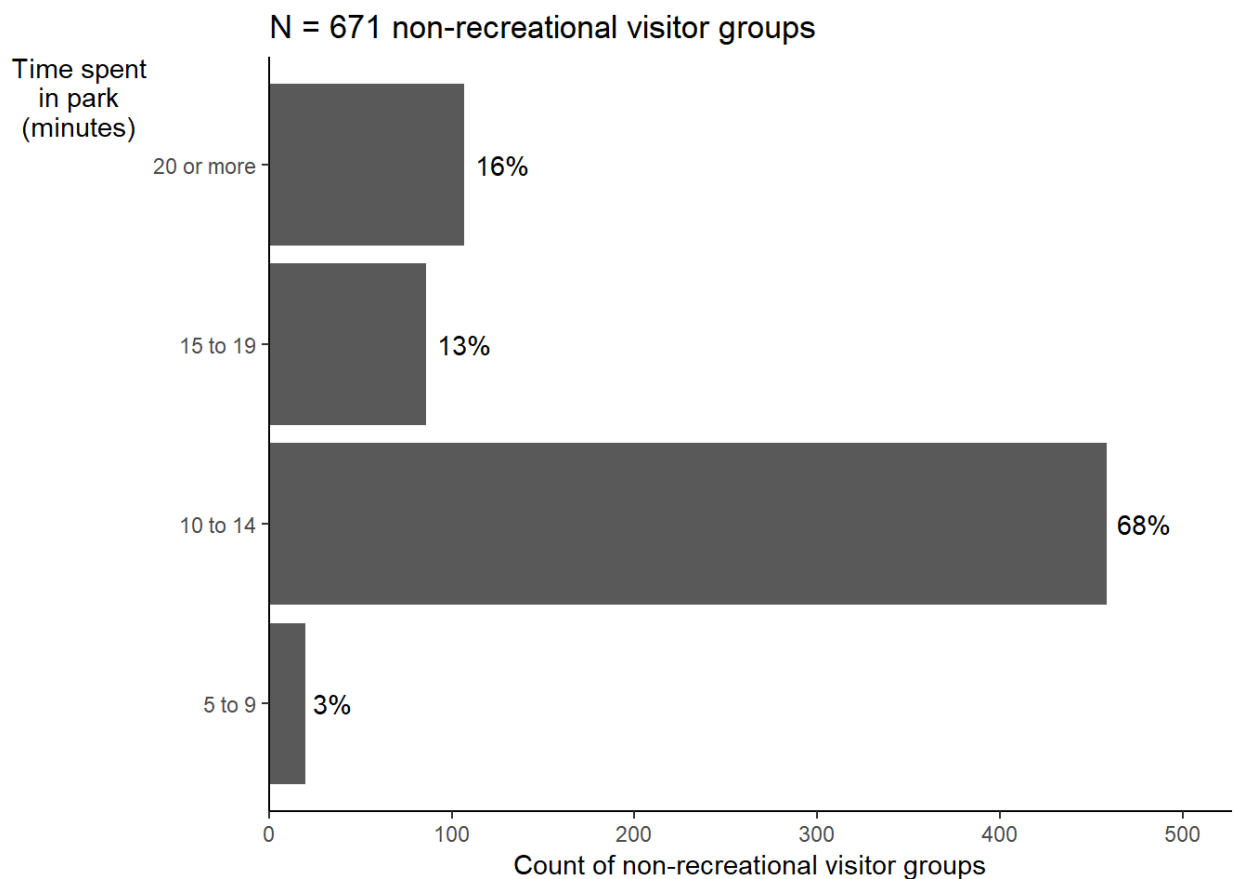


FIGURE 52: TIME SPENT IN WIND CAVE NATIONAL PARK

Non-Recreational Trip Origin and Destination

Where did you start your trip today and where is your destination?

Results (Table 17)

- The most frequently mentioned trip origin and destination pairs were:
 - Custer, SD to Hot Springs, SD (27% of visitor groups)
 - Hot Springs, SD to Custer, SD (26% of visitor groups)

TABLE 17: SUMMARY OF NON-RECREATIONAL TRIP ORIGINS AND DESTINATIONS

N=675 VISITOR GROUPS		
TRIP ORIGIN	TRIP DESTINATION	PERCENT OF TIMES MENTIONED*
Custer	Hot Springs	27%
Hot Springs	Custer	26%
Pringle	Hot Springs	3%
Hot Springs	Hill City	3%
Hill City	Hot Springs	2%
Hot Springs	Pringle	2%
Rapid City	Hot Springs	2%
Custer	Custer	2%
Hot Springs	Hot Springs	2%
Hot Springs	Deadwood	1%
Hot Springs	Rapid City	1%
Custer	Buffalo Gap	1%
Chadron	Custer	1%
Custer	Oelrichs	1%
Hill City	Hill City	1%
New Castle	Hot Springs	1%
Rapid City	Custer	1%
Other trips mentioned*	-	24%

*Other origin and destination pairs mentioned but not listed were mentioned a maximum of three times.



4.0 LITERATURE CITED

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APPENDIX A. DESCRIPTIVE STATISTICS

Table 18 reports the mean, median, and standard deviation for those variables for which measures of central tendency can be computed.

TABLE 18: MEAN/MEDIAN/STANDARD DEVIATION OF SELECTED VARIABLES

QUESTION NUMBER	DESCRIPTION	N	MEAN	MEDIAN	STANDARD DEVIATION
Q01	Number of adults in group	547	2.22	2	0.91
Q01	Number of children in group	547	0.50	0	1.08
Q01	Group size	547	2.71	2	1.54
Q03	Number of people per car, truck, or SUV	399	2.66	2	1.35
Q04	Hours traveled one-way to park	505	18.53	10	52.99
Q04	Miles traveled one-way to park	497	962.09	675	1166.49
Q05	Number of hours visiting the park by groups who spent 1 day or less at the park	439	3.32	3	3.10
Q05	Number of days visiting the park by groups who spent multiple days at the park	62	2.94	2	2.46
Q05	Number of days entered or re-entered park	42	2.88	2	2.00
Q06	Miles alternative site is from home	230	757.67	678	543.52
Q21	Total nights spent in local area	259	3.36	3	2.97
Q25	Expenditures on gas and oil	429	78.81	50	97.84
Q25	Expenditures on rental cars	429	43.60	0	179.86
Q25	Expenditures on taxis, shuttles, and public transportation	429	8.60	0	101.33
Q25	Expenditures on restaurants and bars	429	116.12	75	138.52
Q25	Expenditures on groceries and convenience foods	429	48.42	10	150.15
Q25	Expenditures on hotels, motels, resorts	429	161.78	0	356.01

QUESTION NUMBER	DESCRIPTION	N	MEAN	MEDIAN	STANDARD DEVIATION
Q25	Expenditures on specialty lodging	429	107.71	0	417.47
Q25	Expenditures on camping fees	429	40.11	0	121.89
Q25	Expenditures on cave tour fee	429	13.70	0	23.05
Q25	Expenditures on guides and other tour fees	429	14.48	0	50.10
Q25	Expenditures on recreation and entertainment expenses	429	20.85	0	92.74
Q25	Expenditures on souvenirs, clothing, supplies, other retail	429	58.85	20	95.71
Q25	Expenditures on equipment rental	429	3.43	0	35.77
Q25	Expenditures on National Park annual pass	429	10.70	0	24.37
Q25	Expenditures on other	415	3.80	0	41.33
Q25	Total expenditures at the park and the surrounding 60-mile area	415	712.33	433	853.33
Q26	Adults covered by expenses	491	2.25	2	1.05
Q26	Children covered by expenses	491	0.55	0	1.14
Q26	Visitors sharing expenses in group	316	2.05	2	1.06
Q27	Visitor age: respondent	523	56.45	61	14.73
Q27	Wind Cave NP visits in the last 5 years: respondent	437	8.44	1	78.42
Q27	Other NPS site visits in the last 5 years: respondent	469	12.00	5	38.05
Q27	Visitor age: all group members	1290	49.71	57	21.50
Q27	Other NPS site visits in the last 5 years: all group members	1118	11.98	5	46.78
Q27	Wind Cave NP visits in the last 5 years: all group members	1068	5.74	1	55.17
Q32	Number of people who contribute to household income	488	1.74	2	0.51
Q35	Household size	525	2.45	2	1.14

APPENDIX B. THE QUESTIONNAIRE



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

OMB Control Number: 1024-0224
Expiration Date: May 31, 2019

Wind Cave National Park Visitor Study



2018

PAPERWORK REDUCTION and PRIVACY ACT STATEMENT: The Paperwork Reduction Act requires us to tell you why we are collecting this information, how we will use it, and whether or not you have to respond. We are authorized by the National Park Service Protection Interpretation and research in System (54 USC §100702) to collect this information. The routine uses of this information will be for the benefit of NPS Managers and planning staff of Wind Cave National Park (WICA) in future initiatives related to the visitor use and resource management within the site. The data collected will be summarized to evaluate visitor uses and expectations during their visit at WICA. Your responses to this collection are completely voluntary and will remain anonymous. You can end the process at any time and will not be penalized in any way for choosing to do so. All contact information collected will be for the purpose of the follow-up survey only and will be destroyed at the end of the collection period. This information will not be stored or used for any other purposes. All data from this collection will be aggregated so that no responses will be individually identifiable. A Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it displays a currently valid OMB Control Number (1024-0224). We estimate that it will take about 20 minutes to complete and return this mailback questionnaire. You may send comments concerning the burden estimates or any aspect of this information collection to: Social Science Program Chief, National Park Service, 1201 Oakridge Drive, Fort Collins, CO, 80525-5596; nps_nrss_social_science@nps.gov (email); or Phadrea Ponds NPS Information Collection Coordinator at pponds@nps.gov (email).



**United States Department of the
Interior**

NATIONAL PARK SERVICE

1849 C Street, N.W.
Washington, DC 20240



Summer, 2018

Dear Wind Cave National Park Visitor:

Thank you for participating in this study. Our goal is to learn about the expectations, opinions, and interests of visitors to the National Park System. This information will assist us in understanding how visitors experience Wind Cave National Park and the surrounding area, motivations for visiting, to inform planning and management efforts to better serve you.

This questionnaire is only being given to a select number of visitors, so your participation is very important. It should take about 20 minutes to complete after your visit.

When your visit is over, the adult in your group who will have the next birthday should complete this questionnaire. Seal it in the postage-paid envelope provided and drop it in any U.S. Postal Service mailbox.

If you have any questions, please contact Thomas Farrell, Chief of Interpretation, Wind Cave National Park, 26611 U.S. Highway 385, Hot Springs, SD 57747; tom_farrell@nps.gov (email).

We appreciate your help.

Sincerely,

Videl Davila

Superintendent

RETURN PROCEDURE

At the end of your visit:

1. Please have the adult in your group (at least 18 years old) who will have the next birthday complete this questionnaire. That will help give us a statistically reliable sample.
2. For questions that use circles (O), please mark your answer by filling in the circle with **black or blue ink**. Please do not use pencil.

Like this: ● Not like this:    

3. Seal it in the postage-paid envelope provided.
4. Drop it in a U.S. Postal Service mailbox.

DIRECTIONS

In this questionnaire, your **personal group** is defined as you and anyone with whom you visited Wind Cave National Park on this trip, such as a spouse, family, friends, etc. This does not include the larger group that you might have traveled with, such as a school, church, scout, or tour group.

A **visit** is defined as the day in which you were contacted to complete this questionnaire. A **trip** is defined as the total extent of time away from your personal residence that could include multiple visits to Wind Cave National Park.

Wind Cave National Park Visitor Study

TRIP DESCRIPTION

1. Including yourself, how many people were in your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey? (Please include only direct travel companions; do not include people that are part of a larger tour group)

_____ Number of adults (18 years or older)

_____ Number of children (under 18 years)
2. What type of group were you with, during your visit to Wind Cave National Park on the day you were contacted for this survey? Please mark (●) **one**.
 - ☐ Alone
 - ☐ Friends
 - ☐ Family
 - ☐ Family and friends
 - ☐ Other (Please specify) _____
3. Please indicate all of the forms of transportation you personally used to travel from your home to Wind Cave National Park, on this trip. Please mark (●) **all that apply**.
 - ☐ Car, truck, or SUV
→ (Number of people in vehicle, including you) _____
 - ☐ Recreational vehicle or motorhome
 - ☐ Airplane
 - ☐ Tour bus or tour van
 - ☐ Train or long-distance passenger bus
 - ☐ Bicycle
 - ☐ Walk/hike
 - ☐ Other (Please specify) _____
4. Approximately how many hours and miles from home did you travel one way to get to Wind Cave National Park on this trip?

_____ Number of hours **AND** _____ Number of miles

Wind Cave National Park Visitor Study

5. On this trip, how much total time did you spend within Wind Cave National Park?

_____ Number of hours, if you only spent 1 day or less at Wind Cave National Park

_____ Number of days, if you spent multiple days at Wind Cave National Park

➔ If you spent multiple days at Wind Cave National Park, on how many different **days** did you pass through the park entrance? _____

6. On this trip, if you had not chosen to visit Wind Cave National Park, what other recreation site would you have visited instead?

b) How far is this alternative site from your home? _____ miles

TRIP PLANNING AND MOTIVATIONS

7. Prior to this trip, how did you obtain information about Wind Cave National Park? Please mark (●) **all that apply**.

- ☐ Did not obtain information prior to this visit
- ☐ Previous visits
- ☐ Friends/relatives/word of mouth
- ☐ Inquiry to park via phone, mail, or email
- ☐ Wind Cave National Park website (nps.gov/wica)
- ☐ Other website (Please specify) _____
- ☐ Local businesses (hotels, motels, restaurants, etc.)
- ☐ Maps/brochures
- ☐ Newspaper/magazine articles
- ☐ Other units of the National Park System (NPS)
- ☐ School class/program
- ☐ Social media (such as Facebook, Twitter, etc.)
- ☐ State welcome center/visitors bureau/chamber of commerce
- ☐ Television/radio programs/DVDs
- ☐ Travel guides/tour books (such as AAA, etc.)
- ☐ Other (Please specify) _____

Wind Cave National Park Visitor Study

8. Did you have the information about Wind Cave National Park you needed on this trip? Please mark (●) **one**.
- ☐ Yes
 - ☐ No (Please specify information you needed but didn't have on this trip.)

9. When did you and your personal group make the decision to visit Wind Cave National Park? Please mark (●) **one**.

- ☐ On the same day of the visit
- ☐ 2-7 days before the visit
- ☐ 8-30 days before the visit
- ☐ 1-6 months before the visit
- ☐ More than 6 months but less than a year before the visit
- ☐ A year or more before the visit
- ☐ Don't know/can't recall

PARK ACTIVITIES, PROGRAMS, AND SERVICES

10. On this trip, in which of the following activities did you or a member of your personal group participate within Wind Cave National Park? Please mark (●) **all that apply**.

- | | |
|--|---|
| ☐ Viewing wildlife, natural features, scenery, wildflowers, etc. | ☐ Day hiking (1 hour or more) |
| ☐ Creative arts (photography/drawing/painting/writing) | ☐ Bicycling |
| ☐ Cave tour | ☐ Horseback riding |
| ☐ Shopping | ☐ Camping in developed sites |
| ☐ Driving for pleasure | ☐ Backcountry camping |
| ☐ Walking/short hike (less than 1 hour) | ☐ Picnicking |

- ☐ Other (Please specify) _____
- ☐ Other (Please specify) _____
- ☐ Other (Please specify) _____

Wind Cave National Park Visitor Study

11. Of the activities listed in Question 10, which was your primary activity during your visit to Wind Cave National Park on the day you were contacted for this survey?

OR

- ☐ I did not have a primary activity on this trip to Wind Cave National Park.

12. On this trip, in which of the following programs and services did you or a member of your personal group participate within Wind Cave National Park? Please mark (●) **all that apply**.

- ☐ Attending a ranger-led activity, such as a cave tour or talk
(Please specify) _____
- ☐ Talking informally with a ranger
- ☐ Visiting the park store in the Visitor Center
- ☐ Viewing outdoor exhibits
- ☐ Viewing indoor exhibits
- ☐ Watching a video in the Visitor Center auditorium
- ☐ Reading the park brochure or newspaper
- ☐ Going to the Visitor Center
- ☐ Participating with a child in your group in the Junior Ranger program
- ☐ Obtaining National Park passport stamp
- ☐ Other (Please specify) _____

13. On this visit to Wind Cave National Park, did you participate in a cave tour? Please mark (●) **one**.

- ☐ Yes (Please specify tour(s) in which you participated.)

- ☐ No - → **Go to Question 17.**

14. If you were to visit Wind Cave National Park in the future, would you prefer to have a pre-visit reservation system to obtain tickets for a cave tour? Please mark (●) **one**.

- ☐ Yes
- ☐ No

15. Why did you and your personal group choose the cave tour you did?

Wind Cave National Park Visitor Study

16. Concerning the cave tour you took, please explain the parts of the experience that were especially meaningful to you.

17. a) Did anyone in your personal group have a physical condition that made it difficult to access or participate in park activities or services (such as cave tours), during your visit to Wind Cave National Park? Please mark (●) **one**.

- ☐ Yes
☐ No → **Go to Question 18.**

- b) If YES, what activities, services, or facilities did the person(s) have difficulty participating in or accessing? Please be specific.

- c) Because of the physical condition, which specified difficulties did the person(s) have? Please mark (●) **all that apply**.

- ☐ Hearing (difficulty hearing ranger programs, bus drivers, audio-visual exhibits or programs, or information desk staff even with hearing aid)
☐ Visual (difficulty in seeing exhibits, directional signs, visual aids that are part of programs even with prescribed glasses or due to blindness)
☐ Mobility (difficulty in accessing facilities, services, or programs even with walking aid and/or wheelchairs)
☐ Other (Please specify) _____

Wind Cave National Park Visitor Study

18. If you did not take a cave tour in Wind Cave National Park, what reasons prevented you from taking those tours. Please mark (●) **all that apply**.

- ☐ Had to wait too long
- ☐ Took cave tour on a previous visit
- ☐ Tours were full
- ☐ Fees were too high
- ☐ Physical limitations
- ☐ Did not know about the tours
- ☐ Lack of interest
- ☐ Other (Please specify) _____
- ☐ Not applicable (I was able to take a cave tour)

EXPENDITURES

Please answer the following questions for your time within Wind Cave National Park and its surrounding local area. The local area includes all communities within approximately 60 miles of Wind Cave National Park including Hot Springs, Custer, Edgemont, Keystone, Hill City, and the Rapid City area.

Note: If you are a permanent or seasonal resident of the local area, answer the questions only for this visit to Wind Cave National Park.

19. Do you live within the defined 60-mile local area surrounding Wind Cave National Park? Please mark (●) **one**.

- ☐ Yes, I reside in the local area (skip to question 25)
- ☐ No, I reside outside of the local area

20. What was the primary reason for this trip to the area? Please mark (●) **one**.

- ☐ Visiting Wind Cave National Park was the main reason I came to the local area
- ☐ Visiting Wind Cave National Park was one of several equally important reasons that I came to the local area
- ☐ I came to the local area (within 60 miles of the park) for other reasons and happened to visit Wind Cave National Park while I was in the area

Wind Cave National Park Visitor Study

21. During this trip, how much total time did you spend within Wind Cave National Park and the park's 60-mile local area? Please mark (●) one.
- ☐ I was on a day trip to the area (skip to question 25)
- ☐ I stayed overnight within Wind Cave National Park and/or within the park's local area.
- How many **total nights** did you spend in the local area? _____
- Include nights spent within Wind Cave National Park and nights spent lodging or camping outside of the park but within the park's 60-mile local area.
22. Name the town/city where you and your personal group stayed the night before your arrival at Wind Cave National Park?
- Town/city _____ State _____
23. In what town/city did you and your personal group stay on the night after your departure from Wind Cave National Park?
- Town/city _____ State _____
24. What type(s) of accommodations did you use during your stay in the local area? (Please mark (●) all that apply)
- ☐ Paid lodging outside of Wind Cave National Park but within the park's 60-mile local area
- ☐ Stayed in unpaid lodging within the surrounding 60-mile local area (e.g., stayed in the home of friends or family)
- ☐ Stayed in my permanent or seasonal residence (owned or rented)
- ☐ Camped (campgrounds or backcountry) within Wind Cave National Park
- ☐ Camped (campgrounds or backcountry) outside of Wind Cave National Park but within the park's 60-mile local area
- Why did you choose to camp outside the park?
- _____

Wind Cave National Park Visitor Study

25. Please estimate how much shared expenses you and your personal group (e.g., other family members, traveling companions) spent at Wind Cave National Park **and** in the local communities surrounding the park. **This includes your time in the park and the surrounding communities within approximately 60 miles of Wind Cave National Park** (e.g., Hot Springs, Custer, Edgemont, Keystone, Hill City, and the Rapid City area).

Local Area Residents (only): If you are a permanent or seasonal resident, please only include expenditures that were directly related to this trip to Wind Cave National Park.

Expenses	Amount spent at Wind Cave National Park <u>and</u> surrounding 60-mile area
Gas and oil (e.g., auto, RV, boat, etc.)	\$ _____
Rental cars	\$ _____
Taxis, shuttles, and public transportation	\$ _____
Restaurants and bars	\$ _____
Groceries and convenience foods	\$ _____
Hotels, motels, resorts	\$ _____
Specialty lodging (e.g., B&Bs, hostels, cabins, vacation rentals)	\$ _____
Camping fees (tent, RV)	\$ _____
Cave tour fee	\$ _____
Guides and other tour fees	\$ _____
Recreation and entertainment expenses (e.g., movies, bowling, miniature golf, etc.)	\$ _____
Souvenirs, clothing, supplies, other retail	\$ _____
Equipment rental	\$ _____
National Park annual pass	\$ _____
Other (Please list) _____	\$ _____

OR

- ☐ Don't know/Not sure
- ☐ I did not spend money at Wind Cave National Park or the surrounding 60-mile area

Wind Cave National Park Visitor Study

26. a) Including yourself, how many people in your personal group were covered by the expenses for this time in the park and the surrounding 60-mile local area?
- _____ Number of adults (18 years or over)
- _____ Number of children (under 18 years)
- b) Including yourself, how many people in your group split these trip expenses?
- _____ Number of people

BACKGROUND

27. For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, please provide the following information. (If you don't know the answer, enter "DK.")

	Current Age	U.S. ZIP code or name of country other than U.S.	Number of visits to Wind Cave National Park in last 5 years, including this trip	Number of visits to other NPS sites in the last 5 years
Yourself	_____	_____	_____	_____
Member #2	_____	_____	_____	_____
Member #3	_____	_____	_____	_____
Member #4	_____	_____	_____	_____

Wind Cave National Park Visitor Study

28. For your personal group during your visit to Wind Cave National park on the day you were contacted for this survey, what is the gender and ethnicity of each member of your group? Please mark (●) **one for each group member, including yourself, for both gender and Hispanic or Latino.** (If you don't know the answer, mark (●) "Don't know.")

	Yourself	#2	#3	#4
Male	☐	☐	☐	☐
Female	☐	☐	☐	☐
Hispanic or Latino	☐	☐	☐	☐
Not Hispanic or Latino	☐	☐	☐	☐
Don't know	☐	☐	☐	☐

29. For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, what is the race of each member of your group? Please mark (●) **one or more for each group member, including yourself.** (If you don't know the answer, mark (●) "Don't know.")

	Yourself	#2	#3	#4
American Indian or Alaska Native	☐	☐	☐	☐
Asian	☐	☐	☐	☐
Black or African American	☐	☐	☐	☐
Native Hawaiian or other Pacific Islander	☐	☐	☐	☐
White	☐	☐	☐	☐
Don't know	☐	☐	☐	☐

Wind Cave National Park Visitor Study

30. For your personal group during your visit to Wind Cave National Park on the day you were contacted for this survey, what is the highest level of formal education completed by each member of your group? Please mark (●) **one** for each group member, including yourself. (If you don't know the answer, mark (●) "Don't know.")

	Yourself	#2	#3	#4
Less than high school	☐	☐	☐	☐
Some high school	☐	☐	☐	☐
High school graduate or GED	☐	☐	☐	☐
Some college, business, or trade school	☐	☐	☐	☐
College, business, or trade school graduate	☐	☐	☐	☐
Some graduate school	☐	☐	☐	☐
Master's, doctoral, or professional degree	☐	☐	☐	☐
Don't know	☐	☐	☐	☐

31. Which category best represents your (personal) annual household income? Please mark (●) **one**.

- ☐ Less than \$24,999
- ☐ \$25,000-\$34,999
- ☐ \$35,000-\$49,999
- ☐ \$50,000-\$74,999
- ☐ \$75,000-\$99,999
- ☐ \$100,000-\$149,999
- ☐ \$150,000-\$199,999
- ☐ \$200,000 or more
- ☐ Do not wish to answer

32. Including yourself, how many people contribute to this household income?

_____ Number of people

Wind Cave National Park Visitor Study

33. Employment Status: Are you currently...? Please mark (●) **one**.

- ☐ Employed for wages
- ☐ Self-employed
- ☐ Out of work and looking for work
- ☐ Out of work but not currently looking for work
- ☐ A homemaker
- ☐ A student
- ☐ Military
- ☐ Retired
- ☐ Unable to work

34. Did your household take any unpaid vacation or take unpaid time off from work to come on this trip? Please mark (●) **one**.

- ☐ Yes
- ☐ No

35. Including yourself, how many people are in your household?

_____ Number of people

36. When visiting an area such as Wind Cave National Park, what language do you personally prefer to use? Please mark (●) **one for speaking and one for reading**.

	Speaking	Reading
English	☐	☐
Spanish	☐	☐
Other (Please specify) _____	☐	☐

37. Is there anything else you would like to tell us about Wind Cave National Park facilities, services, or recreational opportunities?

Thank you for your help!

Please place the questionnaire in the envelope provided and drop it in any U.S. Postal Service mailbox.

SURVEY ID NUMBER:

APPENDIX C. THE THANK YOU/REMINDER POSTCARD



Dear Wind Cave National Park Visitor,

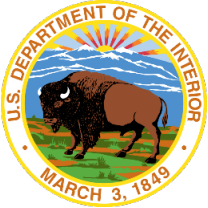
About two weeks ago we contacted you to participate in a survey about your recent trip to Wind Cave National Park. If you are one of the many people who have already responded, thank you!

However, if you have not yet had the opportunity to complete the survey, please do so. A select number of people were contacted for this study, so your opinions are very important! Please complete and return the questionnaire booklet at your earliest convenience. If you have lost the survey, another one will be mailed to you in approximately two weeks.

Vidal Davila

Vidal Davila
Wind Cave National Park
Superintendent

APPENDIX D. THE REPLACEMENT MAILING COVER LETTER



UNITED STATES DEPARTMENT OF THE INTERIOR

WIND CAVE NATIONAL PARK

26611 U.S. Highway 385

Hot Springs, SD 57747



Dear [Name],

About a month ago, on your recent trip to Wind Cave National Park, we asked you to participate in a visitor survey for the National Park Service. The National Park Service would like to thank you for agreeing to participate in this visitor study. We selected only a small number of visitors to participate in this study; therefore, the return of each questionnaire is very important. The information you provide will help us better manage Wind Cave National Park, and better serve you, our visitor.

If you have already returned your questionnaire, we would like to thank you. However, if you have not, we are asking you to please return it by mail today. Since we have not received yours as of the date we mailed this letter, we have included a replacement questionnaire for your convenience, along with a postage paid envelope.

If you have any questions regarding your questionnaire, please contact Thomas Farrell, Chief of Interpretation, Wind Cave National Park, 26611 U.S. Highway 385, Hot Springs, SD 57747; Tom_Farrell@nps.gov (email).

Thank you for your help with this important study. Your opinions matter, and we appreciate you sharing them with us. They will help us improve the management of Wind Cave National Park.

Sincerely,

Vidal Davila
Superintendent – Wind Cave National Park
National Park Service

APPENDIX E. DETAILED SAMPLING PROCEDURES

SITE SCHEMATICS

As noted, the visitor survey was administered at three locations in Wind Cave National Park. A specific survey administration point was identified at each location, based on analysis of aerial site photos, onsite scoping, and recommendations from the Wind Cave National Park point of contact for this study. The survey administration point for each location was denoted with a yellow star in a site schematic provided to the survey administrator assigned to the site (Figure 53 through Figure 55). A red line was used in each site schematic to denote the boundary at which visitor groups traveling in vehicles were considered to have entered the survey area and were intercepted for the survey. A red arrow was used in each site schematic to denote the direction of travel in which visitor groups were intercepted.

SAMPLING PROCEDURES

On each sampling day and at each intercept location, traffic cones and signs were set up along the roadside by survey administrators before the sample period began to provide advance notice of the survey to oncoming vehicles. Traffic cones were also set up to denote a pull-over location for intercepted vehicles. During the sample period, survey administrators used hand-held stop/slow signs and large, commanding arm motions to intercept and direct moving vehicles into the pre-identified pull-over location for survey administration.

Vehicles were intercepted using a first-after-last sampling approach. That is, survey administrators began the sample period by attempting to intercept the first vehicle that entered the survey area. After completing (or attempting to complete) a survey with the occupants of that vehicle, an intercept was attempted with the very next vehicle that entered the survey area. This process was continued throughout the sample period.

Once an intercepted vehicle was safely stopped, the survey administrator asked the occupants what brought them to the park that day. If the response indicated that the visitor group was non-recreational, the group was asked about the trip origin, trip destination, trip purpose, and length of stay in the park. If the response indicated that the visitor group was recreational, the survey administrator asked the group to answer several non-response bias questions. In addition, a sample of these recreational visitor groups was asked to participate in the mail-back survey.

Recreational visitor groups were selected for the mail-back survey using a timed interval sampling approach. The timed interval sampling approach involves selecting the first group to enter the survey area, then selecting a group every N minutes throughout the remainder of the

sampling day, where N is the time interval. Time intervals were designed in advance of onsite administration to ensure that there was a sufficient number of mail-back questionnaires to administer to recreational visitor groups during all hours of each sampling day. If a group selected for a mail-back survey refused to participate, the survey administrator asked the very next recreational visitor group to participate in the mail-back survey. The survey administrator continued this process until a recreational visitor group agreed to participate. If the next time interval started before the survey administrator was able to recruit a recreational visitor group to participate in the mail-back survey for the previous time interval, he/she advanced to the next time interval simply by asking the next recreational group to participate in the mail-back survey. Once a visitor group agreed to participate, the survey administrator waited until the start of the next time interval to continue. This sequence of steps was repeated throughout the sampling period.



FIGURE 53: SOUTH ENTRANCE SAMPLING LOCATION



FIGURE 54: WEST ENTRANCE SAMPLING LOCATION



FIGURE 55: NORTH ENTRANCE SAMPLING LOCATION



55 Railroad Row
White River Junction, VT 05001
802.295.4999
www.rsginc.com



White River Junction & Burlington, VT

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