



# 2021 Arches National Park Visitor Spending and Experience Study

*Final Report on 2021 Data Collection*



**ON THE COVER**

Delicate Arch in Arches National Park  
NPS/Madelyn Carpenter

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# 2021 Arches National Park Visitor Spending and Experience Study

*Final Report on 2021 Data Collection*

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The Otak Team

with:



Resource Systems Group

Prepared for:

Arches National Park



June 2022

U.S. Department of the Interior  
National Park Service

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## Introduction

Arches National Park (ARCH) is a part of the National Park Service's (NPS) Southeast Utah Group (SEUG). Visitation to parks in the SEUG in general, and in particular ARCH has experienced an unprecedented increase in visitation recently. While historical trends have demonstrated a steady increase in annual visitation, the past decade has generated a 79% increase in annual recreation visits. This change in visitation also highlights expansions in the peak season to begin earlier in the spring and extend further into the fall.

The park would like to learn more about park visitors and their visitation behavior in relation to increasing visitor use and potentially changing visitation patterns to inform visitor management decisions and strategies. The park has commissioned this visitor survey to collect information from visitors about these topics.

In particular, ARCH managers require this information collection to determine current utilization and perception of park resources, operations, and issues that may exist due to increased visitation. Further, ARCH is considering visitor use management strategies and updated information is necessary to facilitate communication and decision processes within the park, and between the park and its local partners and stakeholders. A visitor survey was developed to conduct the following:

- Collect visitor spending profiles to enable a better understanding of how and where visitors spend their money while travelling, thus providing the park and local officials with useful information about spending and the potential impacts of management decisions that may alter visitor spending. Results of spending profiles are not included in this report. They are included in Visitor Spending Effects reports generated by the Social Science Program of the NPS;
- Collect trip characteristics to enable understanding of travel demand for the park and its relationship to the region;
- Collect visitor characteristics to enable understanding of visitors and how management decisions may impact sub-populations of visitors; and
- Collect visitor perceptions of the park to identify visitor perceived conditions on the ground, allowing the park to consider potential implications of management decisions on visitor perceptions.

The research conducted to achieve these study purposes and presented in this report includes a visitor survey of park visitors to ARCH in the summer and winter seasons.

## Organization of the Report

The report is organized into four sections.

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

**Results:** This section provides summary information for each question in the study questionnaire organized by season and topic area in two subsections. The first subsection presents results from the on-site intercept survey including information about visitor residency, trip purpose and travel planning, lodging, group characteristics, and transportation modes. The second subsection presents results from a mail-back survey and includes information about trip characteristics, trip motivations, visit experience, and visitor background characteristics and demographics.

**Appendices:** Delivered in a separate companion document.

- Appendix 1. *On-site Questionnaire.* An example of the on-site questionnaire using Qualtrics software to digitally record visitor responses.
- Appendix 2. *Mail-back Questionnaire.* An example of the printed mail-back questionnaire given to visitors on site for return in the mail.
- Appendix 3. *Visitor Survey: Verbatim Responses to Open-ended Questions: Summer.* Summer visitor responses to open-ended questions.
- Appendix 4. *Visitor Survey: Verbatim Responses to Open-ended Questions: Winter.* Winter visitor responses to open-ended questions.
- Appendix 5. *Visitor Survey: Descriptive Statistics.* Descriptive statistics for those variables for which measures of central tendency can be computed.

## Presentation of the Visitor Use Survey Results

Visitor use survey results are represented in the form of figures (see Figure 1 below), tables, and/or text.

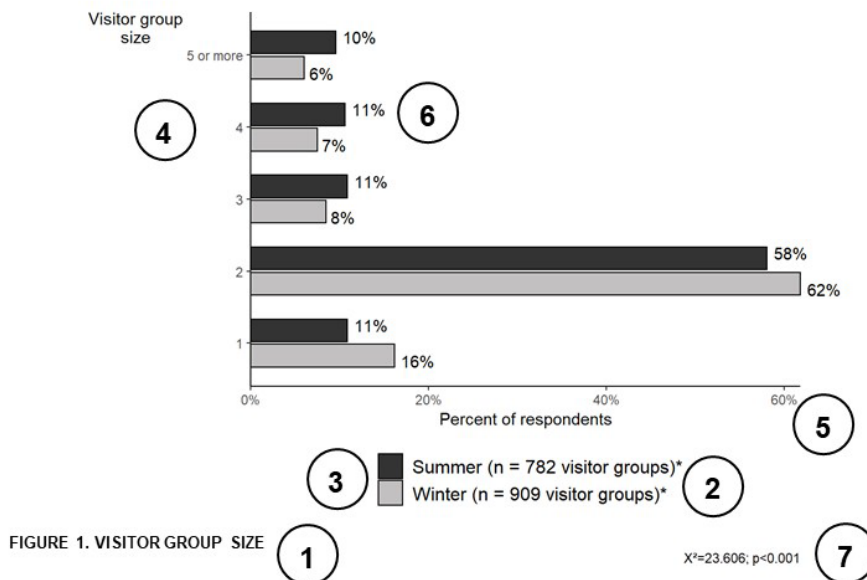
### *SAMPLE ONLY*

1. The figure caption describes the figure's information.
2. Listed at the bottom of the figure, the "N" shows the number of individuals or visitor groups responding to the question in each category. When the number of individuals or visitor groups is less than 30 the word "CAUTION!" is shown on the figure or table to indicate the results are statistically unreliable due to low sample size. No statistical tests will be performed on variables with samples smaller than 30 individuals or visitor groups.

*\* 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. Data categories used for comparison.
4. Vertical information (y-axis) describes the response categories.
5. Horizontal information (x-axis) shows the percentage of responses in each category.
6. The proportion of visitor groups/visitors who selected each category.
7. Statistical test used to compare the two data categories.



**Figure 1.** Example figure

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## Methods

As described in the introduction, the study was designed to collect visitor spending profiles, visitor and trip characteristics, and understand visitor perceptions of the park and park management. This section of the report describes the methods used to accomplish each of these objectives.

### Survey Method

The visitor survey was administered in ARCH. The survey used a two-phase survey methodology to elicit responses from a representative sample of visitors to ARCH. The survey included an on-site intercept survey administered on tablet computers, and a mail-back survey to obtain information about respondents' full trip. Visitors who completed the on-site intercept survey were asked to take a printed mail-back follow-up survey. Individuals who agreed to complete the mail-back questionnaire were asked to provide their name and mailing address following the principles outlined in Don A. Dillman's book *Internet, Phone, Mail, and Mixed-Mode Surveys: The Tailored Design Method* (2014). The mail-back survey method included three phases: 1) on-site distribution of a booklet-sized questionnaire, 2) a color-picture reminder postcard mailing, and 3) up to two replacement mailings of a booklet-sized questionnaire for those participants that had not yet returned a completed questionnaire. Visitors were asked to complete the questionnaire after 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.

Approximately one week after field survey administration concluded, all mail-back survey participants were sent a color-picture postcard thanking them for participating in the study and/or reminding them to complete and return the questionnaire. Approximately two weeks after mailing the postcards, 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. 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 affixed with international postage. This remailing process was repeated approximately two weeks after the first replacement mail-back survey packet for individuals who agreed to participate in the study, but who had still not returned his or her questionnaire.

The study population included visitor groups with at least one group member 18 years of age or older in ARCH during the study period. The target margin of error for summary statistics of no greater than +/- 5% (Fowler 1993) was used to establish the target sample size at 400 completed questionnaires.

### Sampling Effort

The visitor survey was administered at ARCH during two seasons. The summer sampling period occurred from May 27 through June 7, 2021. Winter sampling occurred from November 5 through

November 15, 2021.<sup>1</sup> The survey administration dates were selected to include both weekdays and weekend days. The sampling periods and sampling location were selected in consultation with park staff to capture a broad range of user types and maximize sampling efficiency without being affected by frequent entrance gate closures that occurred during the summer season sampling period.

The visitor survey was administered for a select range of hours on each sampling day. The hours of survey administration coincided with the hours of highest visitation to maximize sampling efficiency. The sampling effort for each season is presented in Table 1 and Table 2.

**Table 1.** Summer sampling effort

<b>Date</b>	<b>Daily sampling period</b>
Friday, May 28	8:00AM – 4:00PM
Saturday, May 29	8:00AM – 4:00PM
Sunday, May 30	8:00AM – 4:00PM
Monday, May 31	8:00AM – 4:00PM
Tuesday, June 1	–
Wednesday, June 2	8:00AM – 4:00PM
Thursday, June 3	8:00AM – 4:00PM
Friday, June 4	8:00AM – 4:00PM
Saturday, June 5	8:00AM – 4:00PM
Sunday, June 6	8:00AM – 4:00PM
Monday, June 7	8:00AM – 4:00PM

**Table 2.** Winter sampling effort

<b>Date</b>	<b>Daily sampling period</b>
Friday, November 5	8:00AM – 4:00PM
Saturday, November 6	8:00AM – 4:00PM
Sunday, November 7	8:00AM – 4:00PM
Monday, November 8	8:00AM – 4:00PM
Tuesday, November 9	8:00AM – 4:00PM
Wednesday, November 10	–
Thursday, November 11	8:00AM – 4:00PM
Friday, November 12	8:00AM – 4:00PM
Saturday, November 13	8:00AM – 4:00PM
Sunday, November 14	8:00AM – 4:00PM
Monday, November 15	8:00AM – 4:00PM

<sup>1</sup> June 1 was a scheduled day off for the field staff during the summer sampling period, and November 10 was a scheduled day off for the field staff during the winter sampling period. No surveys were administered on those dates.

## **Survey Instrument Design**

The on-site portion of the survey was administered to ARCH visitors after they entered the park. The purpose of the on-site survey was to collect key questions of interest regarding visitor segments and visitation in the local area from a larger sample of visitors. The mail-back survey was intended to gather key in-depth information on visitor spending profiles, trip characteristics, and attitudes about park management, programs and facilities.

The survey instruments were designed by the project team in coordination with NPS staff both in the park and in the NPS Social Science Program. All of the questions included in the questionnaires were selected from the NPS Programmatic Information Collection Review Pool of Known Questions. The majority of the questions included in the survey instruments 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 survey instruments and sampling protocol were reviewed and approved by the Office of Management and Budget and correspondingly conform to OMB standards and guidelines for questionnaire design. Appendix 1 contains a copy of the on-site survey instrument, and Appendix 2 contains a copy of the mail-back survey instrument.

## **Sampling Procedures**

The on-site component of the survey was administered on 10 days during the summer and winter sampling periods. Each daily sampling period started at 8:00 a.m. and ended at 4:00 p.m.

Survey sampling was conducted by the survey administration team via roadway intercept sampling which occurred at a pullover location on the inbound side of the park entrance road beyond the turn off to the Fiery Furnace (Figure 2). The sampling location was selected because traffic flow was relatively unaffected by park closures that occurred during the sampling period and was a place where vehicles could safely be pulled over without causing traffic to become congested or interfering with park operations.



**Figure 2.** Roadway intercept location for survey administration

Survey administration used a first-after-last approach to sample inbound vehicles. Specifically, the survey administration team pulled over the first vehicle to approach the sampling location in an inbound direction and asked the occupants of the vehicle to participate in the study. The survey administration team continued to pull over vehicles until a group agreed to participate. Upon completion of a visitor contact, the next vehicle to approach in an inbound direction was pulled over and asked to participate in the survey. The team continued this process throughout the sampling period.

Each contacted visitor group was greeted, briefly, introduced to the purpose of the study, asked to participate, and screened for eligibility. Visitor groups were considered eligible for the study if they had not previously participated in the study, were not a park employee, were able to communicate with the English-speaking survey administrator (i.e., did not have a language barrier), and had at least one group member 18 years of age or older. Information from all contacts, whether they participated in the survey or not, was recorded on a digital contact log by the survey administrator as part of the on-site questionnaire (Appendix 1). The survey administrator noted the gender of the first individual contacted, group size, and whether or not the visitor group arrived in a commercial vehicle. If visitors were eligible for the study and agreed to participate, they were asked which member (at least 18 years old) had the next birthday. The individual with the next birthday was selected 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. The survey administrator then conducted an interview, lasting approximately five minutes, to complete the on-site questionnaire with the visitor.

A shorter interview, lasting approximately two minutes was conducted with eligible visitors who refused to participate in the survey. These visitors were asked how many adults and children were in their group, whether they were a first-time visitor to ARCH, whether visiting ARCH was the primary purpose for their overall trip away from home, whether they planned to stay overnight in ARCH or the local area, and whether they planned to visit ARCH on more than one day. For all “hard refusals” (groups who refused to participate in the study and in the brief interview), only the observational data (gender of first-contacted group member, group size, whether the group arrived in a commercial vehicle, and time of contact) and refusal reason were recorded on the contact log.

## **Sampling Results**

### ***Summer***

During the summer sampling period, 840 visitor groups were invited to participate in the survey. Of these groups, 789 agreed to participate in the on-site survey (94% on-site response rate<sup>2</sup>) and 730 agreed to participate in the mail-back survey by accepting a mail-back survey packet (87% cooperation rate). Questionnaires were completed and returned by 369 visitor groups, resulting in a completion rate of 51% among those visitor groups that accepted a mail-back questionnaire and an overall mail-back response rate of 44% for the study.

### ***Winter***

During the winter sampling period, 886 visitor groups were invited to participate in the survey. Of these groups, 858 agreed to participate in the on-site survey (97% on-site response rate<sup>2</sup>) and 729 agreed to participate in the mail-back survey by accepting a mail-back survey packet (82% cooperation rate). Questionnaires were completed and returned by 436 visitor groups, resulting in a completion rate of 60% among those visitor groups that accepted a mail-back questionnaire and an overall mail-back response rate of 49% for the study.

## **Limitations**

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

1. The mail-back 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 periods May 27 through June 7, 2021, and November 5 through 15, 2021. The results present two ‘snapshots-in-time’ and do not necessarily apply to visitor groups during other times of the year.

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<sup>2</sup> A non-response bias analysis was not conducted on these data. Office of Management and Budget Standards and Guidelines for Statistical Surveys (2006) specifies that a non-response bias analysis is required when unit response rate is below 80%.

3. Caution is advised when interpreting any data with a sample size of less than 30, as the results may be unreliable. Whenever the sample size is less than 30, the phrase **“CAUTION: Number of respondents less than 30 visitor groups”** is included in the graph, figure, table, or text. No statistical tests were performed on variables with samples smaller than 30 individuals or visitor groups.
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 values when interpreting the results.

### **Special Conditions**

The weather during the summer survey period was generally hot, dry, and sunny. Temperatures during the summer survey period were consistently in mid-90s.

Park closures lasting two to three hours occurred daily throughout the summer sampling period. A sampling location was chosen to minimize the effect of closures.

There were no special considerations of note during the winter sampling period.

## Results

This section of the report presents the results of the visitor surveys administered on site and via a mail-back survey. The results are generally presented in questionnaire order and include the question number, the question text, select bulleted information, and data figures and tables. For all open-ended questions and questions with open-ended response options, verbatim responses are reported in Appendices 3 and 4 (companion document). Descriptive statistics (mean, median, standard deviation) are presented in Appendix 5 (companion document) for those variables for which measures of central tendency can be computed.

It should be noted, due to rounding, the percentages summarized in the bulleted information may not exactly match manual summation of the percentages presented in the tables. The percentages in the tables may not sum to 100% due to rounding, or in cases where survey respondents were instructed to select all response options that apply. No statistical tests were performed on variables with samples smaller than 30 individuals or visitor groups.

## Parkwide Visitor Survey by Season – Intercept Survey

### Visitor residency

#### Residency in the local area

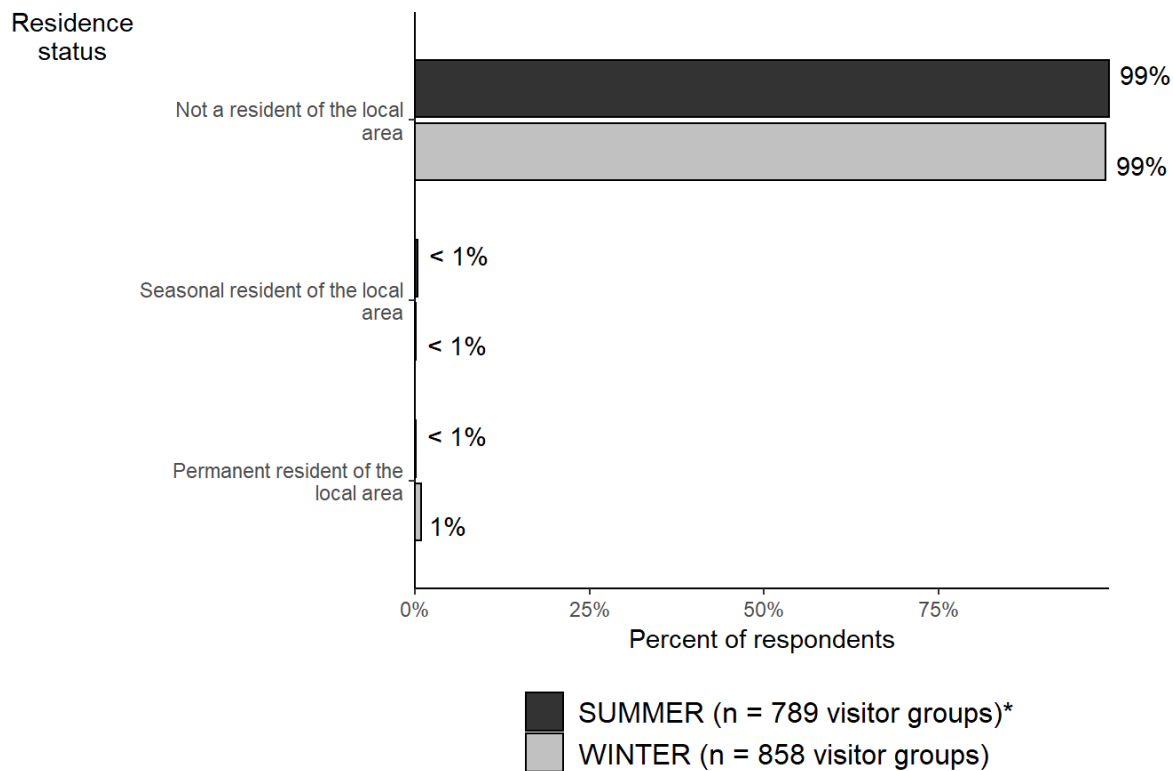
##### Question 1

Are you a permanent or seasonal resident of the local area around Arches National Park?

See Figure 4 on the next page for the local area map.

#### Results (Figure 3)

- Most summer visitor groups (99%) did not live within the local area shown on the map, while <1 % lived permanently or seasonally within the local area. This differs slightly from winter visitor groups. Ninety-nine percent of winter visitor groups did not live within the local area shown on the map, while 1% lived permanently in the local area, while <1% lived seasonally within the local area.

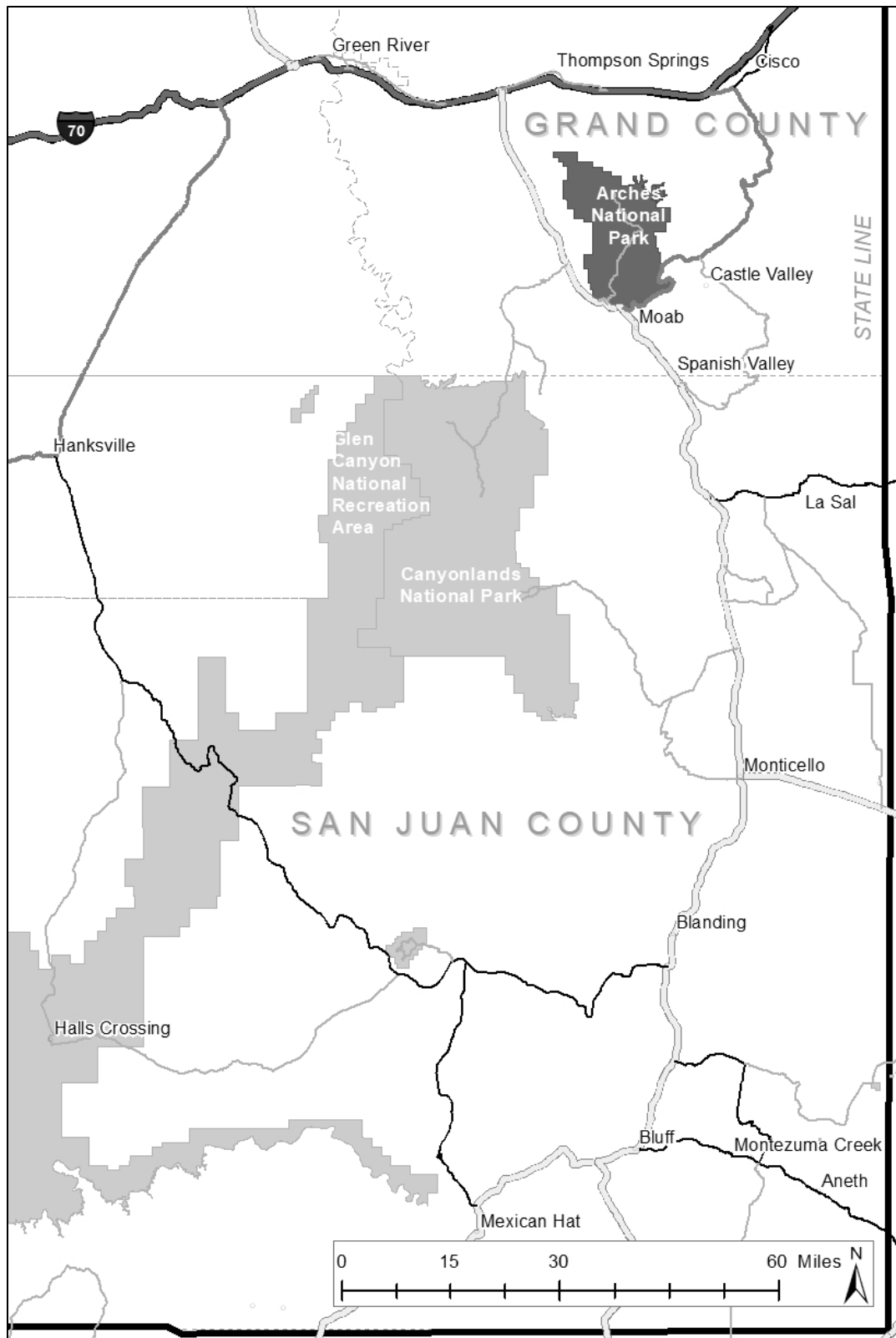


$\chi^2=6.071$ ;  $p=0.048$

**Figure 3.** Local or non-local residence

\* total percentages do not equal 100 due to rounding

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



**Figure 4.** Map of Arches National Park and local area

\* total percentages do not equal 100 due to rounding

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

## U.S. visitors' state of residence

Questions 2 and 3

What is your ZIP code in the local area?

What is your home ZIP code or home country if not U.S.?

Results (Table 3, Table 4, Figure 5, Figure 6)

The most popular states of residence of U.S. visitors in the summer were Colorado (12%) and California (10%).

- The most popular states of residence of U.S. visitors in the winter were Utah (16%), Colorado (13%), and California (10%).

**Table 3.** United States visitors by state of residence – Summer

<b>State</b>	<b>Number of visitors</b>	<b>Percent of U.S. visitors* (N = 774)</b>	<b>Percent of all visitors* (N = 782)</b>
Colorado	94	12	12
California	77	10	10
Texas	53	7	7
Utah	47	6	6
Florida	36	5	5
Georgia	29	4	4
Illinois	29	4	4
Ohio	27	3	3
Arizona	22	3	3
Minnesota	20	3	3
Tennessee	20	3	3
Washington	20	3	3
Missouri	18	2	2
Virginia	18	2	2
Pennsylvania	17	2	2
Massachusetts	16	2	2
Oregon	14	2	2
Indiana	13	2	2
New York	13	2	2
Nebraska	12	2	2
North Carolina	12	2	2
Oklahoma	12	2	2
27 other states	155	20	20
Total	774	103	103

Other states each had less than 2% visitors

\* total percentages do not equal 100 due to rounding

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

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

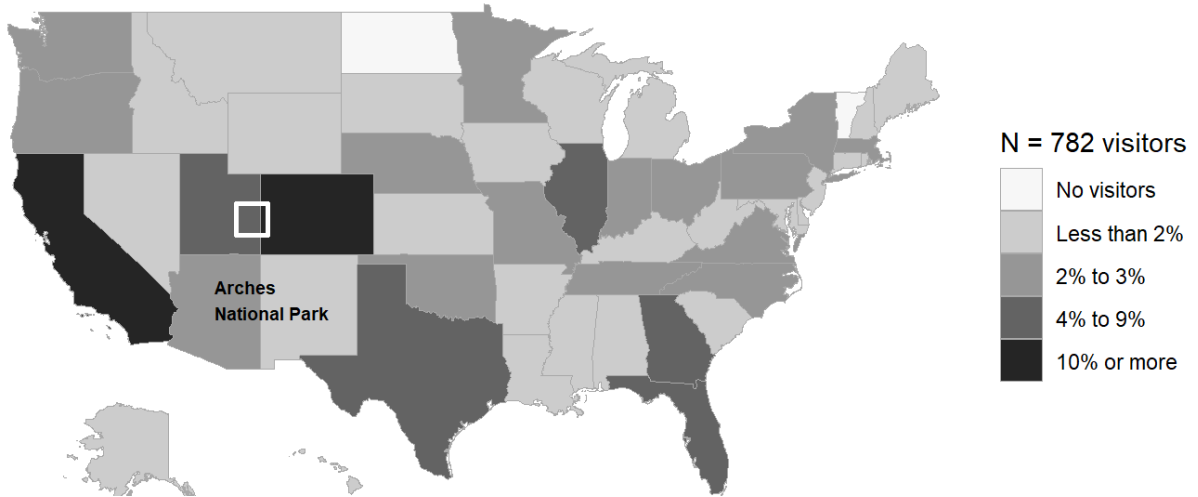
<b>State</b>	<b>Number of visitors</b>	<b>Percent of U.S. visitors* (N = 812)</b>	<b>Percent of all visitors (N = 844)</b>
Utah	126	16	15
Colorado	104	13	12
California	83	10	10
Florida	31	4	4
Texas	30	4	4
New York	28	3	3
Arizona	25	3	3
Ohio	24	3	3
Washington	22	3	3
Minnesota	21	3	2
Pennsylvania	19	2	2
Wisconsin	19	2	2
Illinois	17	2	2
Virginia	17	2	2
Michigan	15	2	2
Nevada	15	2	2
North Carolina	14	2	2
Oregon	14	2	2
30 other states	188	23	22
Total	812	101	97

Other states each had less than 2% visitors

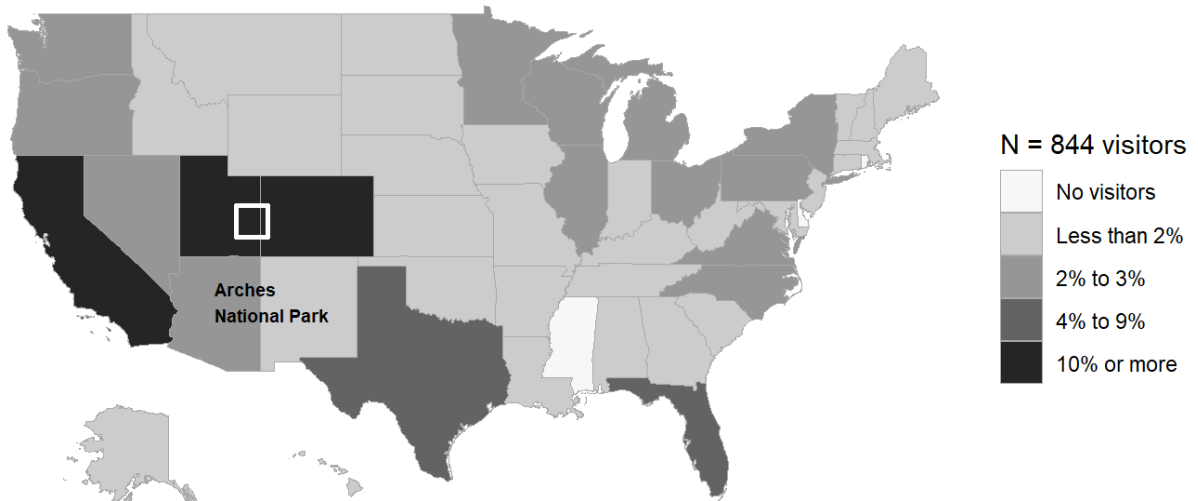
\* total percentages do not equal 100 due to rounding

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

Geographic origin of U.S. residents – On-site survey  
Question 2



**Figure 5.** Proportion of U.S. visitors by state of residence – Summer



**Figure 6.** Proportion of U.S. visitors by state of residence – Winter

\* total percentages do not equal 100 due to rounding

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

## International visitors' country of residence

### Question 3

What is your home ZIP code or home country if not U.S.?

Results (Table 5, Table 6)

- One-quarter of summer international visitors (25%) were from Canada and about one third of winter international visitors (31%) were from Canada. A small percentage of winter international visitors (16%) were from Germany.

**Table 5.** International visitors by country of residence – Summer

<b>Country</b>	<b>Number of visitors</b>	<b>Percent of international visitors* (N = 8)</b>	<b>Percent of all visitors (N = 782)</b>
Canada	2	25	<1
Ecuador	1	12	<1
Germany	1	12	<1
Nigeria	1	12	<1
Paraguay	1	12	<1
Sweden	1	12	<1
United Arab Emirates	1	12	<1
Total	8	97	1

All countries are included

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

<b>Country</b>	<b>Number of visitors</b>	<b>Percent of international visitors* (N = 32)</b>	<b>Percent of all visitors (N = 844)</b>
Canada	10	31	1
Germany	5	16	1
DR of the Congo	2	6	<1
France	2	6	<1
Sweden	2	6	<1
Argentina	1	3	<1
Australia	1	3	<1
Belgium	1	3	<1
Djibouti	1	3	<1
Guatemala	1	3	<1
Israel	1	3	<1
Italy	1	3	<1
Myanmar (Burma)	1	3	<1
Paraguay	1	3	<1
Sierra Leone	1	3	<1
United Arab Emirates	1	3	<1
Total	32	98	4

All countries are included

\* total percentages do not equal 100 due to rounding

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

## ***Trip characteristics and travel planning***

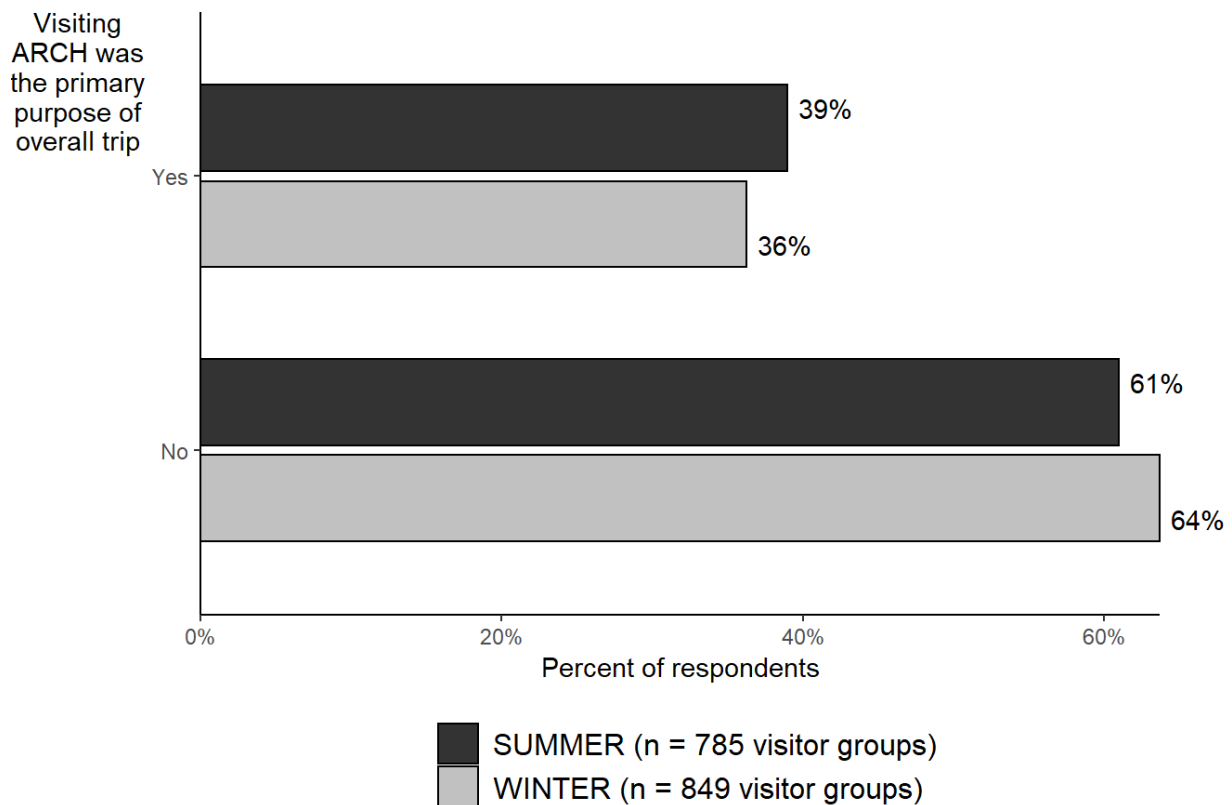
### Trip purpose

#### Question 4

Is your visit to Arches National Park the primary purpose of your overall trip away from home?

Results (Figure 7)

- A majority of summer visitors (61%) reported that visiting ARCH was not the primary purpose of their overall trip away from home.
- A majority of winter visitors (64%) reported that visiting ARCH was not the primary purpose of their overall trip away from home.



$X^2=1.158$ ;  $p=0.282$

**Figure 7.** Purpose of overall trip away from home

\* total percentages do not equal 100 due to rounding

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

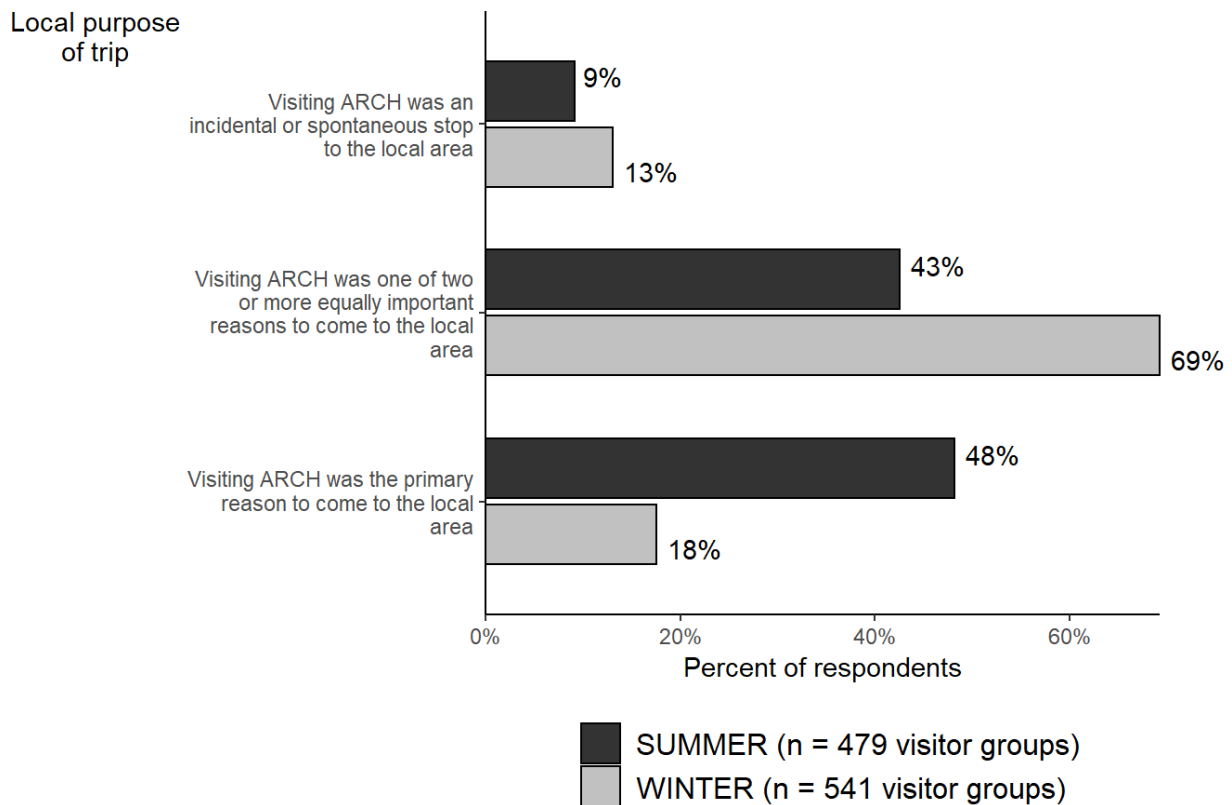
## Role of park visit in trip away from home

### Question 5

If NO, is your visit to Arches National Park the primary purpose of your overall trip away from home?

### Results (Figure 8)

- Summer visitor groups were less likely than winter visitors to report that their visit to ARCH was one of two or more equally important reasons for coming to the local area (43% and 69%, respectively)
- Summer visitors were more likely than winter visitors to report that their visit to ARCH was the primary reason for coming to the local area (48% and 18%, respectively).



$X^2=110.217$ ;  $p<0.001$

**Figure 8.** Role of park visit in trip away from home

\* total percentages do not equal 100 due to rounding

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

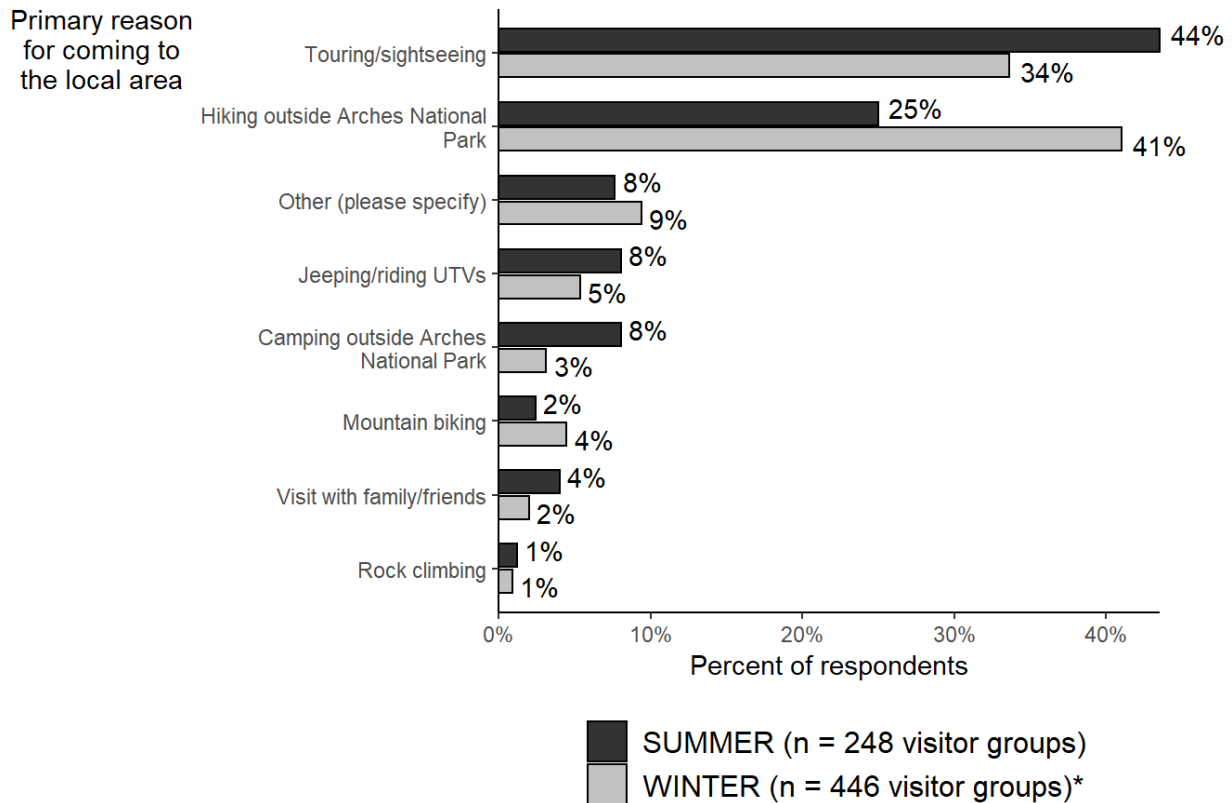
Primary reason for visiting the local area

Question 6

What was the primary reason you came to the local area?

Results (Figure 9)

- Summer visitor groups were more likely than winter visitor groups to report that touring/sightseeing (44% and 34%, respectively) was their primary reason for coming to the local area.
- Winter visitor groups were more likely than summer visitor groups to report that hiking outside ARCH (41% and 25%, respectively) was their primary reason for coming to the local area.



X<sup>2</sup>=30.41; p<0.001

**Figure 9.** Primary reason for visiting the local area

\* total percentages do not equal 100 due to rounding

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

## Travel planning

### Question 7

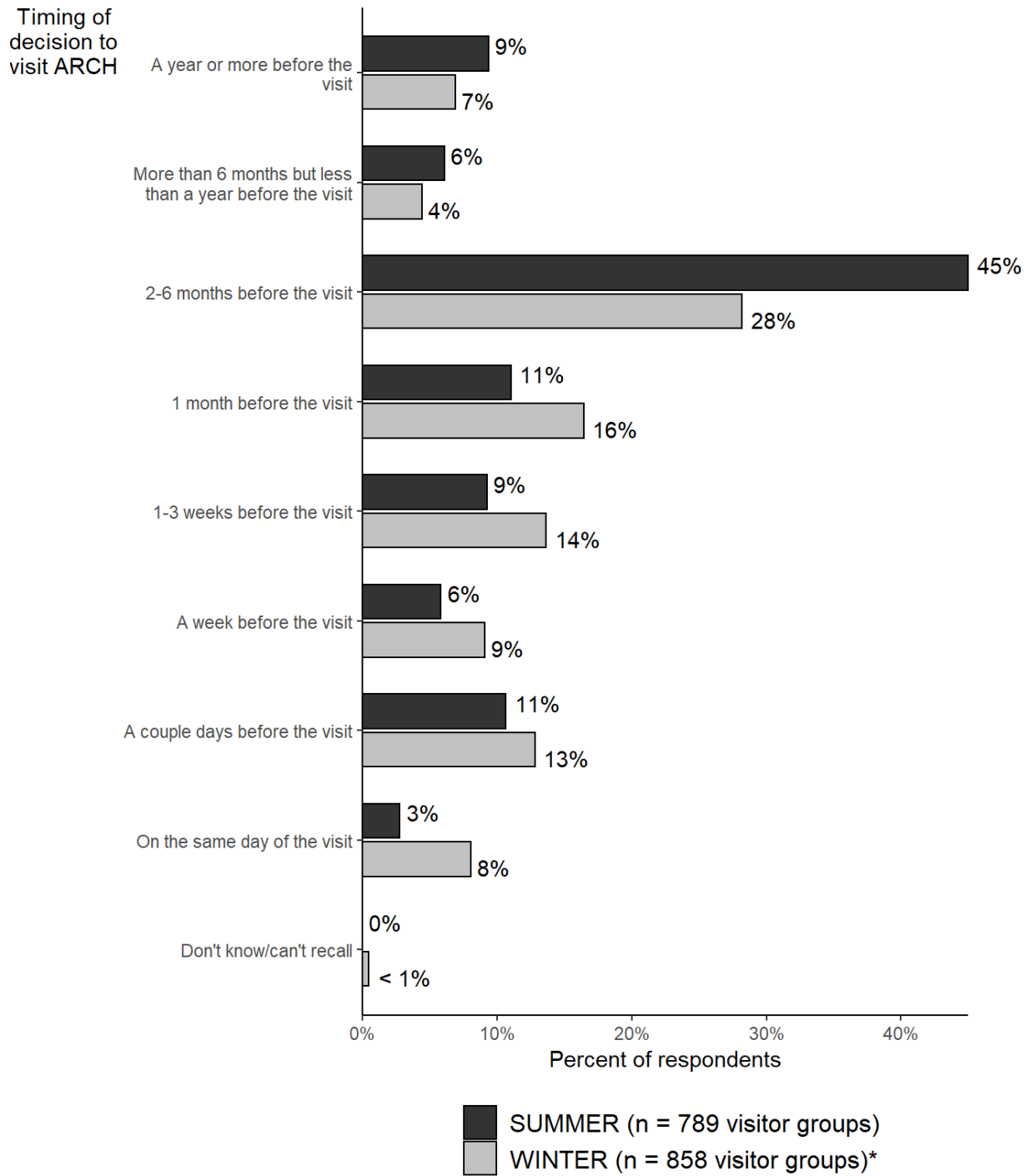
When did you make the decision to visit Arches National Park?

#### Results (Figure 10)

- Summer visitor groups were more likely than winter visitor groups to report that they decided to travel to ARCH 2–6 months prior to traveling (45% and 28%, respectively).
- A majority of winter visitor groups (60%) reported deciding to travel to ARCH one month or less before their travel.

\* total percentages do not equal 100 due to rounding

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



$\chi^2=84.497$ ;  $p<0.001$

**Figure 10.** Timing of decision to visit ARCH

\* total percentages do not equal 100 due to rounding

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

Overnight stay in the local area by local residents

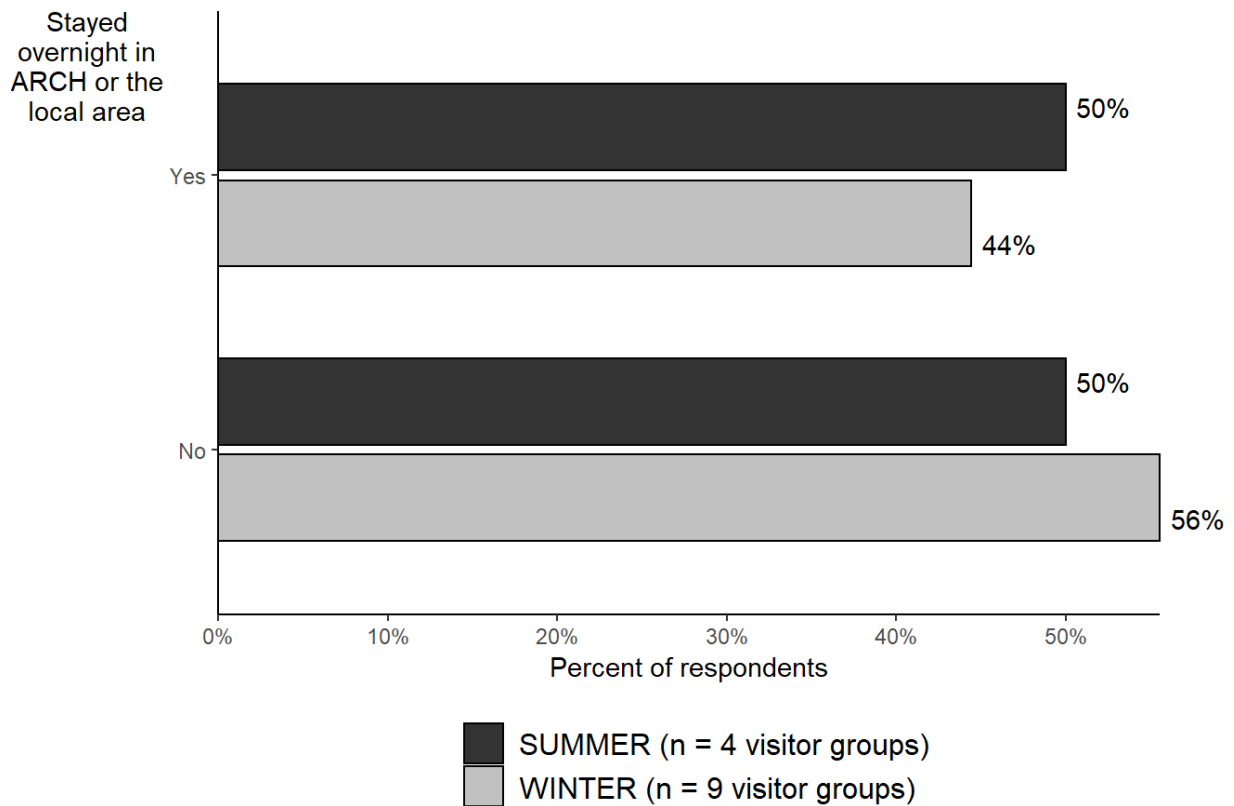
Question 8

On this trip away from home, have you stayed, or will you stay overnight in Arches National Park and/or within the local area somewhere other than your local residence?

See Figure 4 for map.

Results (Figure 11)

- Half of summer visitor groups (50%) and 44% of winter visitor groups who reside in the local area stayed overnight in the local area in accommodations other than their local residence.



CAUTION: Number of respondents less than 30 visitor groups

**Figure 11.** Visitors from the local area who stayed in overnight in local accommodations

\* total percentages do not equal 100 due to rounding

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

Overnight stay outside the local area by non-local residents

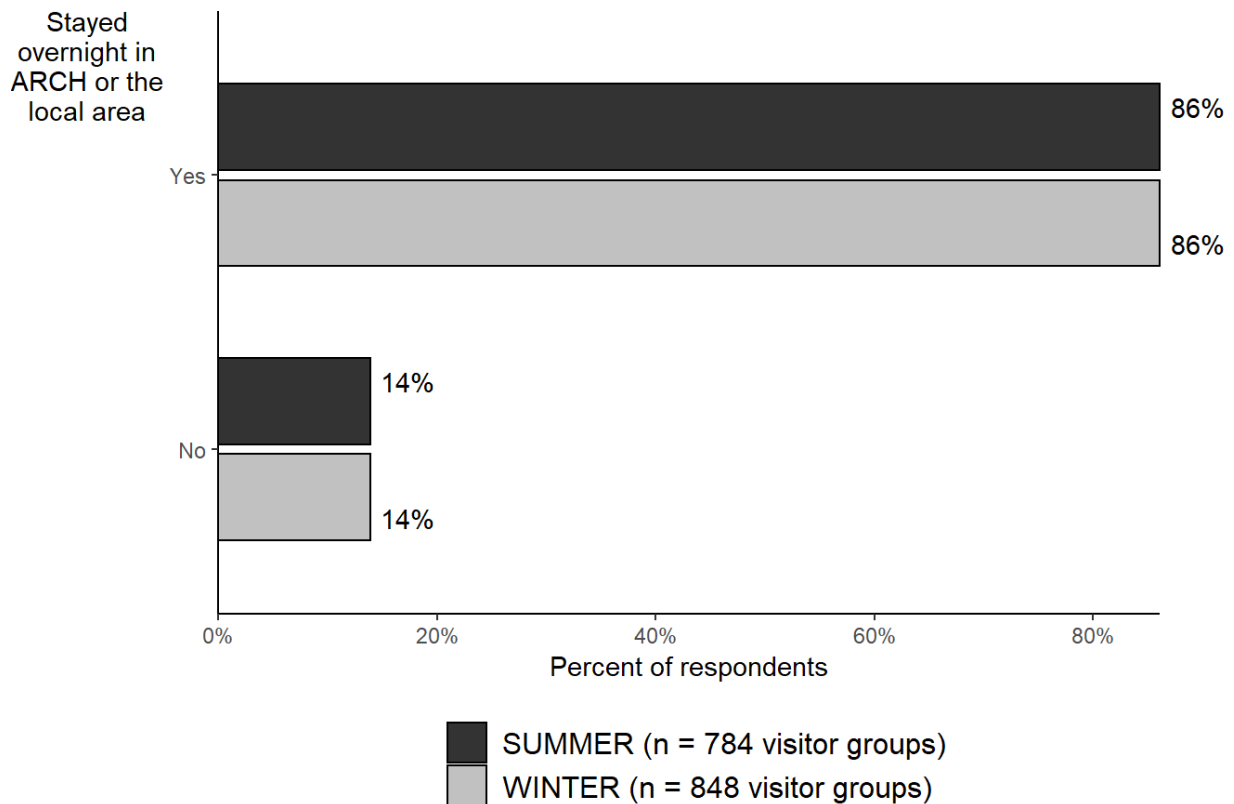
Question 8

On this trip away from home, have you stayed, or will you stay overnight in Arches National Park and/or within the local area?

See Figure 4 for map.

Results (Figure 12)

- Most summer and winter visitor groups (86%) who reside outside the local area stayed overnight in the local area.



$\chi^2=0$ ;  $p=1$

**Figure 12.** Visitors who stayed overnight in the local area

\* total percentages do not equal 100 due to rounding

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

Nights spent in overnight accommodations

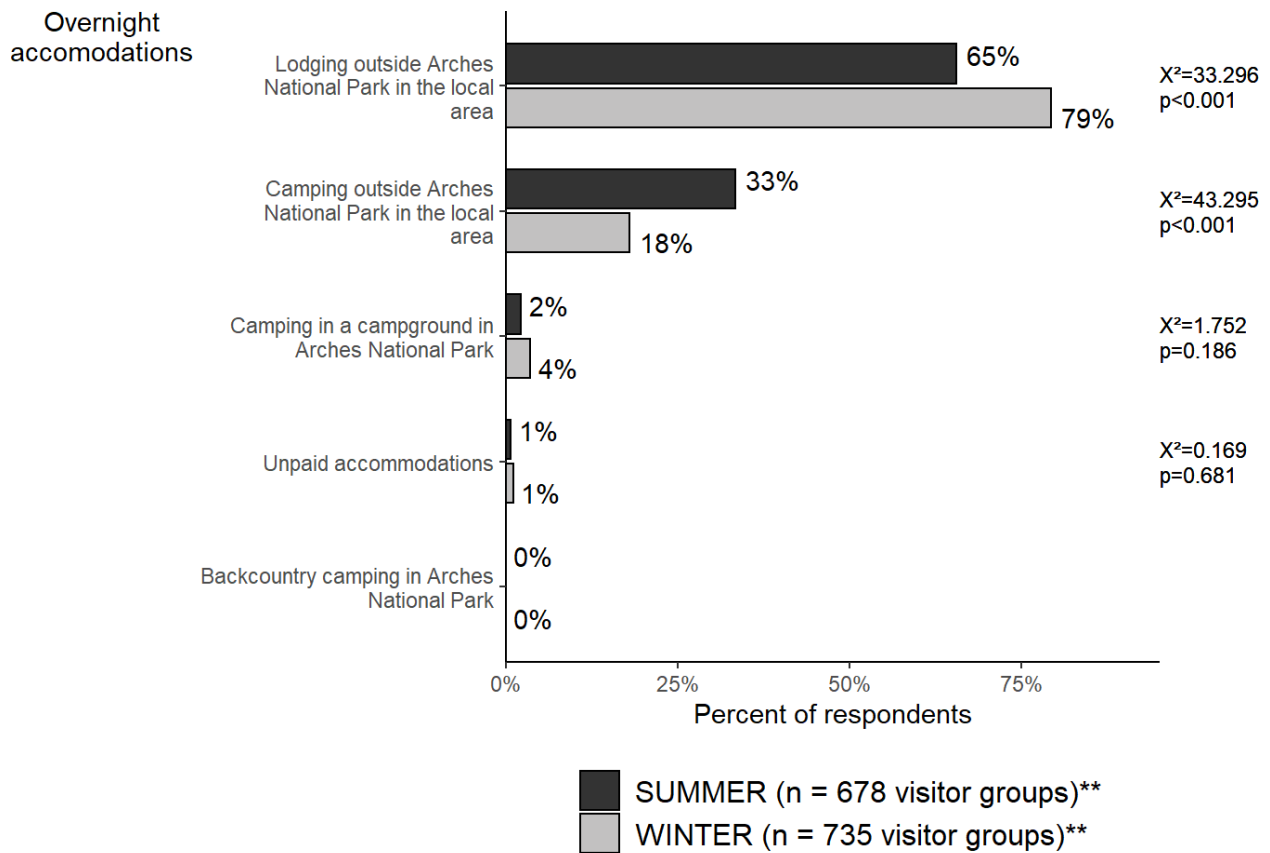
Question 9

On this trip, what type of accommodations do you expect to use while in Arches National Park and/or the local area?

See Figure 4 for map.

Results (Figure 13)

- Summer visitor groups were less likely to stay in lodging outside the park than winter visitor groups (65% and 79%, respectively).
- Summer visitor groups were more likely than winter visitor groups to camp outside the park (33% and 18%, respectively).
- No visitors reported camping in the backcountry.



**Figure 13.** Accommodations for nights spent in ARCH or the local area

\* total percentages do not equal 100 due to rounding

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

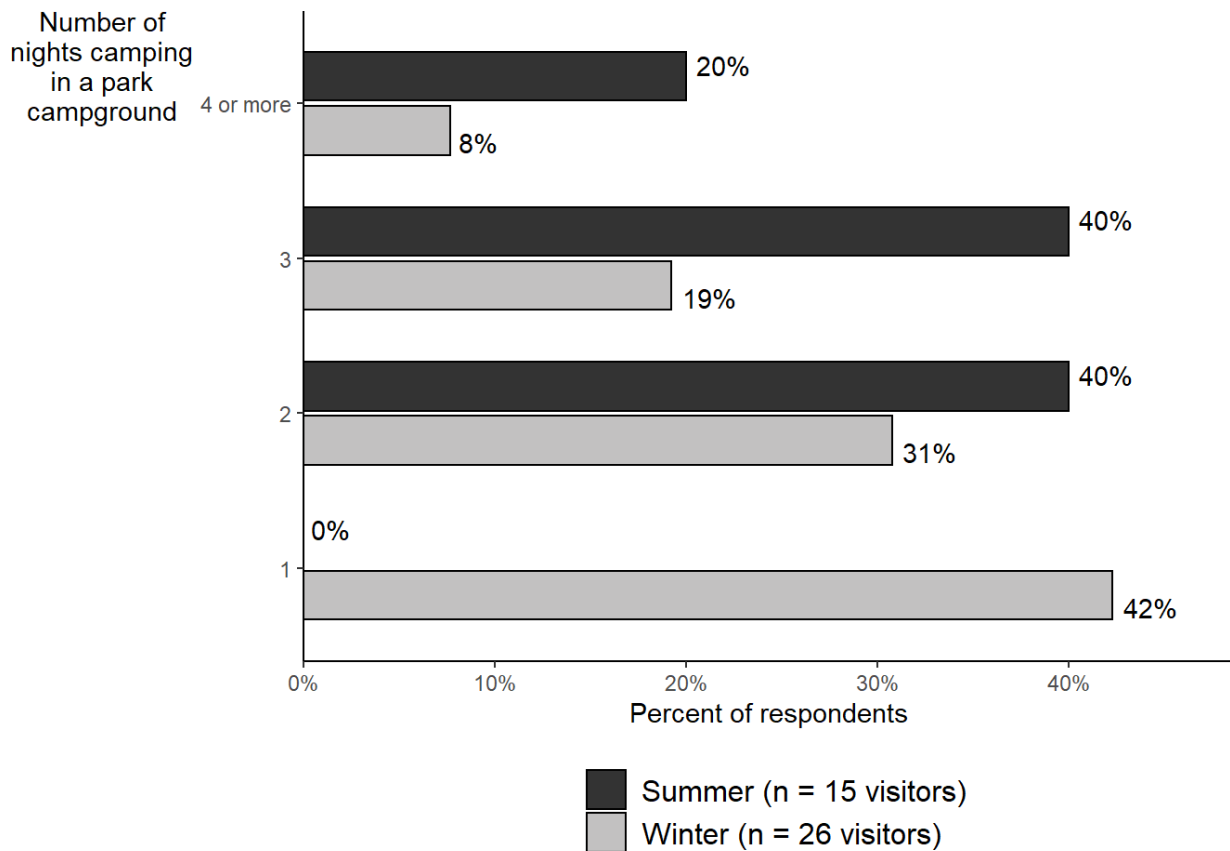
## Camping in campgrounds in Arches National Park

### Question 10

How many nights have you or do you plan to spend camping (not in the backcountry) in Arches National Park?

Results (Figure 14)

- Nearly three quarters of winter visitors (73%) who camped in ARCH spent two nights or less.
- All summer visitors (100%) who camped in ARCH spent two or more nights.
- On average, summer visitors spent nearly three nights camping in ARCH, while winter visitors spent just over two nights on average. This difference was not statistically significant (see Appendix 5 in the Appendices companion document).



CAUTION: Number of respondents less than 30 visitors

**Figure 14.** Nights spent camping in a campground in ARCH

\* total percentages do not equal 100 due to rounding

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

## Camping in campgrounds outside Arches National Park

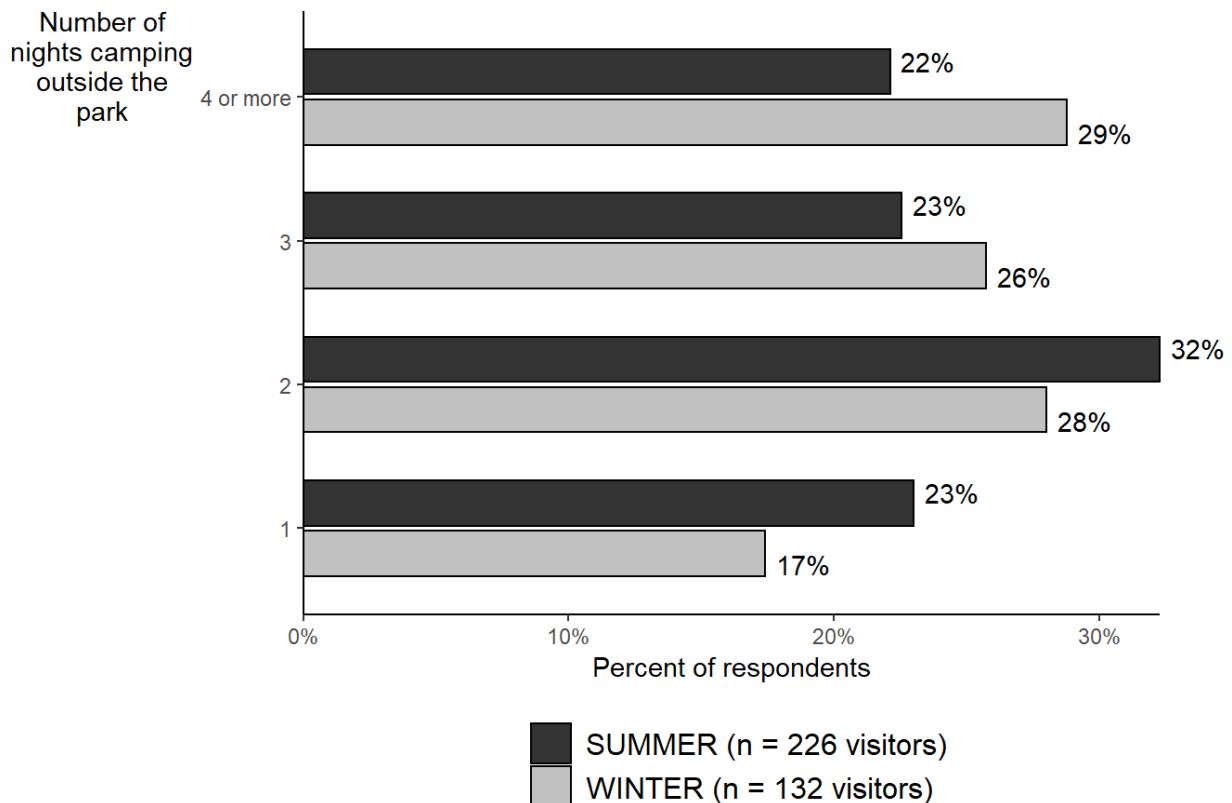
### Question 10

How many nights have you or do you plan to spend camping outside Arches National Park in the local area?

See Figure 4 for map.

### Results (Figure 15)

- A majority of summer visitors (77%) who camped outside ARCH in the local area spent two nights or more.
- A majority of winter visitors (83%) who camped outside ARCH in the local area spent two nights or more.
- On average, summer visitors spent nearly three nights camping in the local area, while winter visitors spent nearly four nights on average. This difference was not statistically significant (see Appendix 5 in the Appendices companion document).



$X^2=3.598$ ;  $p=0.308$

**Figure 15.** Nights spent camping outside ARCH in the local area

\* total percentages do not equal 100 due to rounding

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

Lodging in the local area

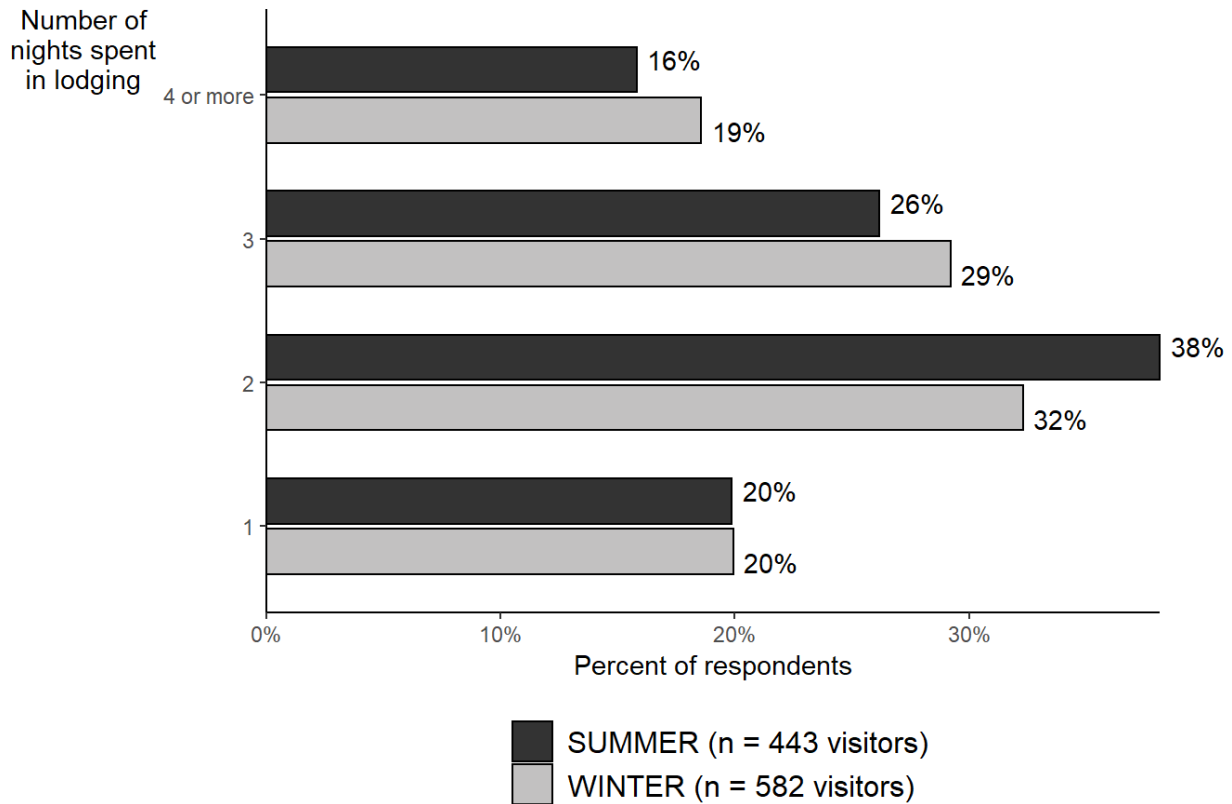
Question 10

How many nights have you or do you plan to spend lodging outside Arches National Park in the local area (e.g., hotels, cabins, vacation rentals)?

See Figure 4 for map.

Results (Figure 16)

- A majority of summer and winter visitors (80%) who stayed in lodging in the local area spent two nights or more.
- On average, summer visitors spent 2.5 nights in lodging in the local area, while winter visitors spent 2.8 nights in lodging in the local area. This difference was statistically significant (see Appendix 5 in the Appendices companion document).



X<sup>2</sup>=4.394; p=0.222

**Figure 16.** Nights spent in lodging in the local area

\* total percentages do not equal 100 due to rounding

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

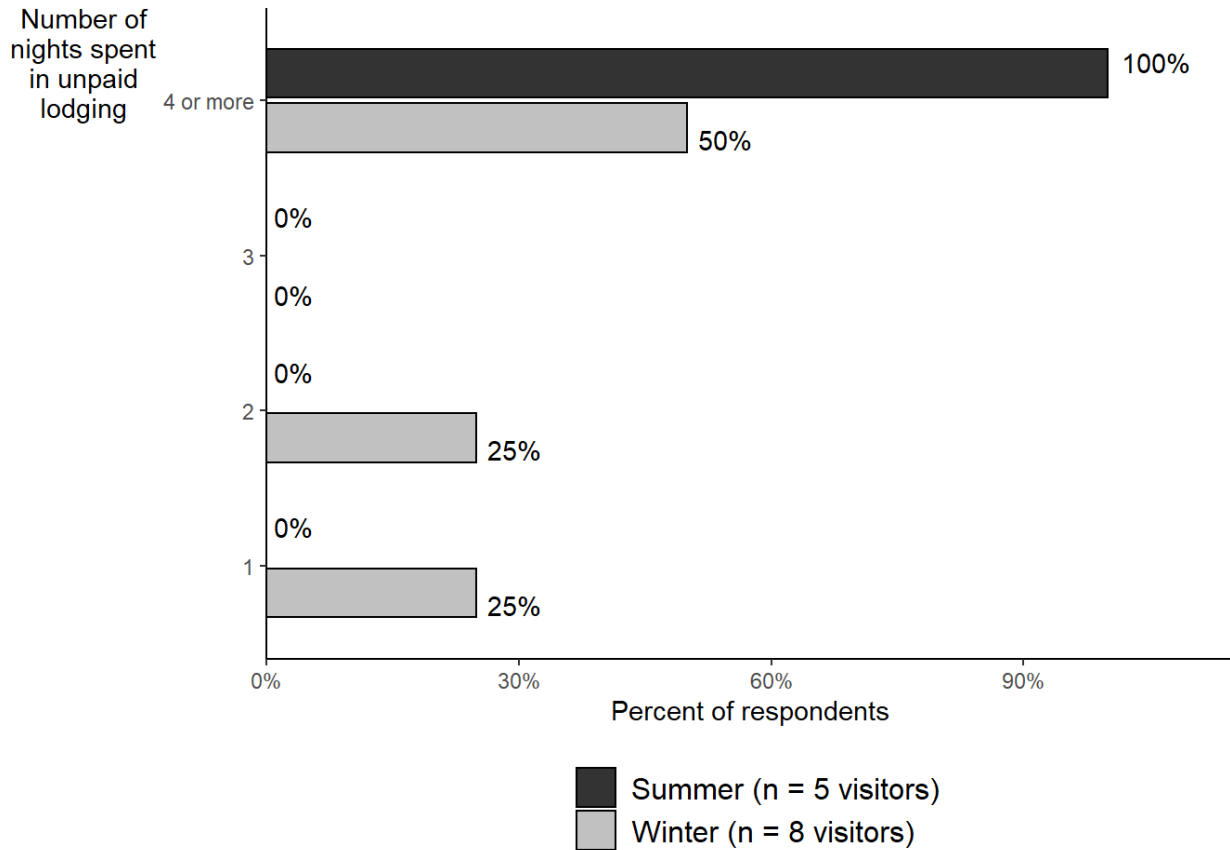
Lodging in unpaid accommodations (e.g., friends/relatives)

Question 10

How many nights have you or do you plan to spend at unpaid accommodations (e.g., family and friends)?

Results (Figure 17)

- All summer visitors (100%) who stayed in unpaid lodging spent four or more nights.
- Half of winter visitors (50%) who stayed in unpaid lodging spent four or more nights.



CAUTION: Number of respondents less than 30 visitors

**Figure 17.** Nights spent in unpaid lodging (e.g., family and friends)

\* total percentages do not equal 100 due to rounding

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

## Arriving at Arches National Park

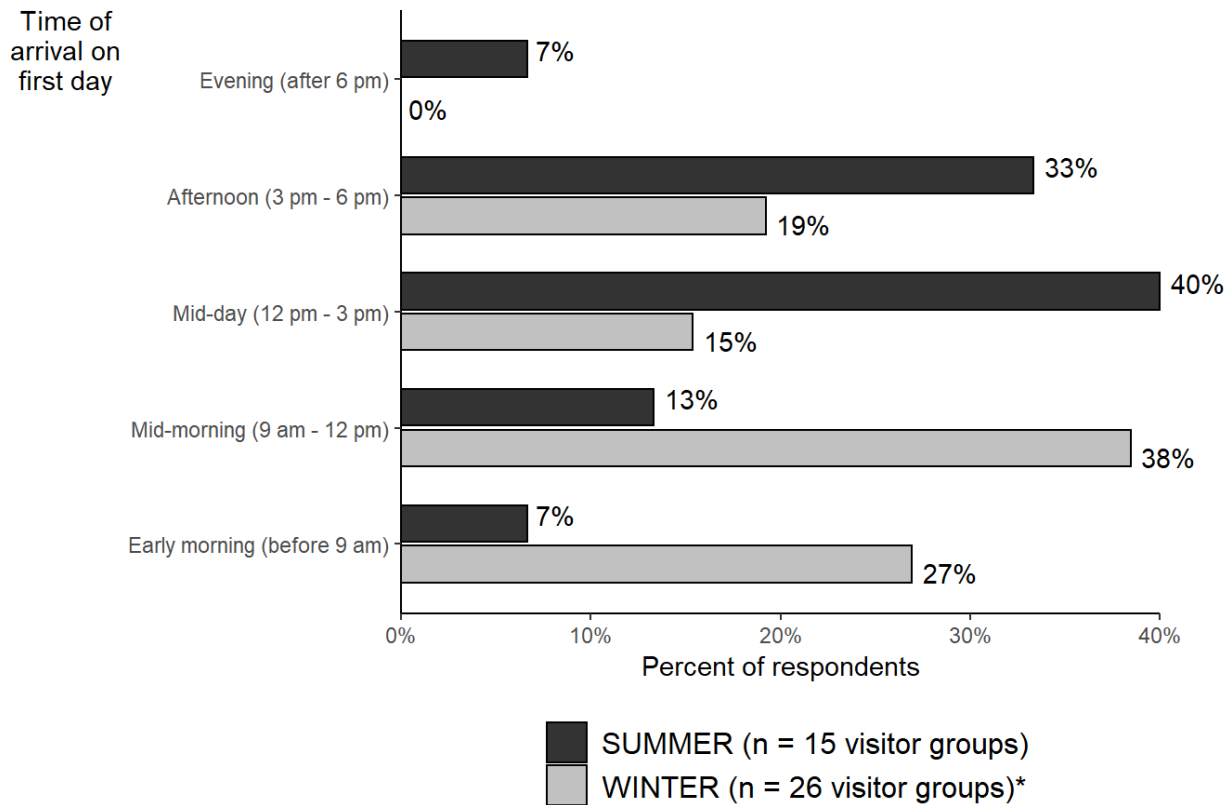
### Question 11

What time of day did you arrive on your first day in Arches National Park?

Note: This question was only asked to visitors who camped in the park.

Results (Figure 18)

- Over one-third of summer visitors (40%) who camped in the park arrived at mid-day. One third of summer visitors who camped in the park (33%) arrived in the afternoon.
- Over one-third of winter visitors (38%) who camped in the park arrived mid-morning, while over a quarter (27%) who camped in the park arrived in the early morning.



CAUTION: Number of respondents less than 30 visitor groups

**Figure 18.** Arrival time on first day of visit

\* total percentages do not equal 100 due to rounding

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

## Departing from Arches National Park

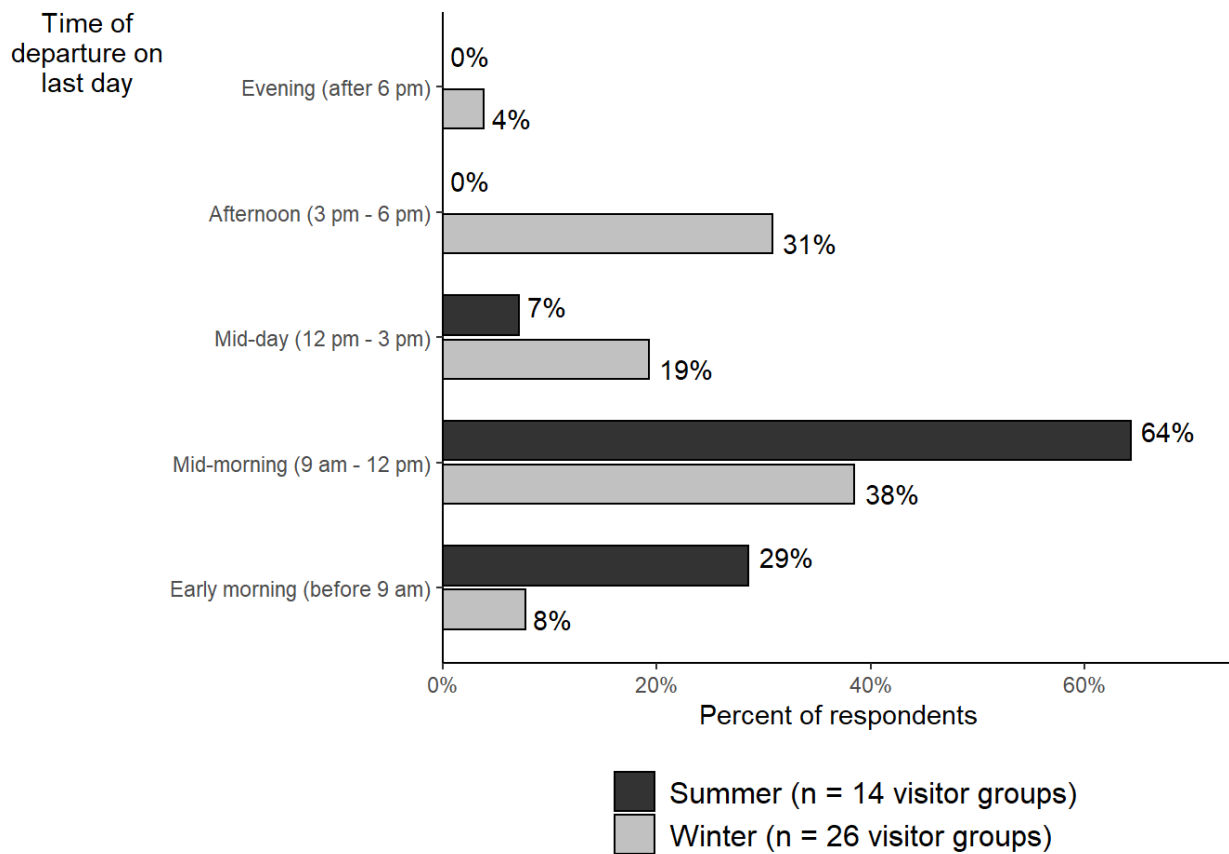
### Question 12

What time of day do you plan to leave Arches National Park on your last day in the park?

Note: This question was only asked to visitors who camped in the park.

Results (Figure 19)

- About two-thirds of summer visitors (64%) who camped in the park anticipated that they would leave the park during mid-morning.
- Over one-third of winter visitors (38%) who camped in the park anticipated that they would leave the park during mid-morning, while 31% planned to leave in the afternoon.



CAUTION: Number of respondents less than 30 visitor groups

**Figure 19.** Anticipated departure time on last day of visit

\* total percentages do not equal 100 due to rounding

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

## Nearby communities

### Question 13

What communities are closest to where you stayed or are staying at your accommodation(s) outside Arches National Park in the local area?

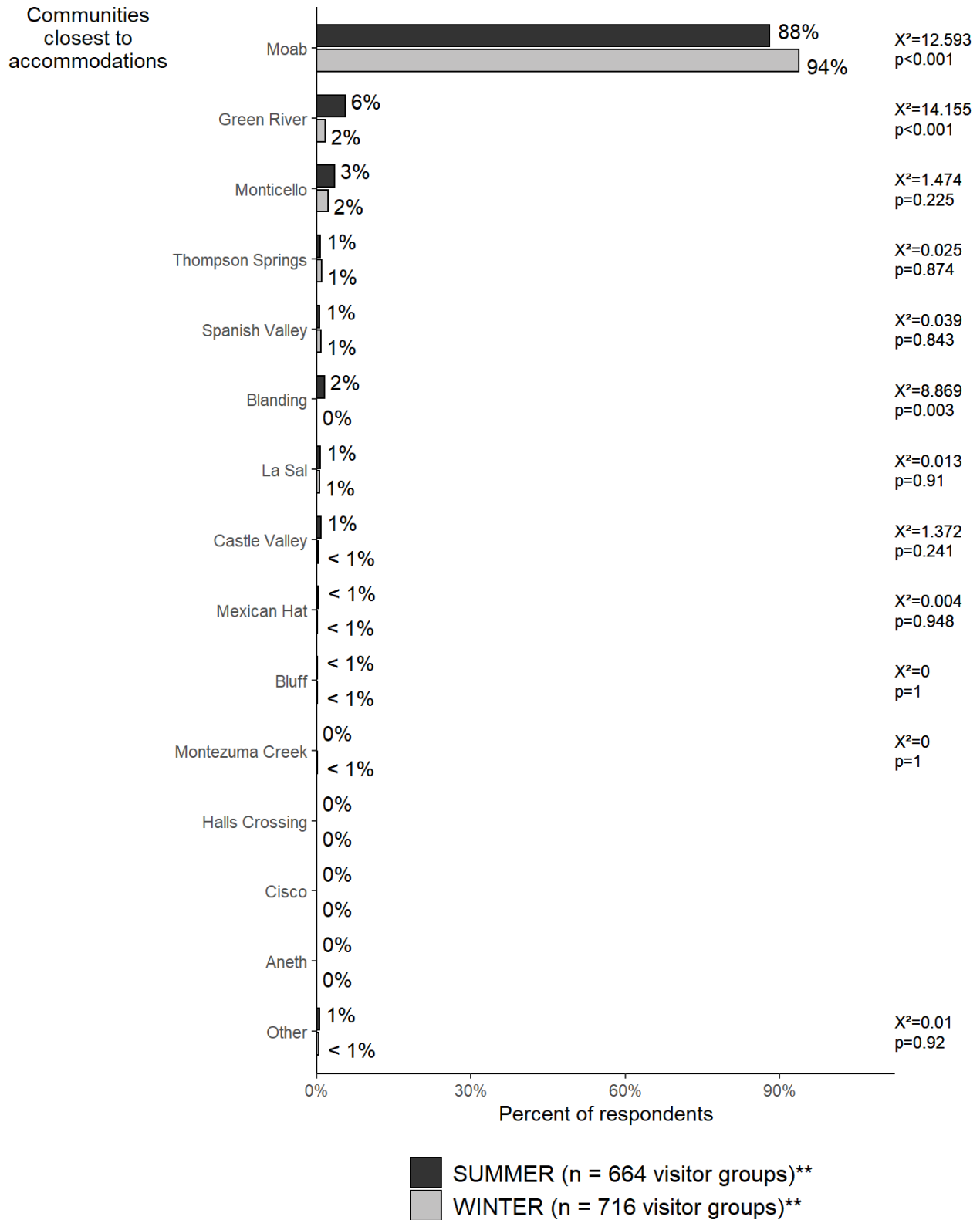
See Figure 4 for map.

### Results (Figure 20)

- Most summer visitor groups (88%) and winter visitor groups (94%) stayed in accommodations in Moab.
- Winter visitor groups were slightly more likely than summer visitor groups to stay in accommodations in Moab.
- Summer visitor groups were slightly more likely than winter visitor groups to stay in accommodations in Green River (6% and 2%, respectively) and Blanding (2% and 0%, respectively).

\* total percentages do not equal 100 due to rounding

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



**Figure 20.** Closest communities to visitors' accommodations

\* total percentages do not equal 100 due to rounding

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

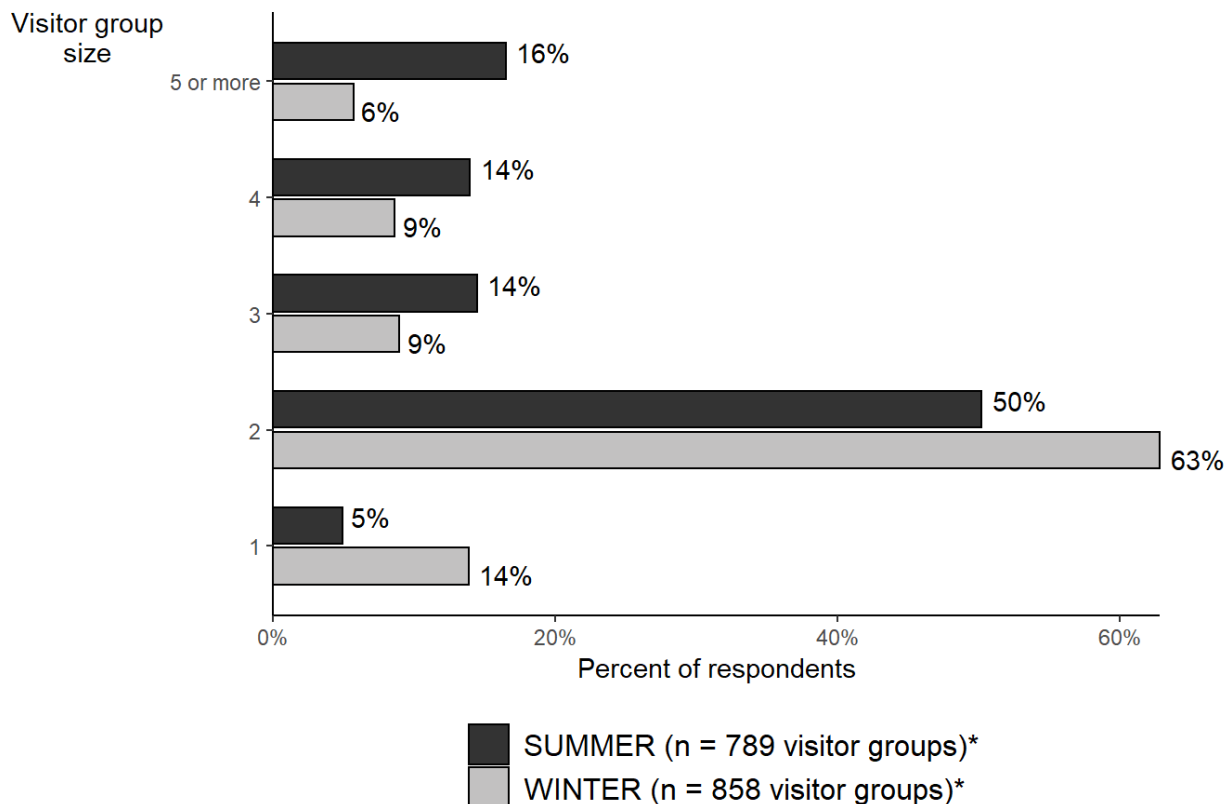
## Group size

### Question 14

Including yourself, how many people are in your personal group as you visit Arches National Park?

#### Results (Figure 21)

- Half of summer visitor groups (50%) and almost two-thirds of winter visitor groups (63%) visited the park in groups of two people.
- Summer visitor groups were more likely than winter visitor groups to travel in larger groups of three or more people (42% and 24%, respectively).
- The average group size of summer visitor groups (mean = 3.1 people) was slightly higher than that of winter visitor groups (mean = 2.4 people). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



$\chi^2=110.545$ ;  $p<0.001$

**Figure 21.** Visitor group size

\* total percentages do not equal 100 due to rounding

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

Number of adults within group

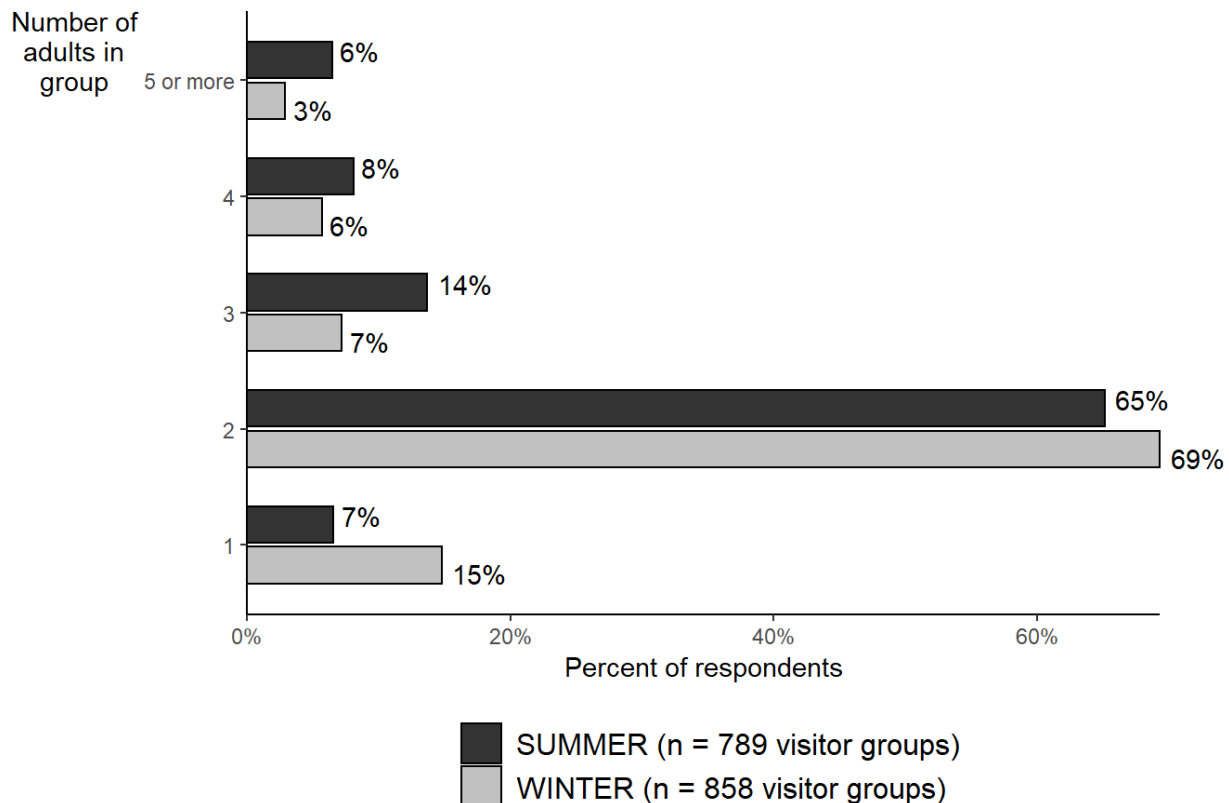
Question 14

Including yourself, how many people are in your personal group as you visit Arches National Park?

Number of adults (18 years and older)

Results (Figure 22)

- About two-thirds of visitor groups (65% of summer visitor groups, and 69% of winter visitor groups) contained two adults.
- Summer visitor groups were more likely than winter visitor groups to travel in groups with three or more adults (28% and 16%, respectively).
- The average number of adults in summer visitor groups (mean = 2.5 people) was slightly higher than that of winter visitor groups (mean = 2.2 people). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



$\chi^2=57.885; p<0.001$

**Figure 22.** Number of adults in group

\* 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 children in group

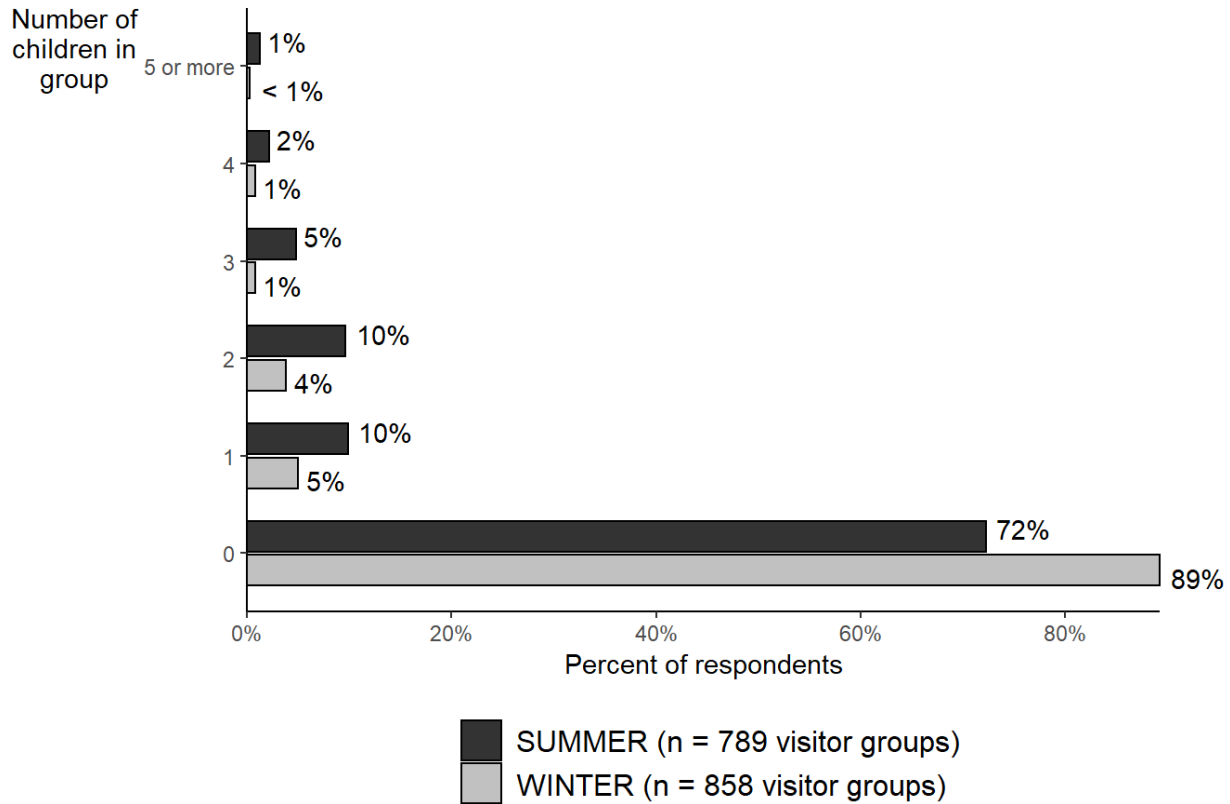
Question 14

Including yourself, how many people are in your personal group as you visit Arches National Park?

Number of children (under 18 years)

Results (Figure 23)

- A majority of visitor groups (72% of summer visitor groups, and 89% of winter visitor groups) traveled without children.
- Winter visitor groups were more likely than summer visitor groups to travel without children (89% and 72%, respectively).
- See Appendix 5 in the Appendices companion document.



X<sup>2</sup>=83.954; p<0.001

**Figure 23.** Number of children in group

\* total percentages do not equal 100 due to rounding

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

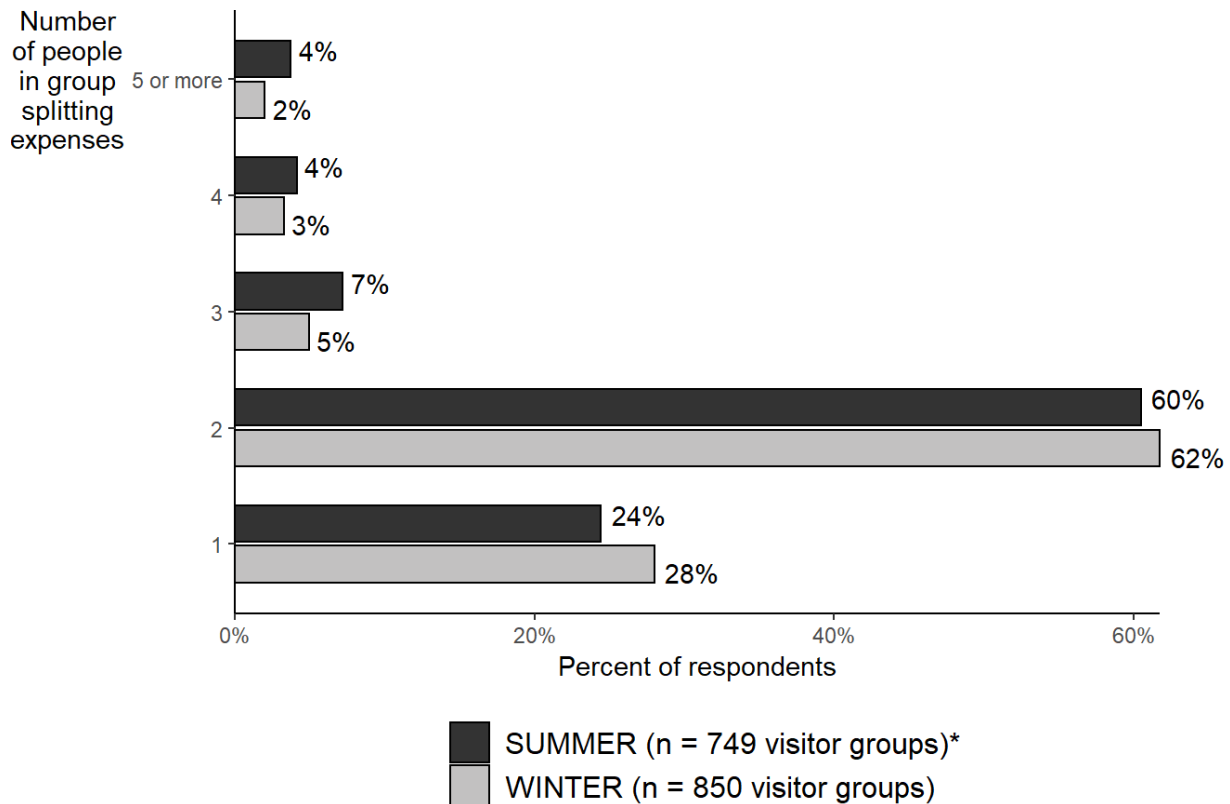
Number of people splitting expenses

Question 15

Including yourself, how many people in your personal group split trip expenses?

Results (Figure 24)

- About two-thirds of visitor groups (60% of summer visitor groups, and 62% of winter visitor groups) split trip expenses between two group members.
- Summer visitor groups were more likely than winter visitor groups to split trip expenses among three or more group members (15% and 10%, respectively).
- The average number of group members splitting expenses in summer visitor groups (mean = 2.1 people) was slightly higher than that of winter visitor groups (mean = 1.9 people). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



X<sup>2</sup>=10.49; p=0.033

**Figure 24.** Number of people splitting trip expenses

\* total percentages do not equal 100 due to rounding

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

## Forms of transportation

### Question 16

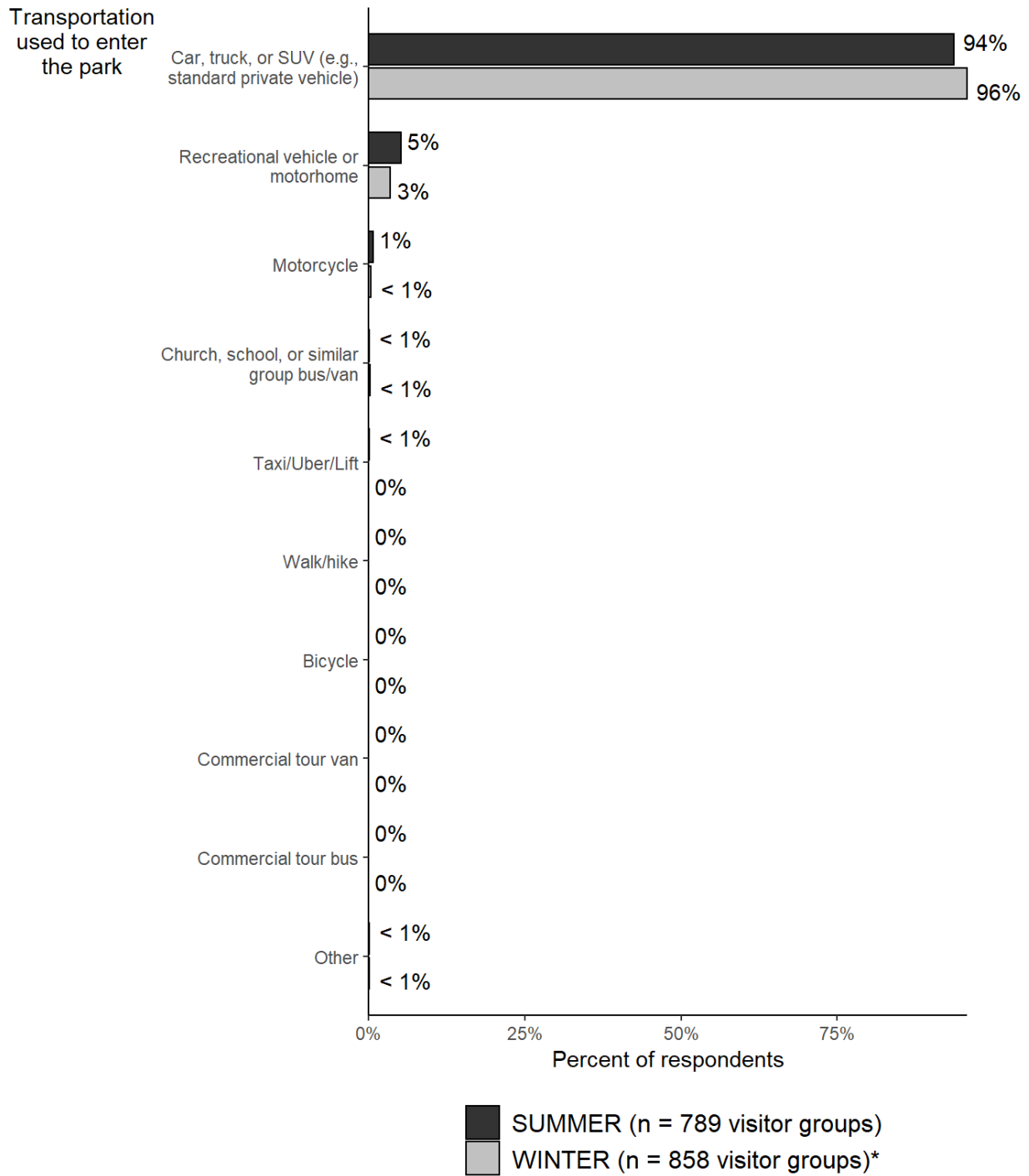
Which of the following forms of transportation did you personally use to enter Arches National Park today?

### Results (Figure 25)

- The vast majority of visitor groups (94% of summer visitor groups, and 96% of winter visitor groups) entered ARCH in a private vehicle such as a car, truck or SUV.

\* total percentages do not equal 100 due to rounding

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



$\chi^2=5.57$ ;  $p=0.35$

**Figure 25.** Transportation used to enter park

\* total percentages do not equal 100 due to rounding

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

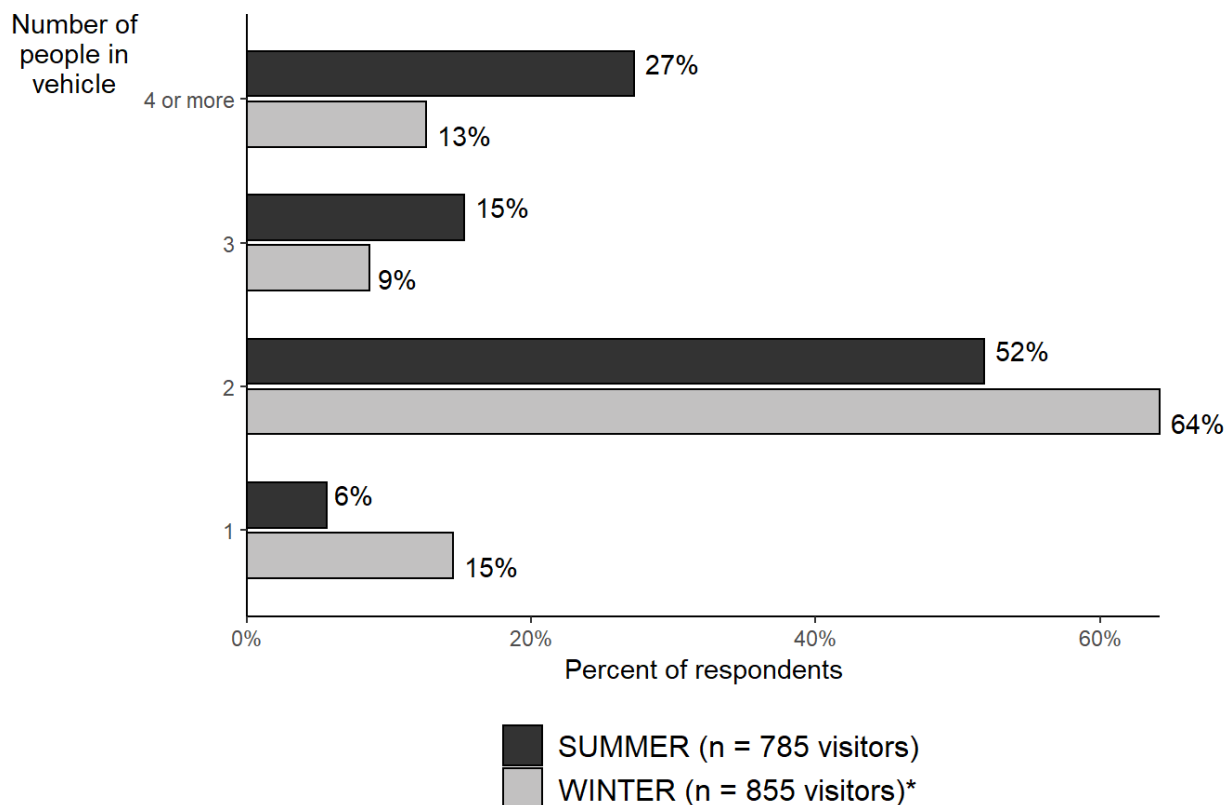
## Number of people in vehicle

### Question 17

How many people are traveling in your vehicle with you, including yourself?

Results (Figure 26)

- About half of summer visitors (52%) and nearly two-thirds of winter visitors (64%) entered the park in a vehicle with two people.
- About a quarter of summer visitors (27%) entered the park in a vehicle with four or more people.
- Summer visitors were more likely than winter visitors to enter the park in vehicles with three or more people (42% and 22%, respectively).
- On average, summer visitors entered the park in vehicles with slightly higher occupancy than winter visitors (2.8 people and 2.3 people, respectively). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



$X^2=102.187$ ;  $p<0.001$

**Figure 26.** Number of passengers in vehicle

\* total percentages do not equal 100 due to rounding

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

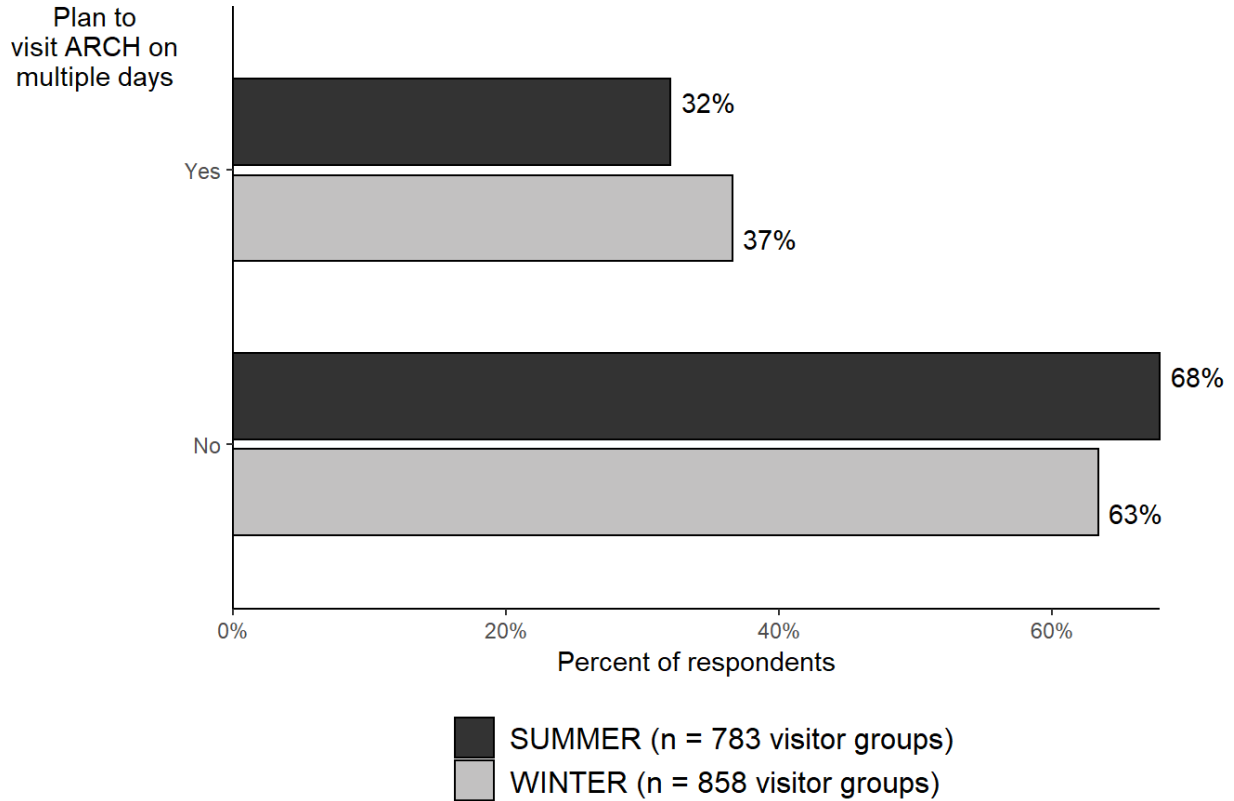
Multiday trip

Question 24

On this trip, do you plan to visit Arches National Park for more than one day?

Results (Figure 27)

- A majority of summer visitor groups (68%) and 63% of winter visitor groups did not plan to visit ARCH on multiple days.



$\chi^2=3.54$ ;  $p=0.06$

**Figure 27.** Plan to visit ARCH on multiple days

\* total percentages do not equal 100 due to rounding

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

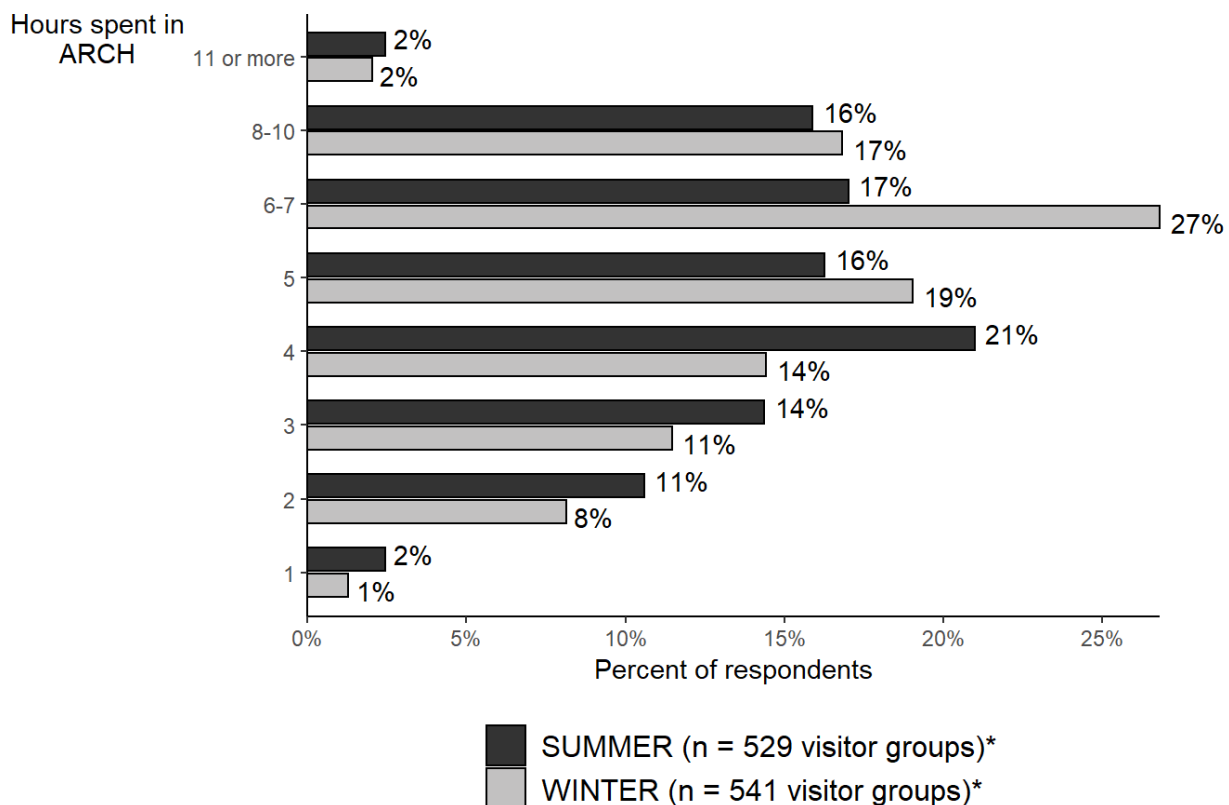
Number of hours spent in the park

Question 25

How many hours do you plan to spend within Arches National Park on this trip?

Results (Figure 28)

- A majority of summer visitor groups (64%) who planned to spend less than 24 hours in the park planned to visit for five hours or less.
- A smaller majority of winter visitor groups (53%) who planned to spend less than 24 hours in the park planned to visit for five hours or less.
- Winter visitor groups were more likely than summer visitor groups to spend six hours or more in the park (46% and 35%, respectively).
- On average, summer visitor groups (mean = 5.0 hours) spent slightly fewer hours in the park than winter visitor groups (mean = 5.4 hours). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



$\chi^2=25.139$ ;  $p=0.001$

**Figure 28.** Number of hours visiting the park by groups who planned to spend less than 24 hours in the park

\* total percentages do not equal 100 due to rounding

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

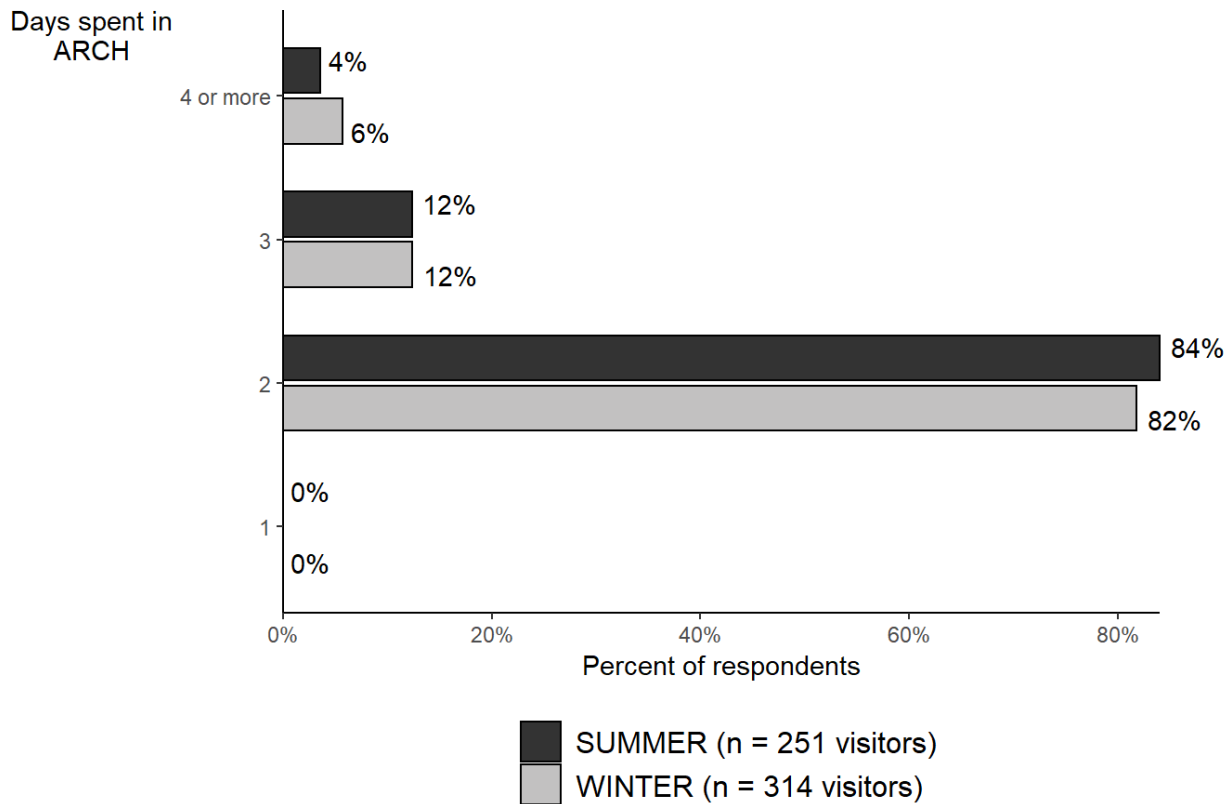
Days spent in the park

Question 26

How many days do you plan to spend within Arches National Park on this trip?

Results (Figure 29)

- A majority of summer visitor groups (84%) who planned to spend more than one day in the park planned to visit for two days.
- A majority of winter visitor groups (82%) who planned to spend more than one day in the park planned to visit for two days.
- The average number of days spent in the park by both summer and winter visitor groups was just over two days. This difference was not statistically significant (see Appendix 5 in the Appendices companion document).



$X^2=1.429$ ;  $p=0.49$

**Figure 29.** Number of days visiting the park by groups who spent 24 hours or more in the park

\* total percentages do not equal 100 due to rounding

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

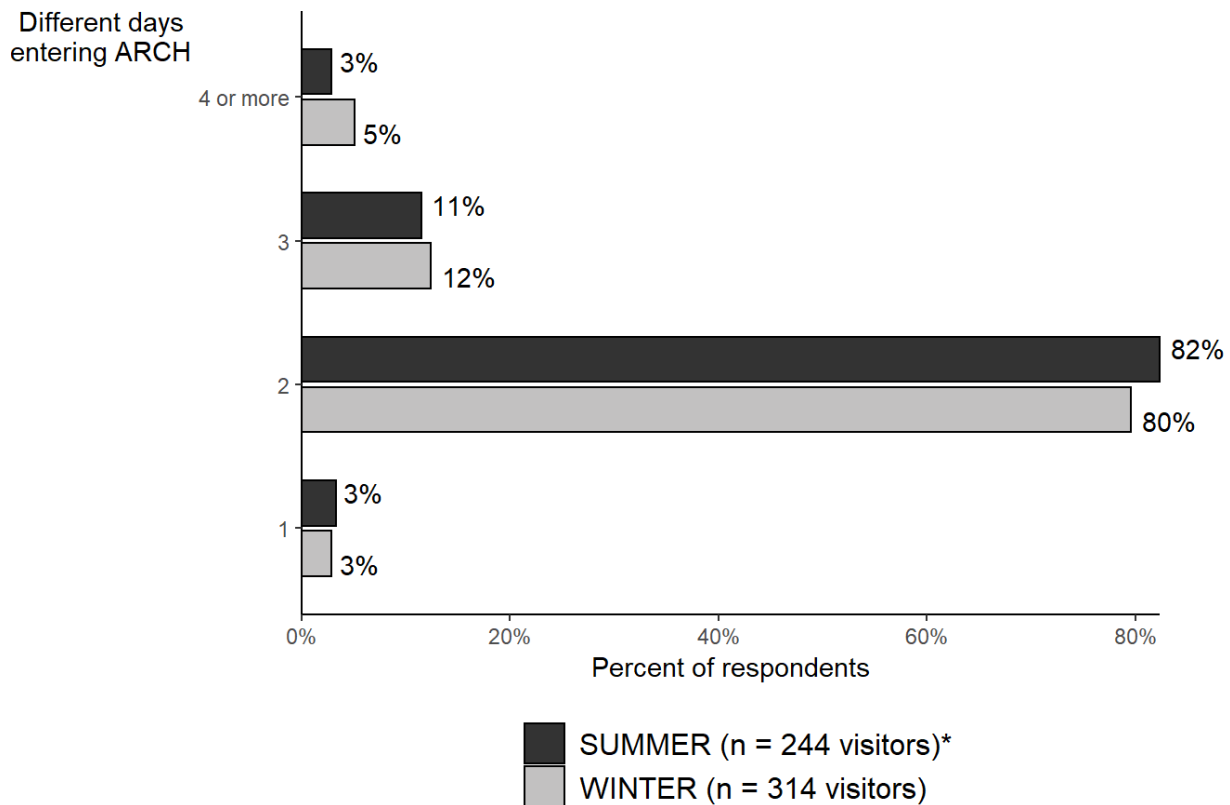
Number of different days visiting the park

Question 27

On how many different days do you expect to enter the park?

Results (Figure 30)

- A majority of summer visitor groups (82%) and winter visitor groups (80%) planned to enter the park on two different days.
- The average number of different days visiting the park for summer visitor groups (mean = 2.1 days) was slightly fewer than for winter visitor groups (mean = 2.3 days). This difference was statistically significant (see Appendix 5 in the Appendices companion document).



$X^2=1.96$ ;  $p=0.581$

**Figure 30.** Number of different days visiting the park

\* total percentages do not equal 100 due to rounding

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

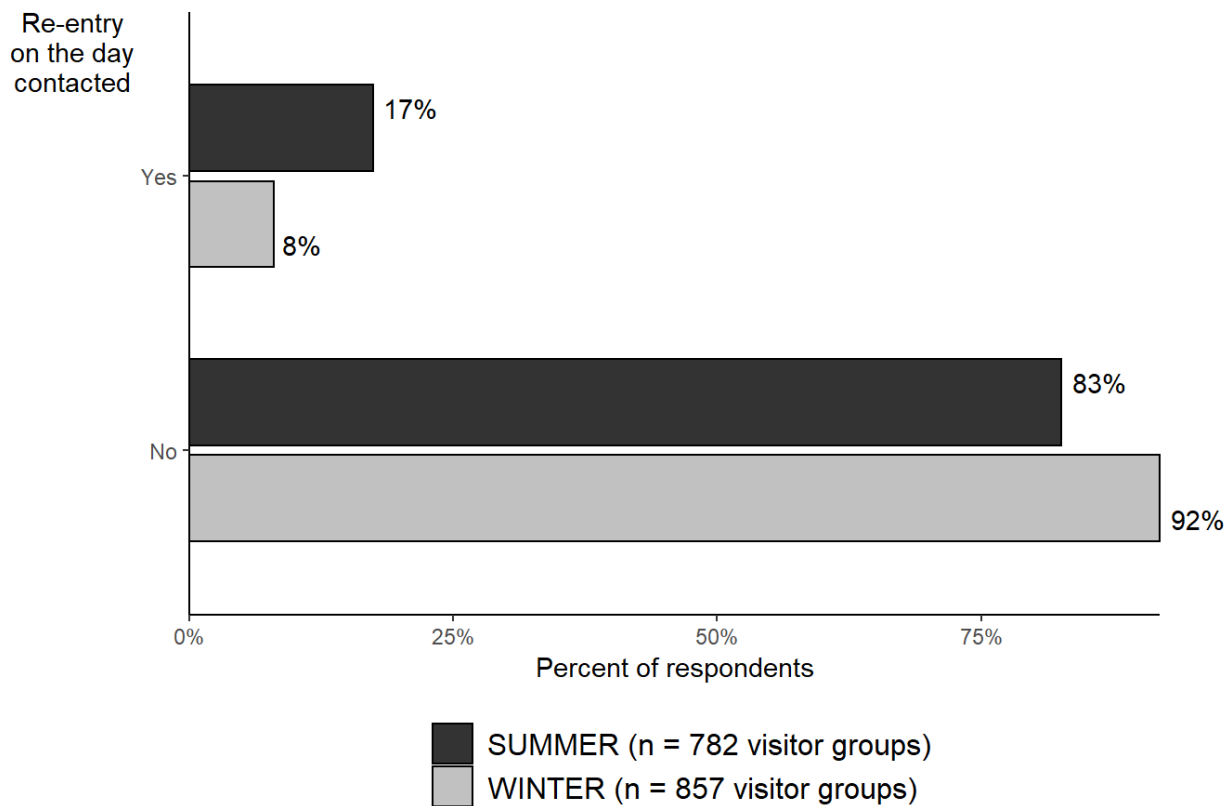
Multiple entrances on the day contacted

Question 28

Did you, or do you plan to leave and re-enter the park today?

Results (Figure 31)

- Most summer visitor groups (83%) and winter visitor groups (92%) did not plan to exit and re-enter the park on the day they were contacted.
- Summer visitor groups were more likely than winter visitor groups to leave and re-enter the park on the day they were contacted (17% and 8%, respectively).



$\chi^2=31.747$ ;  $p<0.001$

**Figure 31.** Plans for park re-entry on the day contacted

\* total percentages do not equal 100 due to rounding

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

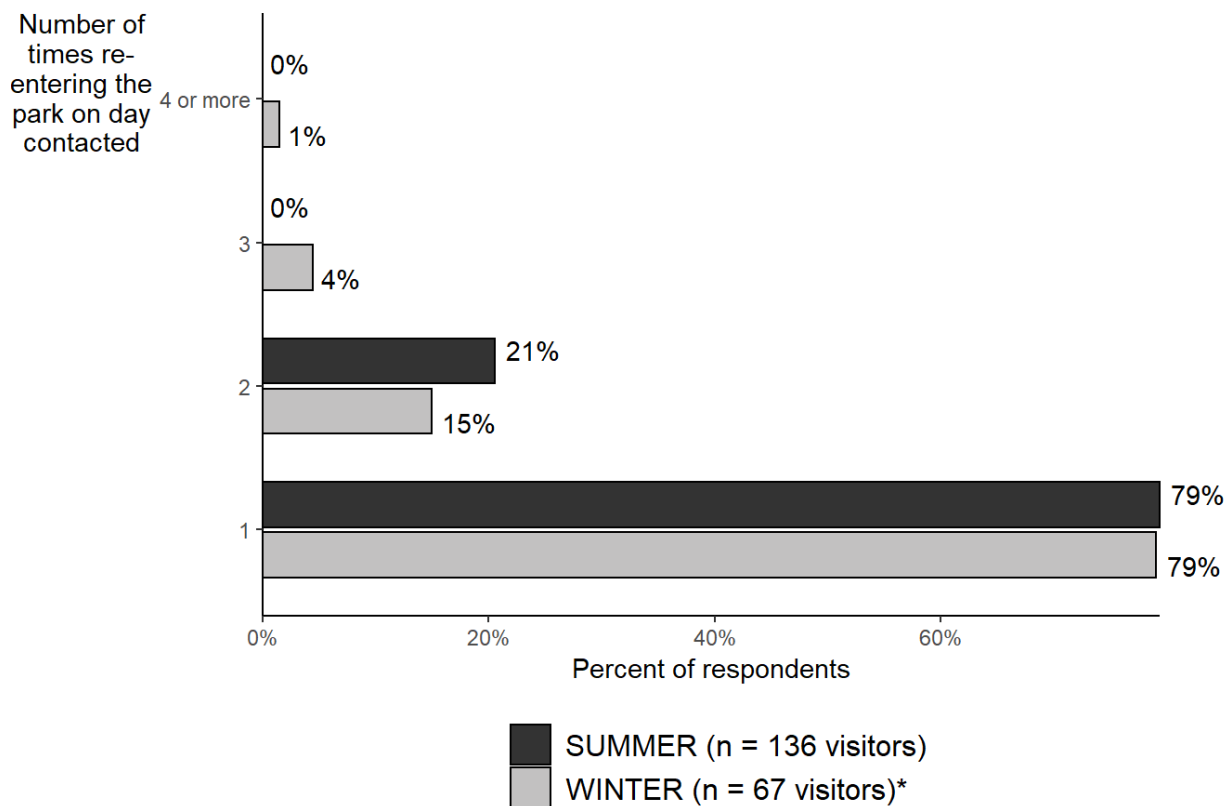
Number of times re-entering the park on the day contacted

Question 28

How many times do you plan to re-enter the park?

Results (Figure 32)

- A majority of summer visitor groups (79%) and winter visitor groups (79%) who exited or planned to exit and re-enter the park on the day they were contacted did so only one time.
- Winter visitor groups were more likely than summer visitor groups to exit and re-enter the park more than two times (5% and 0%, respectively).



$X^2=8.889$ ;  $p=0.031$

**Figure 32.** Number of times re-entering the park on the day contacted

\* total percentages do not equal 100 due to rounding

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

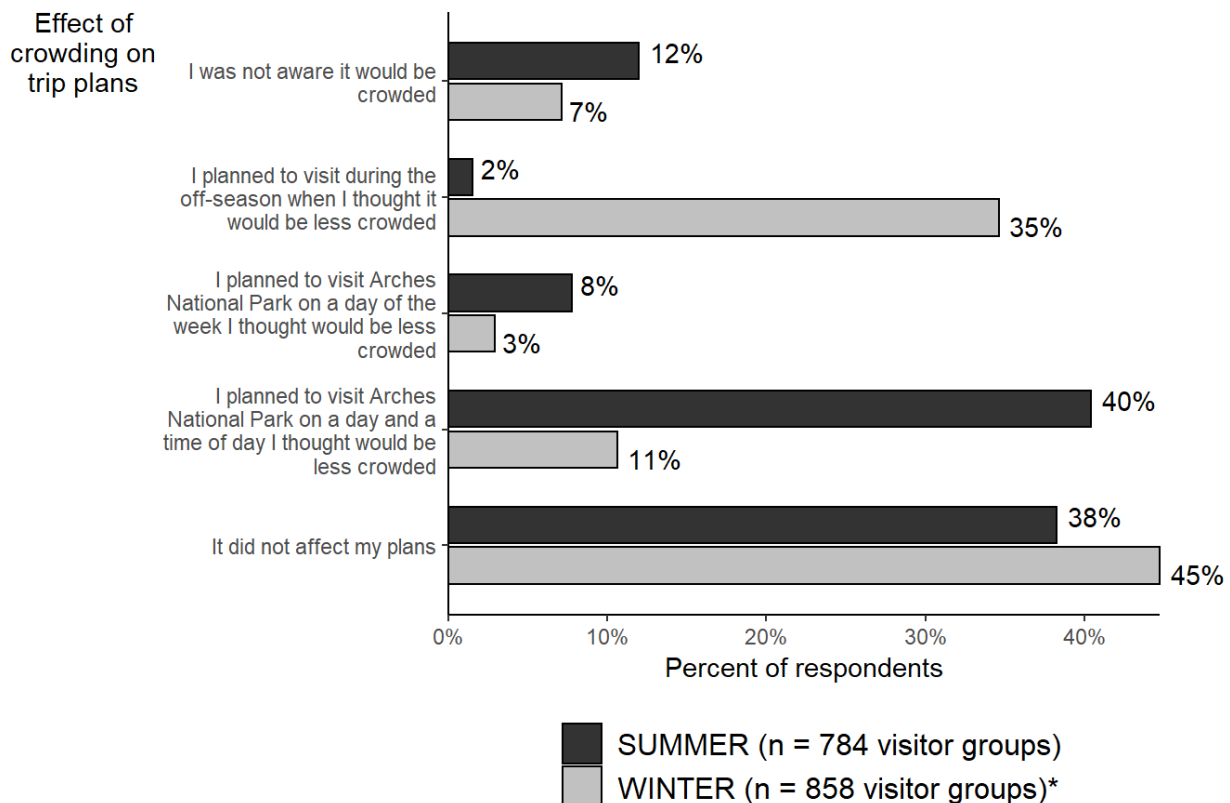
## Effect of potential crowding on trip planning

### Question 29

During the planning process for your visit to Arches National Park, how did the possibility of crowding affect your trip plans?

#### Results (Figure 33)

- Over one-third of summer visitor groups (38%) and nearly half of winter visitor groups (45%) reported that the possibility of crowding did not affect their trip plans.
- Winter visitor groups were substantially more likely than summer visitor groups (35% and 2%, respectively) to report that they planned to visit the park during the off-season when they thought it would be less crowded.
- Summer visitor groups were more likely than winter visitor groups to report that they planned to visit the park on a day and a time of day that they thought the park would be less crowded (40% and 11% respectively).



$\chi^2=417.976$ ;  $p<0.001$

**Figure 33.** Effect of possible crowding on trip plans

\* total percentages do not equal 100 due to rounding

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

## Visitation history

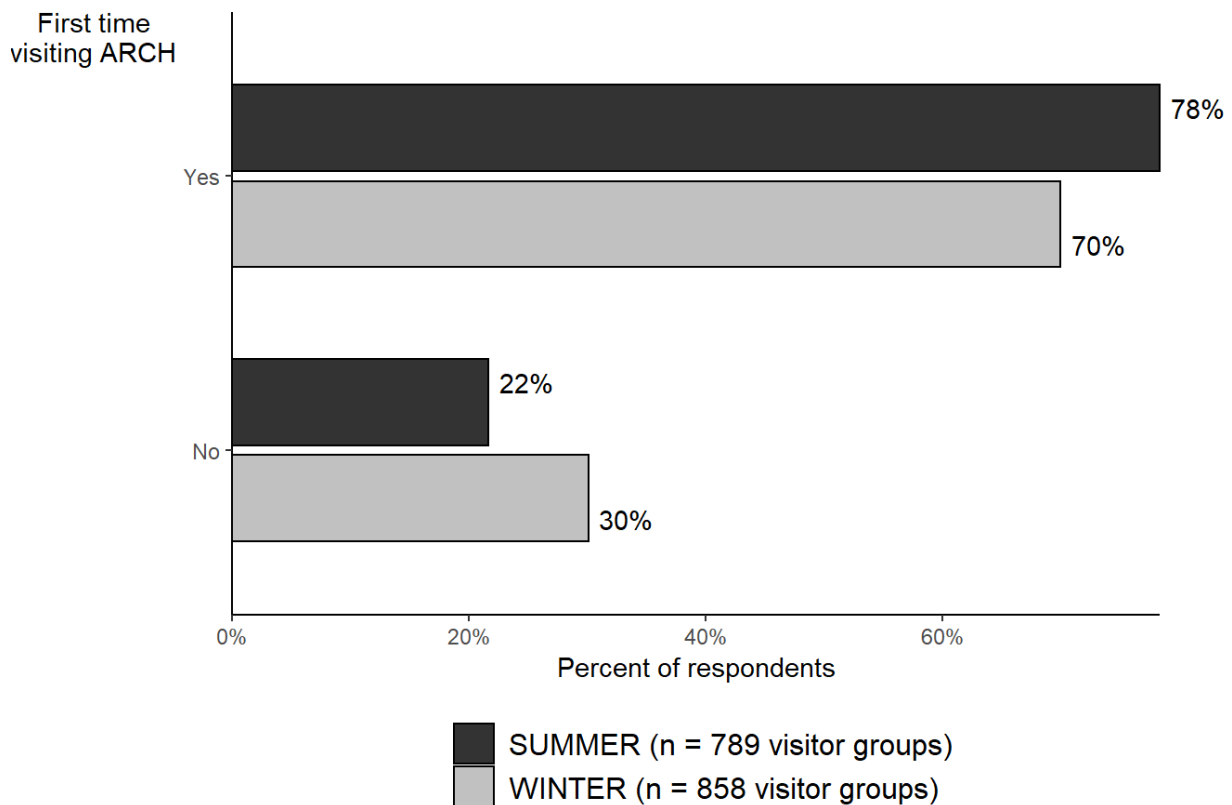
### First time visitor

#### Question 30

Are you a first-time visitor to Arches National Park?

Results (Figure 34)

- A majority of summer visitor groups (78%) and winter visitor groups (70%) reported being first-time visitors to ARCH.
- Summer visitor groups were more likely than winter visitor groups to report being first-time visitors to the park (78% and 70%, respectively).



$\chi^2=14.612$ ;  $p<0.001$

**Figure 34.** First-time visitors

\* total percentages do not equal 100 due to rounding

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

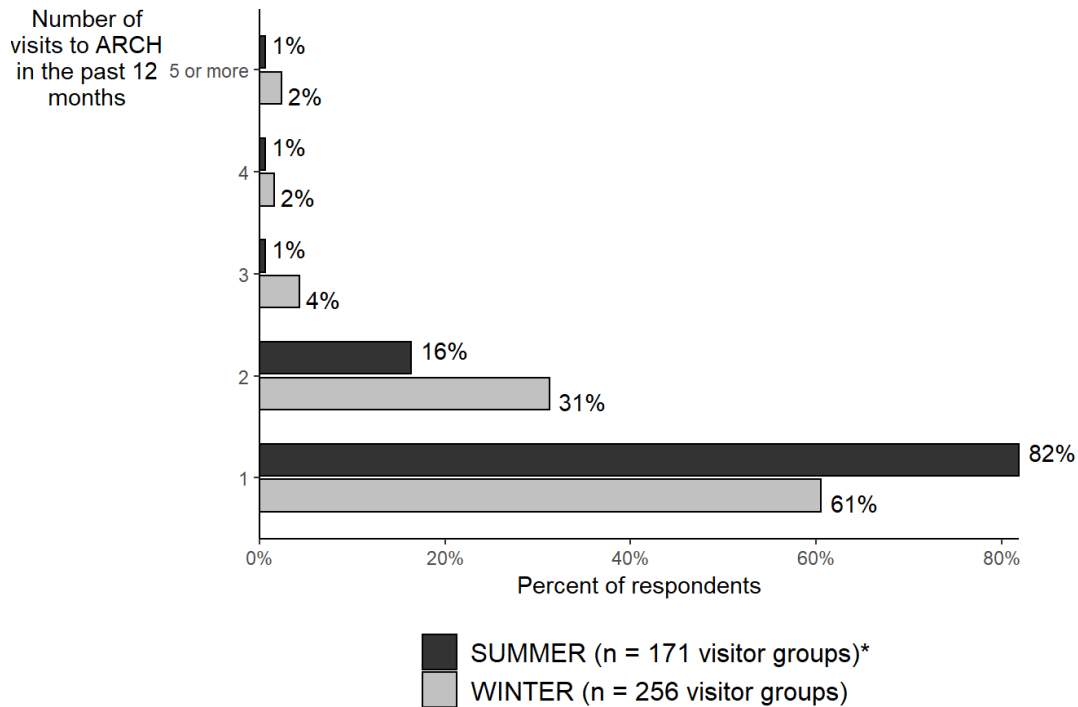
Number of visits to Arches National Park in the past 12 months

Question 31

Including the current trip, how many visits have you made to Arches National Park over the past 12 months?

Results (Figure 35)

- A majority of summer visitor groups (82%) and a smaller majority of winter visitor groups (61%) who had visited ARCH before, reported one trip to the park in the past 12 months (i.e., the current trip).
- A relatively small percentage of summer visitor groups (16%) and about one-third of winter visitor groups (31%) who had visited ARCH before, reported two trips to the park in the past 12 months, including the current trip.
- Winter visitor groups were more likely than summer visitor groups to report more than one visit to the park in the past 12 months (39% and 19%, respectively)
- On average, summer visitor groups reported visiting ARCH 1.4 times over the past 12 months, while winter visitor groups reported visiting 1.7 times. This difference was statistically significant (see Appendix 5 in the Appendices companion document).



X<sup>2</sup>=23.516; p<0.001

**Figure 35.** Number of previous visits in the last 12 months

\* total percentages do not equal 100 due to rounding

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

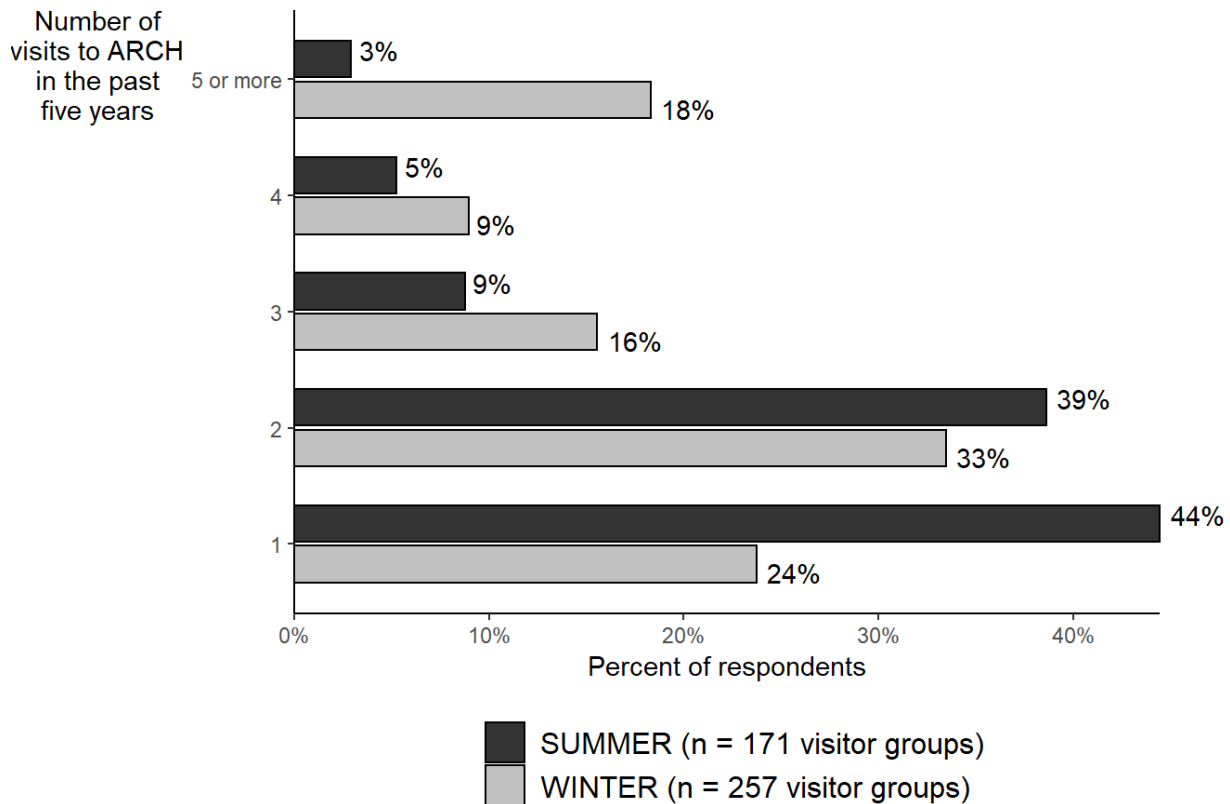
Number of visits to Arches National Park in the past five years

Question 32

Including the current trip, how many visits have you made to Arches National Park over the past five years?

Results (Figure 36)

- A majority of summer visitor groups (83%) who had visited ARCH before, reported one or two trips to the park in the past five years, including the current trip.
- Over one-third of winter visitor groups (43%) who had visited ARCH before, reported three or more trips to the park in the past five years, including the current trip.
- The average number of visits to ARCH in the past five years for winter visitor groups (mean = 4.5 visits) was significantly higher than for summer visitor groups (mean = 2.1 visits) (see Appendix 5 in the Appendices companion document).



$X^2=40.021$ ;  $p<0.001$

**Figure 36.** Number of previous visits in the past five years

\* total percentages do not equal 100 due to rounding

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

## Visitor Survey by Season – Mail-back Survey

### *Trip description*

#### Transportation used to get to Arches National Park

##### Question 1

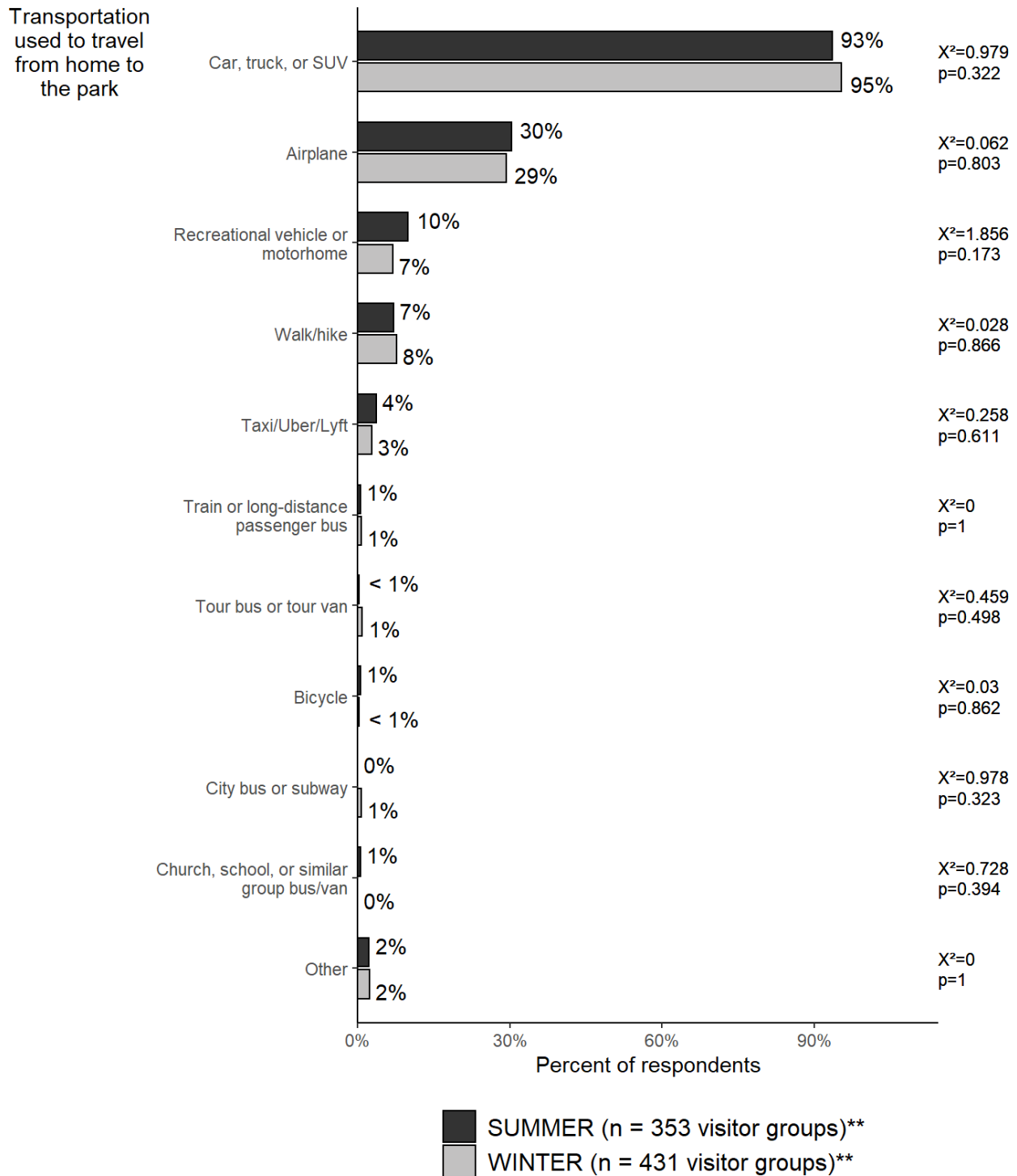
Please indicate all forms of transportation you personally used to travel from your home to Arches National Park on this trip.

##### Results (Figure 37)

- Most summer visitor groups (93%) and winter visitor groups (95%) reported using a car, truck, or SUV to travel to the park.
- Nearly one-third of summer visitor groups (30%) and winter visitor groups (29%) reported also using an airplane as part of their travel to the park.
- See Appendices 3 and 4 (Appendices companion document) for other forms of transportation specified by visitor groups.

\* total percentages do not equal 100 due to rounding

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



**Figure 37.** 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

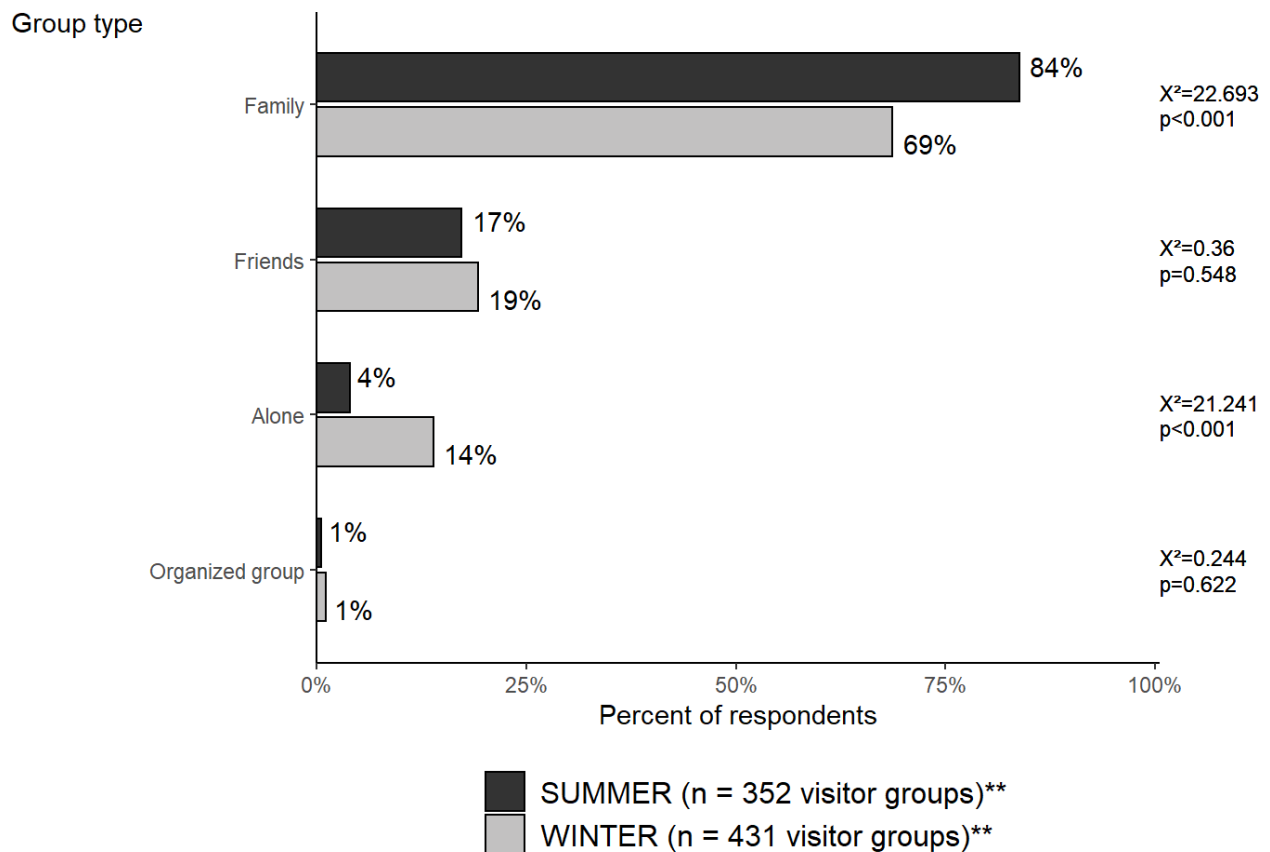
Group type

Question 2

What type of group were you with during your trip to Arches National Park on the day you were contacted for this survey?

Results (Figure 38)

- A majority of summer visitor groups (84%) and winter visitor groups (69%) reported visiting ARCH with family.
- Summer visitor groups were significantly more likely than winter visitor groups to report visiting the park with family (84% and 69%, respectively), while winter visitor groups were more likely than summer visitor groups to report visiting alone (14% and 4%, respectively).
- See Appendices 3 and 4 (Appendices companion document) for organized groups specified by visitor groups.



**Figure 38.** Visitor group type

\* total percentages do not equal 100 due to rounding

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

Alternative recreation site if Arches National Park was not visited

Question 3

On this trip, if you (and your personal group) had not chosen to visit Arches National Park, what other recreation site would you have visited instead?

Results

- See Appendices 3 and 4 (Appendices companion document) for the other recreation sites specified by visitor groups.

\* total percentages do not equal 100 due to rounding

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

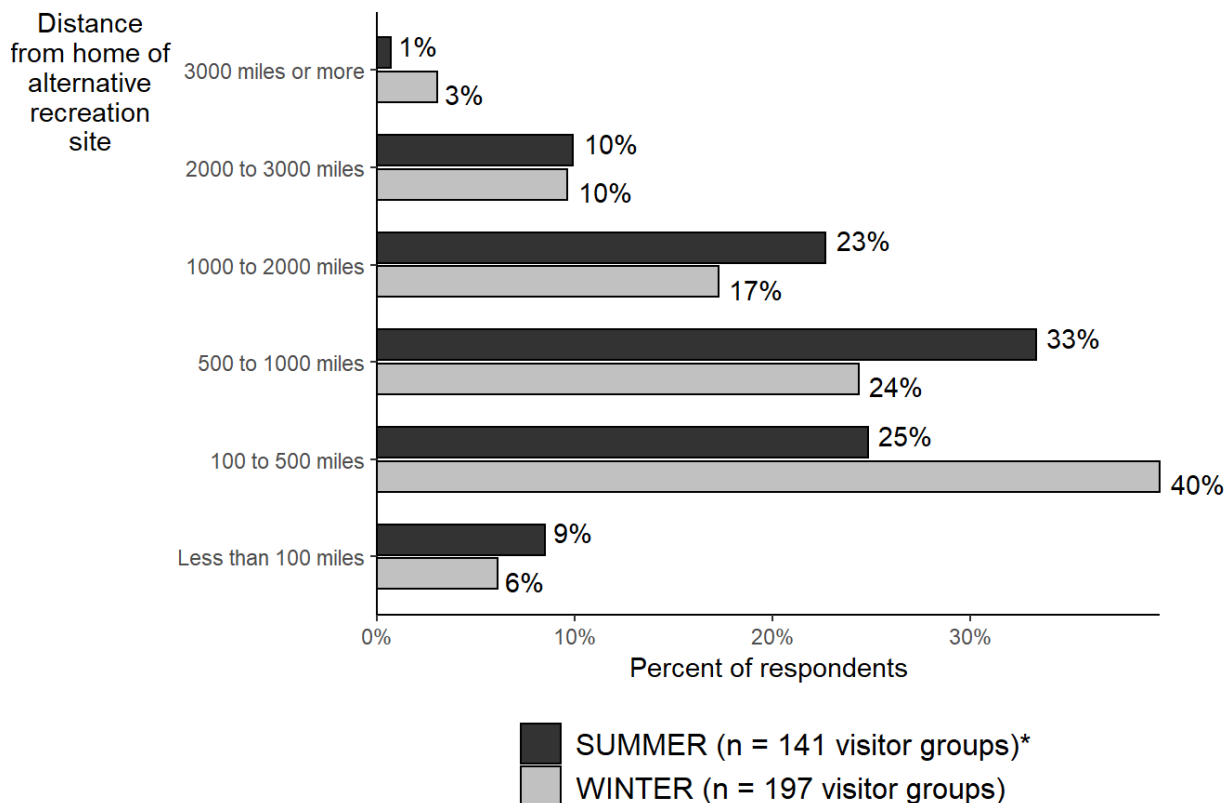
Alternative recreation site distance from home

Question 3

How far is this alternative recreation site from your home?

Results (Figure 39)

- Two-thirds of summer visitor groups (67%) who identified an alternative recreation site and 70% of winter visitor groups who identified an alternative recreation site reported the site was 1000 miles or less from their home.
- Winter visitor groups were more likely than summer visitor groups to report that their alternative recreation site was 100 to 500 miles from their home (40% and 25%, respectively).
- Summer visitor groups were more likely than winter visitor groups to report that their alternative recreation site was 500 to 1000 miles from their home (33% and 24%, respectively).



$\chi^2=11.809$ ;  $p=0.038$

**Figure 39.** Distance of alternative recreation site from respondents' homes

\* total percentages do not equal 100 due to rounding

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

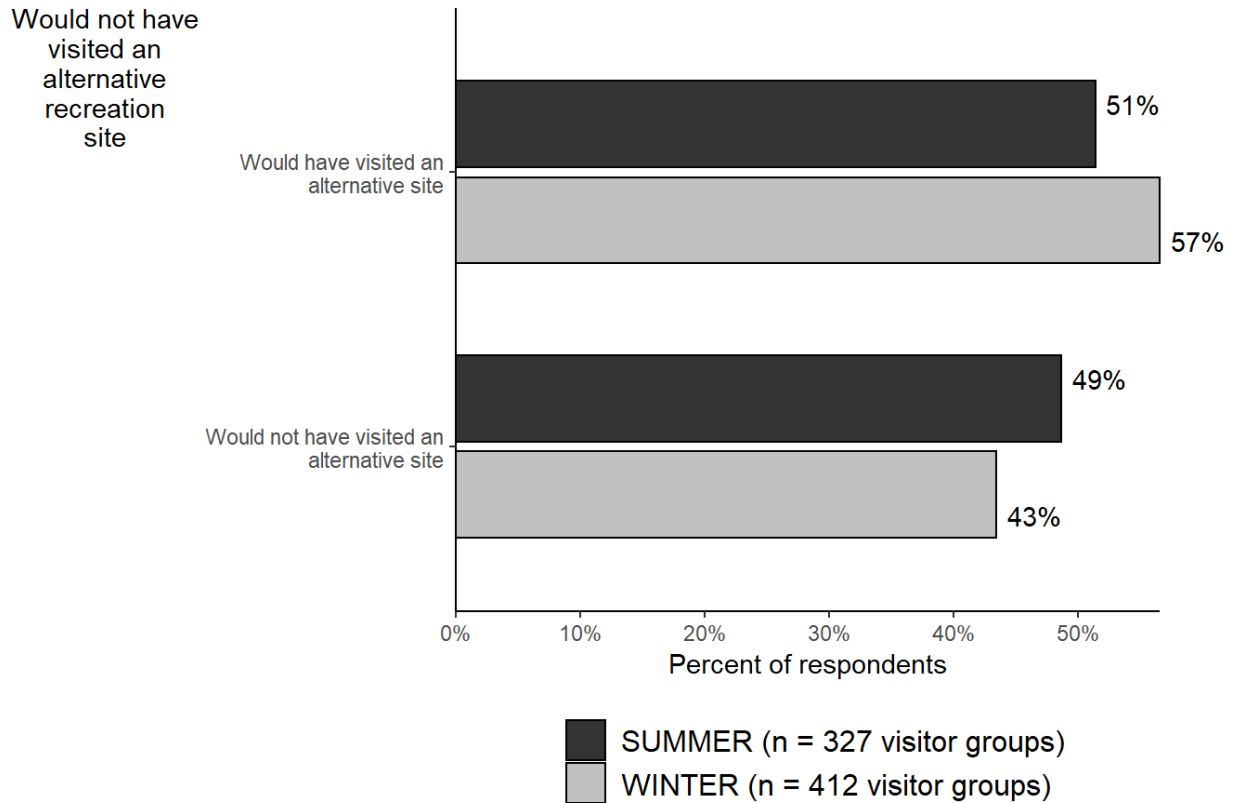
Would not have visited alternative recreation site

Question 3

I would not have chosen to visit another recreation site.

Results (Figure 40)

- Nearly half of summer visitor groups (49%) and 43% of winter visitor groups reported that if they had not visited ARCH, they would not have visited another recreation site.



$X^2=1.766$ ;  $p=0.184$

**Figure 40.** Visitors reporting no alternative recreation site

\* total percentages do not equal 100 due to rounding

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

## Other Utah parks visited on this trip

### Question 4

Did you visit any of the following parks on this trip away from home?

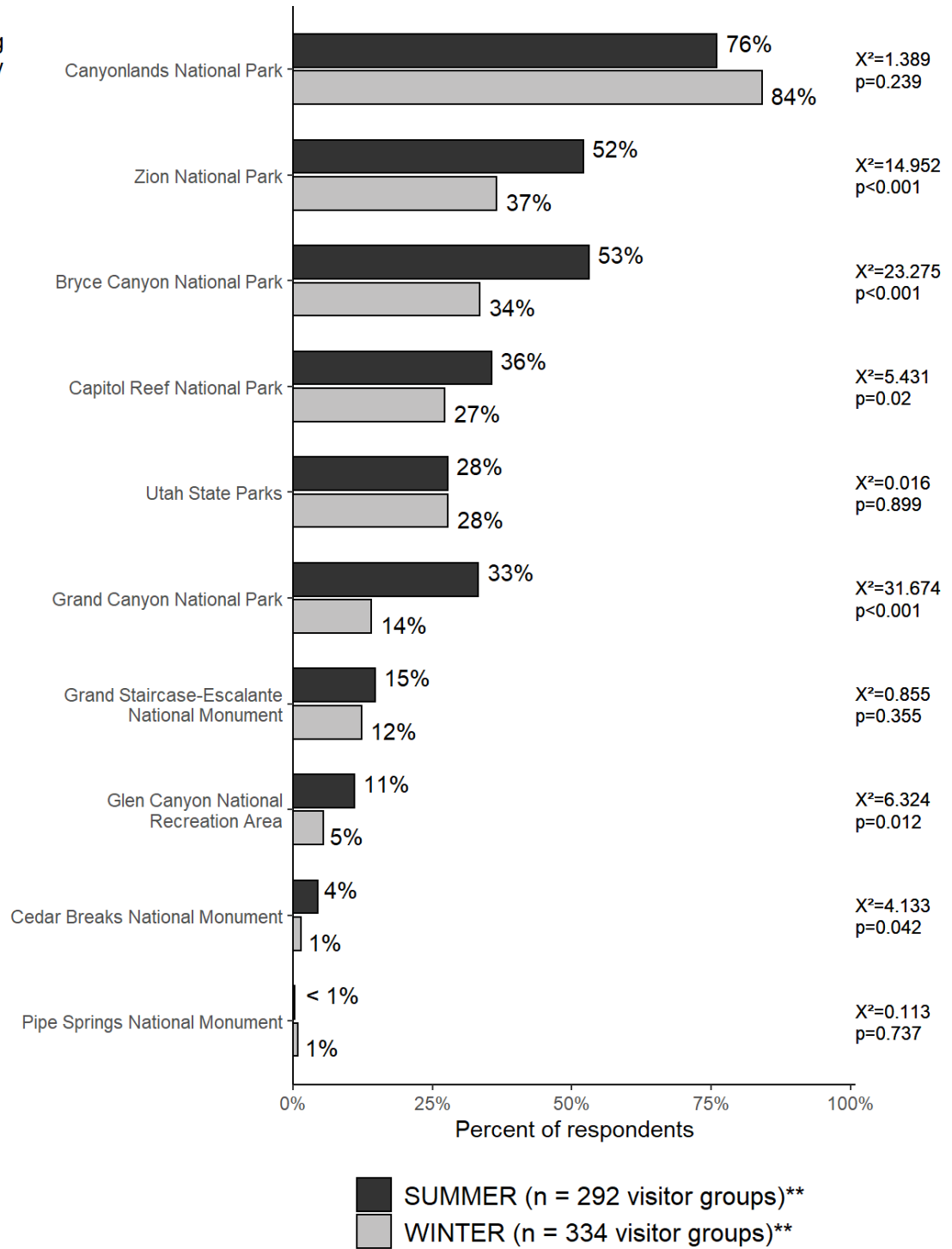
#### Results (Figure 41)

- A majority of summer visitor groups (76%) and winter visitor groups (84%) also visited Canyonlands National Park during their trip away from home.
- More than one-third of summer visitor groups also visited Bryce Canyon National Park, Zion National Park, Capitol Reef National Park, and Grand Canyon National Park while on their trip away from home.
- More than one-third of winter visitor groups also visited Bryce Canyon National Park and Zion National Park while on their trip away from home.
- Summer visitor groups were more likely than winter visitor groups to also visit Zion National Park (52% and 37%, respectively), Bryce Canyon National Park (53% and 34%, respectively), Capitol Reef National Park (36% and 27%, respectively), Grand Canyon National Park (33% and 14%, respectively), Glen Canyon National Recreation Area (11% and 5%, respectively), and Cedar Breaks National Monument (4% and 1%, respectively).

\* total percentages do not equal 100 due to rounding

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

Other parks visited during this trip away from home



**Figure 41.** Other nearby parks visited while on this trip away from home

\* total percentages do not equal 100 due to rounding

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

## Communities visited in the local area

### Question 5

Which communities did you visit while in the local area?

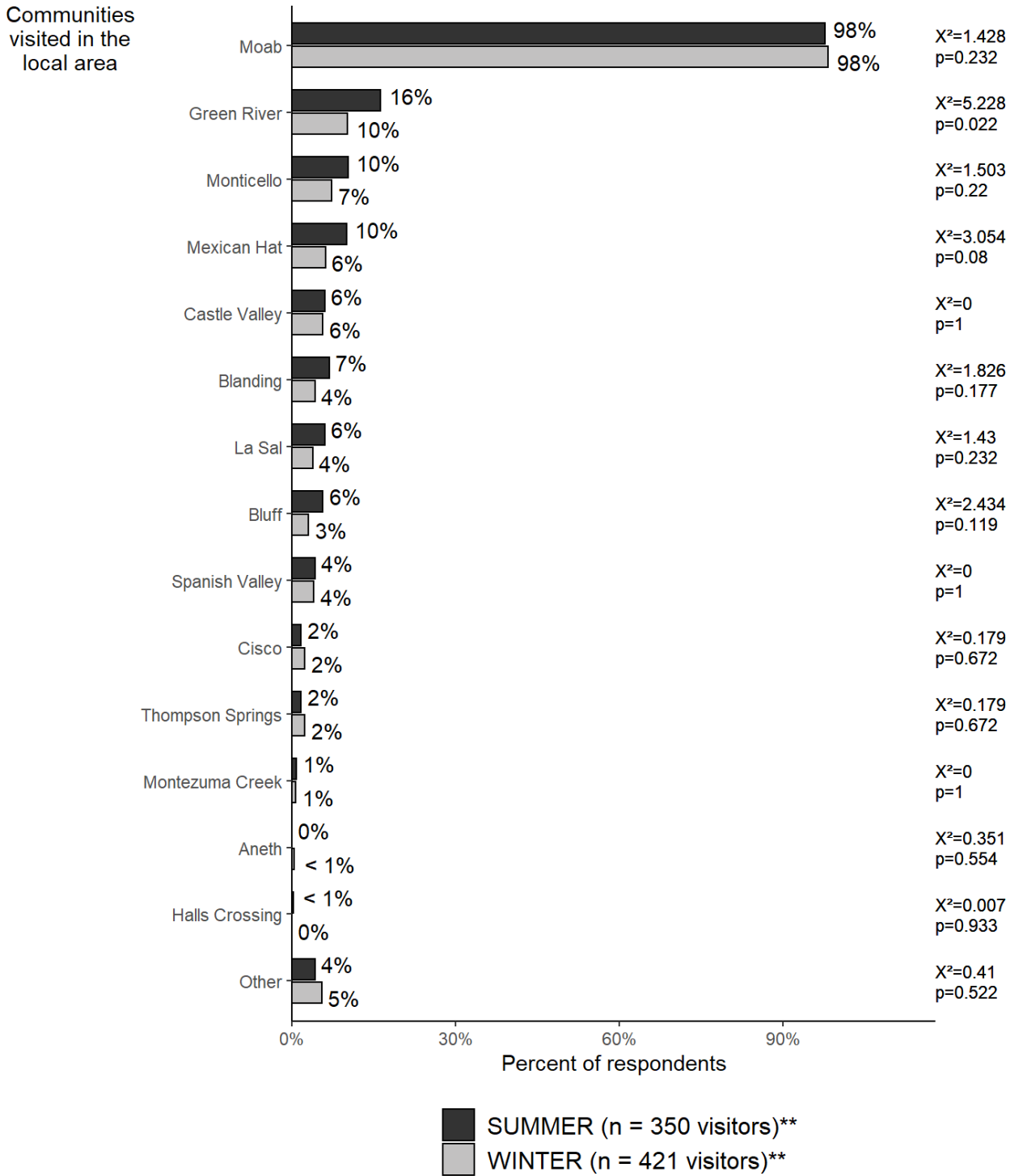
See Figure 4 for the local area map.

### Results (Figure 42)

- Most summer visitor groups (98%) and winter visitor groups (98%) visited Moab.
- Summer visitor groups were slightly more likely than winter visitor groups to visit Green River (16% and 10%, respectively).
- See Appendices 3 and 4 (Appendices companion document) for other communities specified by visitor groups.

\* total percentages do not equal 100 due to rounding

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



**Figure 42.** Communities visited while in the local area

\* 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 days spent in the park or in the local area

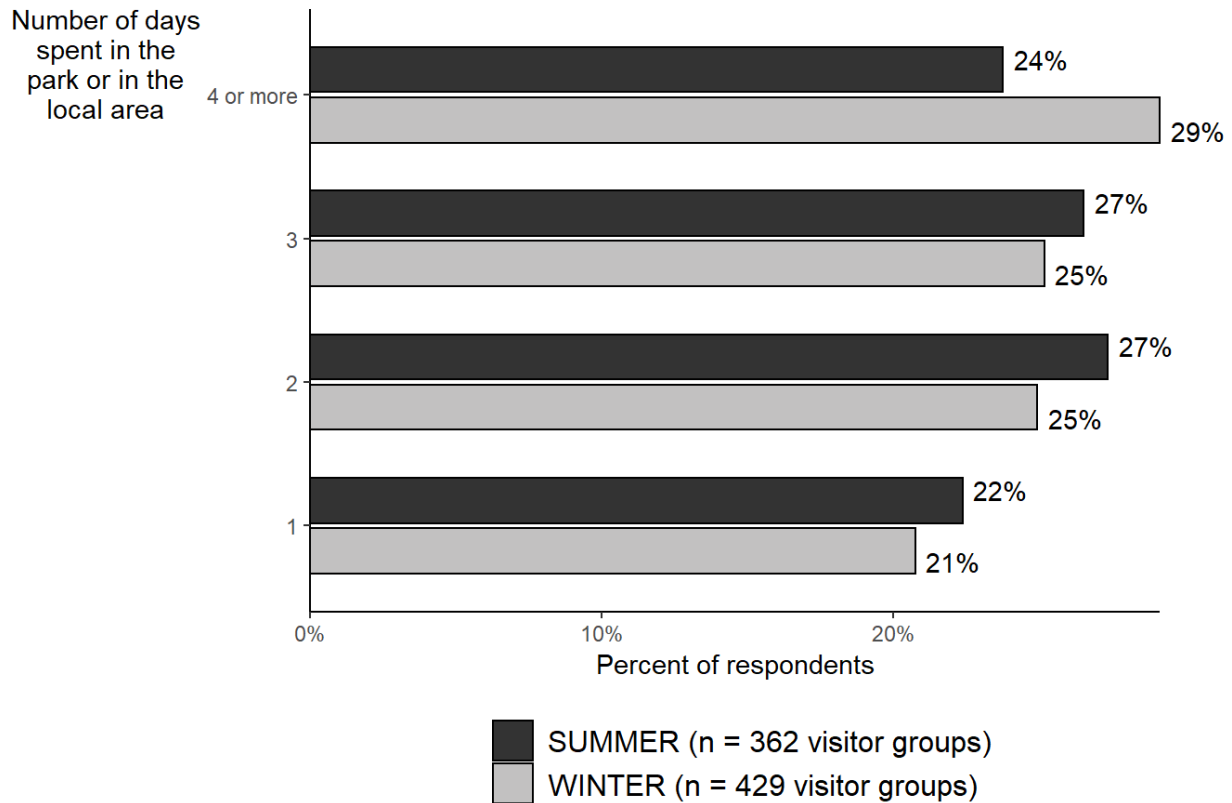
Question 6

How many days did you spend in Arches National Park and/or the local area?

See Figure 4 for the local area map.

Results (Figure 43)

- A majority of summer visitor groups (51%) and winter visitor groups (54%) spent three or more days in the park or in the local area.
- On average, summer visitor groups spent between two and three days in the park or in the local area, while winter visitor groups spent between three and four days. This difference was statistically significant (see Appendix 5 in the Appendices companion document).



X<sup>2</sup>=2.948; p=0.4

**Figure 43.** Number of days spent in the park or in the local area

\* total percentages do not equal 100 due to rounding

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

## ***Arches National Park visit***

### Importance of visiting park destinations

#### Question 10

How important to you was it to visit each of the following destinations during this trip to Arches National Park?

#### Results (Table 7)

- A majority of summer visitor groups reported that visiting the following destinations in ARCH was either “extremely important” or “very important”:
  - Delicate Arch
  - The Windows
  - Other park destinations listed in Appendix 3 (Appendices companion document).
- A majority of winter visitor groups reported that visiting the following destinations in ARCH was either “extremely important” or “very important”:
  - Delicate Arch
  - Other park destinations listed in Appendix 4 (Appendices companion document).
- Winter visitor groups were more likely than summer visitor groups to report not visiting Fiery Furnace (43% and 33%, respectively) and the Windows (18% and 9%, respectively).
- Summer visitor groups were more likely than winter visitor groups to report visiting Balanced Rock was “extremely important” or “very important” (48% and 39%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 7.** Importance of visiting park destinations

Destination	Season	N	Extremely Important	Very Important	Moderately Important	Slightly Important	Not at all Important	Did not visit	Total	Statistic
Delicate Arch	Summer	317	42%	32%	13%	6%	1%	7%	100%	X <sup>2</sup> =6.806; p=0.235
	Winter	377	40%	27%	15%	5%	1%	11%	100%	
Landscape Arch	Summer	302	20%	28%	24%	9%	2%	17%	100%	X <sup>2</sup> =1.53; p=0.91
	Winter	367	20%	26%	27%	8%	2%	17%	100%	
Park Avenue	Summer	293	12%	16%	23%	13%	4%	32%	100%	X <sup>2</sup> =1.965; p=0.854
	Winter	367	11%	15%	22%	14%	7%	32%	100%	
Fiery Furnace	Summer	295	7%	15%	23%	15%	7%	33%	100%	X <sup>2</sup> =13.738; p=0.017
	Winter	366	10%	12%	19%	10%	5%	43%	100%	
Sand Dune Arch	Summer	287	9%	19%	25%	14%	6%	28%	100%	X <sup>2</sup> =3.315; p=0.652
	Winter	358	11%	18%	22%	14%	8%	27%	100%	
Balanced Rock	Summer	310	20%	28%	30%	13%	4%	6%	100%	X <sup>2</sup> =12.728; p=0.026
	Winter	374	16%	23%	29%	15%	5%	12%	100%	
Visitor Center	Summer	309	19%	20%	20%	12%	6%	22%	100%	X <sup>2</sup> =3.108; p=0.683
	Winter	362	18%	17%	18%	12%	8%	26%	100%	
Windows	Summer	303	25%	31%	25%	7%	3%	9%	100%	X <sup>2</sup> =12.344; p=0.03
	Winter	365	22%	25%	25%	7%	3%	18%	100%	
Other	Summer	81	31%	32%	15%	1%	1%	20%	100%	X <sup>2</sup> =5.267; p=0.384
	Winter	110	42%	22%	14%	5%	1%	17%	100%	

\* total percentages do not equal 100 due to rounding

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

## Activities

### Question 11

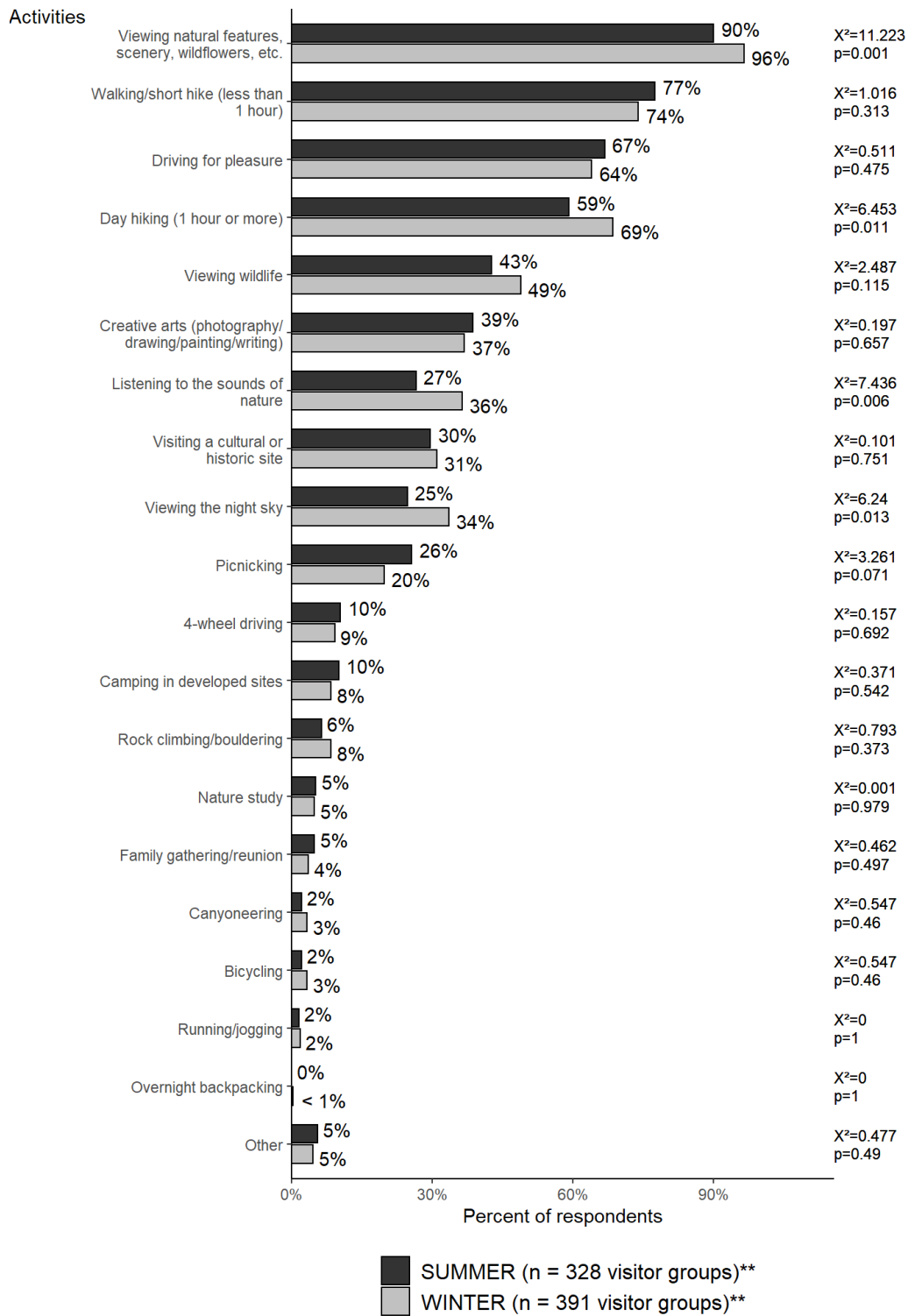
On this trip, in which of the following activities did you personally participate within Arches National Park?

#### Results (Figure 44)

- A majority of summer visitor groups participated in viewing natural features, scenery, wildflowers, etc. (90%), walking/short hikes (less than one hour) (77%), driving for pleasure (67%), and day hikes (one hour or more) (59%).
- A majority of winter visitor groups participated in viewing natural features, scenery, wildflowers, etc. (96%), walking/short hikes (less than one hour) (74%), driving for pleasure (64%), and day hikes (one hour or more) (69%).
- Winter visitor groups were more likely than summer visitor groups to report participating in viewing natural features, scenery, wildflowers, etc. (96% and 90%, respectively), day hiking (one hour or more) (69% and 59%, respectively), listening to the sounds of nature (36% and 27%, respectively), and viewing the night sky (34% and 25%, respectively).
- See Appendices 3 and 4 (Appendices companion document) for other activities specified by visitor groups.
- This bar chart shows the frequency distribution of activity participation shown by season (summer and winter). Statistical tests show significant differences between summer and winter visitor groups participating in several activities.

\* total percentages do not equal 100 due to rounding

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



**Figure 44.** Participation in activities on this trip

\* total percentages do not equal 100 due to rounding

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

## Primary activity

### Question 12

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

### Results

- Primary activities specified are listed in Appendices 3 and 4 (Appendices companion document).
- 52 summer visitor groups and 23 winter visitor groups specified that they did not have a primary activity.

\* total percentages do not equal 100 due to rounding

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

## ***Arches National Park management***

### Perceived condition of park resources

#### Question 13

To what extent do you agree or disagree with each of the following statements?

#### Results (Table 8)

- A majority of summer and winter visitor groups agreed or strongly agreed with the following statements: ARCH is a safe place to visit, natural resources in ARCH are in pristine condition, graffiti and litter are not a problem in ARCH, and historical and cultural features in ARCH are well maintained/preserved.
- A majority of summer and winter visitor groups disagreed or strongly disagreed with the following statement: ARCH is not accessible to persons with physical disabilities.
- A majority of winter visitor groups disagreed with the following statement: Development of adjacent areas OUTSIDE the park detracts from visitors' experiences at ARCH.
- Summer visitor groups were more likely than winter visitor groups to agree or strongly agree that ARCH is too crowded (41% and 23%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 8.** Perceived condition of park resources

Variable	Season	N	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do not Know/ Not Sure	Total	Statistic
Arches National Park is a safe place to visit	Summer	366	65%	33%	2%	<1%	0%	0%	100%	X <sup>2</sup> =4.455; p=0.348
	Winter	432	69%	29%	1%	<1%	1%	0%	100%	
Arches National Park is too crowded	Summer	364	12%	29%	35%	1%	19%	3%	100%	X <sup>2</sup> =49.302; p<0.001
	Winter	429	8%	15%	33%	3%	31%	9%	100%	
Natural resources in Arches National Park are in pristine condition	Summer	359	36%	53%	8%	1%	2%	1%	100%	X <sup>2</sup> =5.686; p=0.338
	Winter	430	34%	50%	11%	1%	3%	<1%	100%	
Graffiti and litter are not a problem in Arches National Park	Summer	366	37%	47%	7%	2%	5%	2%	100%	X <sup>2</sup> =4.008; p=0.548
	Winter	432	37%	46%	9%	1%	6%	1%	100%	
Arches National Park is not accessible to persons with physical disabilities	Summer	356	2%	11%	31%	32%	18%	5%	100%	X <sup>2</sup> =2.016; p=0.847
	Winter	430	2%	13%	29%	31%	21%	5%	100%	
Historical and cultural features in Arches National Park are well maintained/preserved	Summer	366	31%	49%	11%	8%	1%	0%	100%	X <sup>2</sup> =1.813; p=0.874
	Winter	433	34%	46%	11%	8%	1%	<1%	100%	
Development of facilities INSIDE the park detracts from visitors' experiences at Arches National Park	Summer	360	2%	10%	20%	7%	38%	22%	100%	X <sup>2</sup> =9.69; p=0.084
	Winter	431	4%	6%	19%	8%	37%	26%	100%	
Development of adjacent areas OUTSIDE the park detracts from visitors' experiences at Arches National Park	Summer	361	1%	10%	23%	8%	37%	21%	100%	X <sup>2</sup> =5.064; p=0.408
	Winter	431	3%	10%	19%	36%	23%	9%	100%	

\* total percentages do not equal 100 due to rounding

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

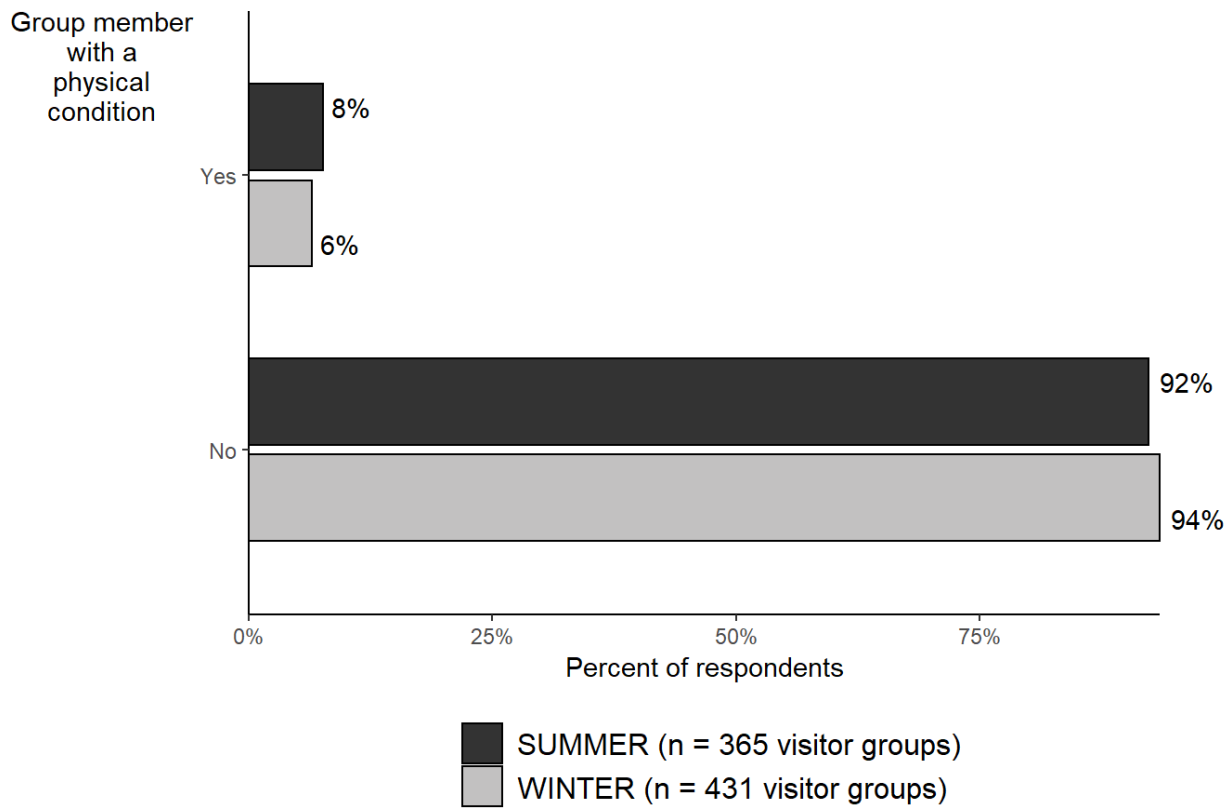
Group member physical condition

Question 14a

Did anyone in your personal group have a physical condition that made it difficult to access or participate in park activities or services, during your visit to Arches National Park?

Results (Figure 45)

- Most summer visitor groups (92%) and winter visitor groups (94%) had no members of their group with a physical condition that made it difficult to access or participate in park activities for services during their visit.



$X^2=0.257$ ;  $p=0.612$

**Figure 45.** Visitors with physical conditions

\* total percentages do not equal 100 due to rounding

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

Types of activities, services, facilities in which group member(s) could not participate or access  
Question 14b

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

Results

- The types of activities, services or facilities that visitors had difficulty participating in or accessing are listed in Appendices 3 and 4 (Appendices companion document).

\* total percentages do not equal 100 due to rounding

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

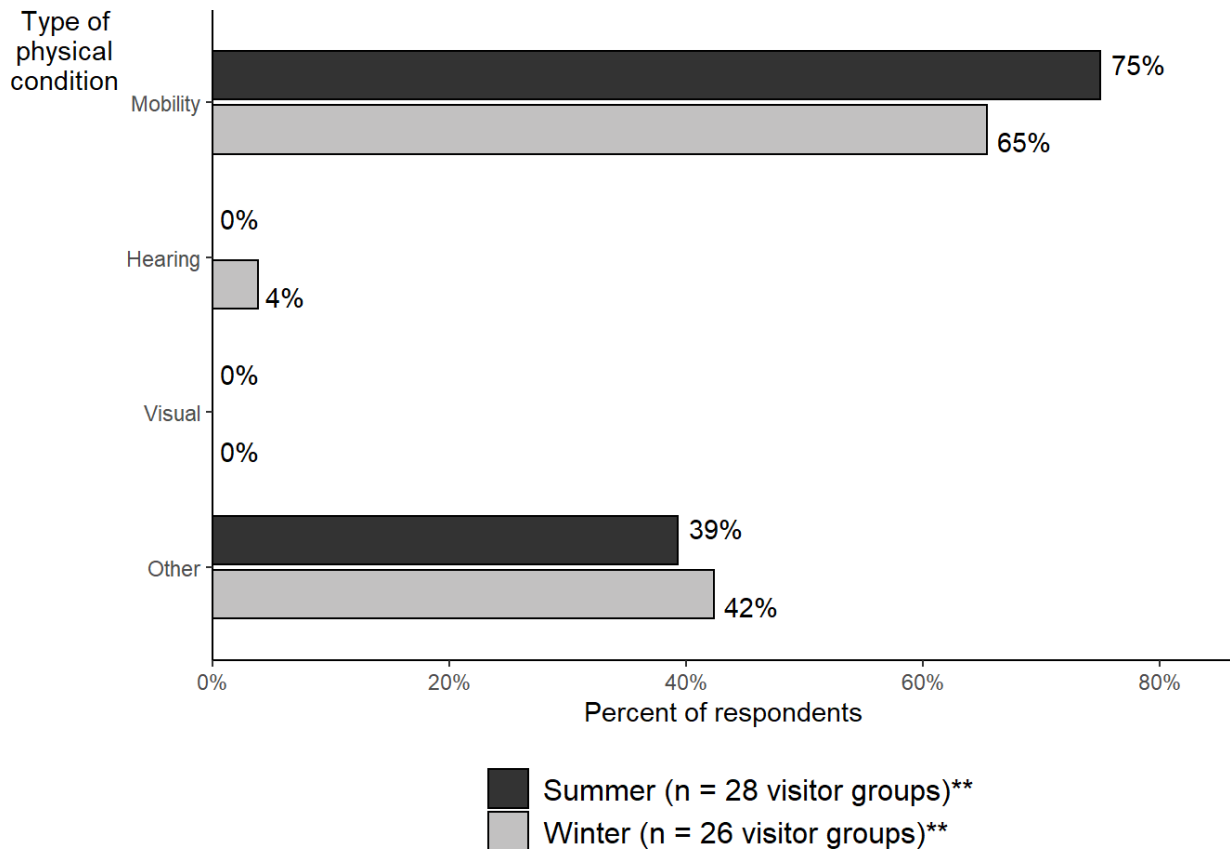
Type of physical condition

Question 14c

Because of the physical condition, which specified difficulties did the person(s) have?

Results (Figure 46)

- Of the summer visitor groups that had at least one member with a physical condition, 75% reported a group member with difficulties related to mobility.
- Of the winter visitor groups that had at least one member with a physical condition, 65% reported a group member with difficulties related to mobility and 4% reported difficulties related to hearing.
- More than one-third of both summer and winter visitor groups with at least one member with a physical condition reported an “other” type of difficulty (39% and 42%, respectively). The “other” types of specific difficulties are reported in Appendices 3 and 4 (Appendices companion document).



CAUTION: Number of respondents less than 30 visitor groups

**Figure 46.** Specific difficulties encountered by visitor group member(s)

\* total percentages do not equal 100 due to rounding

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

## Quantity of park facilities

### Question 15

Thinking about your visit to Arches National Park, would you have liked to have seen more of, the same, or less of each of the following facilities?

#### Results (Table 9)

- A majority of summer visitor groups (59%) would have liked to see more water stations available for visitor to use.
- Summer visitor groups were more likely than winter visitor groups to have liked to have seen more access to arches (40% and 29%, respectively), more restrooms (36% and 18%, respectively), and water stations (59% and 46%, respectively).
- Other trails at specified sites and other types of facilities visitor groups would have liked to have seen more of, the same, or less are specified in Appendices 3 and 4 (Appendices companion documents).

\* total percentages do not equal 100 due to rounding

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

**Table 9.** Facilities availability

Facility	Season	N	More	Same	Less	Total	Statistic
Primitive roads for scenic driving	Summer	342	29%	68%	4%	100%	X <sup>2</sup> =0.534; p=0.765
	Winter	413	31%	66%	3%	100%	
Access to arches	Summer	349	40%	60%	1%	100%	X <sup>2</sup> =8.735; p=0.013
	Winter	414	29%	70%	1%	100%	
Access to panoramic viewpoints	Summer	346	32%	68%	<1%	100%	X <sup>2</sup> =5.749; p=0.056
	Winter	412	24%	75%	<1%	100%	
Access to canyons	Summer	343	33%	66%	1%	100%	X <sup>2</sup> =0.354; p=0.838
	Winter	409	35%	64%	1%	100%	
Trails at the Windows	Summer	337	21%	78%	1%	100%	X <sup>2</sup> =0.428; p=0.807
	Winter	394	21%	77%	2%	100%	
Trails at Delicate Arch	Summer	339	31%	68%	1%	100%	X <sup>2</sup> =3.056; p=0.217
	Winter	408	26%	72%	2%	100%	
Trails at Delicate Arch Viewpoint	Summer	337	24%	75%	1%	100%	X <sup>2</sup> =2.636; p=0.268
	Winter	393	19%	80%	1%	100%	
Trails at Devils Garden	Summer	329	17%	82%	1%	100%	X <sup>2</sup> =5.108; p=0.078
	Winter	389	24%	75%	2%	100%	
Trails at other sites	Summer	145	13%	86%	1%	100%	X <sup>2</sup> =1.478; p=0.478
	Winter	170	12%	86%	2%	100%	
Transportation options between Moab and Arches National Park (trails, shuttles, etc.)	Summer	304	30%	67%	3%	100%	X <sup>2</sup> =5.96; p=0.051
	Winter	337	22%	75%	3%	100%	
Restrooms	Summer	340	36%	63%	1%	100%	X <sup>2</sup> =31.07; p<0.001
	Winter	408	18%	81%	<1%	100%	
Water stations	Summer	341	59%	40%	1%	100%	X <sup>2</sup> =14.576; p=0.001
	Winter	409	46%	54%	<1%	100%	
Campgrounds	Summer	307	24%	73%	3%	100%	X <sup>2</sup> =2.913; p=0.233
	Winter	369	18%	78%	3%	100%	
Other	Summer	56	39%	61%	0%	100%	X <sup>2</sup> =2.425; p=0.297
	Winter	57	28%	70%	2%	100%	

\* total percentages do not equal 100 due to rounding

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

Strategies used to cope with crowding

Question 16

Please indicate whether (and if so, how often) you have ever done each of the following in Arches National Park.

Results (Table 10)

- A majority of summer visitor groups have visited on weekdays to avoid weekend crowds (52%).
- A majority of winter visitor groups have visited earlier or later in the season to avoid seeing other people (74%), visited on weekdays to avoid weekend crowds (64%), gone to trails that are less crowded (55%), gone to other areas where you are less likely to see other people (56%), and avoided attractions that are crowded (61%).
- Winter visitor groups were more likely than summer visitor groups to have visited earlier or later in the season to avoid seeing other people (74% and 27%, respectively), visited on weekdays to avoid weekend crowds (64% and 52%, respectively), gone to other areas where you are less likely to see other people (56% and 43%, respectively), and avoided attractions that are crowded (61% and 49%, respectively).

**Table 10.** Use of coping strategies for crowding.

Strategy	Season	N	Yes	No	Total	Statistic
Visit earlier or later in the season to avoid seeing other people	Summer	351	27%	73%	100%	$X^2=169.829$ ; $p<0.001$
	Winter	421	74%	26%	100%	
Visit on weekdays to avoid weekend crowds	Summer	350	52%	48%	100%	$X^2=10.927$ ; $p=0.001$
	Winter	410	64%	36%	100%	
Go to trails that are less crowded	Summer	347	48%	52%	100%	$X^2=3.617$ ; $p=0.057$
	Winter	401	55%	45%	100%	
Avoid places that have limits on the amount of use	Summer	344	21%	79%	100%	$X^2=0.606$ ; $p=0.436$
	Winter	381	19%	81%	100%	
Go to other areas where you are less likely to see other people	Summer	348	43%	57%	100%	$X^2=13.208$ ; $p<0.001$
	Winter	401	56%	44%	100%	
Avoid attractions that are crowded	Summer	346	49%	51%	100%	$X^2=11.023$ ; $p=0.001$
	Winter	409	61%	39%	100%	

\* total percentages do not equal 100 due to rounding

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

## Frequency of coping Strategy use

### Question 16

Please indicate whether (and is so, how often) you have ever done each of the following in Arches National Park

#### Results (Table 11)

- Of the strategies utilized by winter visitor groups, a majority “always” or “usually” visited earlier or later in the season to avoid seeing other people (58%) and visited on weekdays to avoid weekend crowds (55%).
- None of the strategies utilized by summer visitor groups were “always” or “usually” used by a majority.
- Summer visitor groups were more likely than winter visitor groups to “occasionally” go to trails that are less crowded (30% and 21%, respectively).
- Winter visitor groups were more likely than summer visitor groups to “always” go to trails that are less crowded (18% and 8%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 11.** Frequency of coping strategy use

Strategy	Season	N	Rarely	Occasionally	Often	Usually	Always	Total	Statistic
Visit earlier or later in the season to avoid seeing other people	Summer	90	9%	33%	16%	22%	20%	100%	$X^2=8.826$ ; $p=0.066$
	Winter	287	9%	21%	12%	27%	31%	100%	
Visit on weekdays to avoid weekend crowds	Summer	157	13%	20%	20%	28%	19%	100%	$X^2=5.39$ ; $p=0.25$
	Winter	241	8%	22%	15%	32%	23%	100%	
Go to trails that are less crowded	Summer	143	6%	30%	25%	31%	8%	100%	$X^2=10.455$ ; $p=0.033$
	Winter	206	6%	21%	28%	26%	18%	100%	
Avoid places that have limits on the amount of use	Summer	60	3%	33%	25%	20%	18%	100%	$X^2=2.703$ ; $p=0.609$
	Winter	65	3%	25%	23%	32%	17%	100%	
Go to other areas where you are less likely to see other people	Summer	132	6%	28%	30%	27%	8%	100%	$X^2=4.366$ ; $p=0.359$
	Winter	206	4%	25%	27%	28%	16%	100%	
Avoid attractions that are crowded	Summer	146	8%	30%	27%	25%	10%	100%	$X^2=4.649$ ; $p=0.325$
	Winter	228	6%	25%	24%	31%	14%	100%	

\* total percentages do not equal 100 due to rounding

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

## Hiking experience

### Question 17

To what extent do you agree or disagree with each of the following statements about your experiences while hiking on trails in Arches National Park?

#### Results (Table 12)

- A majority of summer and winter visitor groups agreed or strongly agreed that the number of people on the trail was acceptable to protect the quality of visitors' experiences (i.e., prevent crowding) (51% and 61%, respectively).
- A majority of summer and winter visitor groups disagreed or strongly disagreed that there were fewer people on the trail than they would prefer to see when hiking in ARCH (61% and 64%, respectively).
- Winter visitor groups were more likely than summer visitor groups to disagree or strongly disagree that there were more people on the trail than they thought was acceptable to reduce environmental impacts (41% and 28%, respectively).
- Winter visitor groups were more likely than summer visitor groups to agree or strongly agree that the number of people on the trail was acceptable to protect the quality of visitors' experiences (i.e., prevent crowding) (61% and 51%, respectively), and that the number of people they encountered while hiking on trails in ARCH positively impacted their experience (32% and 22%, respectively).
- Summer visitor groups were more likely than winter visitor groups to agree or strongly agree that there were more people on the trail than they thought were acceptable to provide opportunities for solitude (41% and 30%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 12.** Hiking experience

Condition	Season	N	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree	Do not Know/No Opinion	Total	Statistic
There were fewer people on the trail than I would prefer to see when hiking in Arches National Park	Summer	359	1%	6%	24%	37%	24%	9%	100%	X <sup>2</sup> =5.081; p=0.406
	Winter	417	2%	4%	23%	39%	25%	7%	100%	
There were more people on the trail than I think is acceptable to reduce environmental impacts	Summer	354	5%	18%	37%	23%	5%	11%	100%	X <sup>2</sup> =15.302; p=0.009
	Winter	418	4%	15%	33%	32%	9%	8%	100%	
The number of people on the trail was acceptable to protect the quality of visitors' experiences (i.e., prevent crowding)	Summer	359	5%	46%	25%	15%	2%	7%	100%	X <sup>2</sup> =14.295; p=0.014
	Winter	420	10%	51%	20%	10%	2%	6%	100%	
There were more people on the trail than I think is acceptable to provide opportunities for solitude	Summer	353	10%	31%	28%	18%	3%	9%	100%	X <sup>2</sup> =22.569; p<0.001
	Winter	418	9%	21%	29%	28%	6%	6%	100%	
The number of people I encountered while hiking on trails in Arches National Park positively impacted my experience	Summer	358	4%	18%	43%	21%	4%	10%	100%	X <sup>2</sup> =14.649; p=0.012
	Winter	418	8%	24%	41%	16%	5%	6%	100%	

\* total percentages do not equal 100 due to rounding

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

## Responses to advance reservation system

### Question 18

If a reservation were required in advance to visit Arches National Park, which of the following actions would you be willing or able to take in order to secure a visit to Arches National Park?

#### Results (Table 13)

- A majority of summer and winter visitor groups reported that they would be willing or able to visit during a different time of day, visit on a different day in the same week, visit on weekdays instead of weekend days, and visit earlier or later in the season in order to obtain an advance reservation.
- A majority of winter visitor groups reported that they would be willing or able to visit in a different week in the same month, visit in a different month, or visit in a different season in order to obtain an advance reservation.
- Winter visitor groups were more likely than summer visitor groups to report that they would be willing or able to visit during a different time of day (71% and 63%, respectively), visit on a different day in the same week (72% and 64%, respectively), visit in a different week in the same month (58% and 39%, respectively), visit in a different month (65% and 46%, respectively), visit earlier or later in the season (78% and 57%, respectively), and visit in a different season (70% and 48%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 13.** Actions to secure an advance reservation

Response	Season	N	Yes	No	Total	Statistic
Visit during a different time of day	Summer	350	63%	37%	100%	X <sup>2</sup> =4.943; p=0.026
	Winter	407	71%	29%	100%	
Visit on a different day in the same week	Summer	348	64%	36%	100%	X <sup>2</sup> =5.16; p=0.023
	Winter	404	72%	28%	100%	
Visit on weekdays instead of weekend days	Summer	351	71%	29%	100%	X <sup>2</sup> =2.435; p=0.119
	Winter	408	76%	24%	100%	
Visit in a different week in the same month	Summer	344	39%	61%	100%	X <sup>2</sup> =24.515; p<0.001
	Winter	404	58%	42%	100%	
Visit in a different month	Summer	345	46%	54%	100%	X <sup>2</sup> =26.662; p<0.001
	Winter	404	65%	35%	100%	
Visit earlier or later in the season	Summer	348	57%	43%	100%	X <sup>2</sup> =35.528; p<0.001
	Winter	408	78%	22%	100%	
Visit in a different season	Summer	347	48%	52%	100%	X <sup>2</sup> =37.017; p<0.001
	Winter	403	70%	30%	100%	
Visit Arches National Park even if you were unable to visit the most popular areas of the park	Summer	351	29%	71%	100%	X <sup>2</sup> =0.301; p=0.583
	Winter	407	31%	69%	100%	

\* total percentages do not equal 100 due to rounding

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

## Support for management practices

### Question 19

Please indicated the extent to which you would support or oppose each of the following potential management practices at Arches National Park

#### Results (Table 14)

- A majority of summer visitor groups reported that they would “support” or “strongly support” expanding parking areas at key attraction sites, allowing for more visitors on the related trails (53%), implementing an advance timed entry reservations to the park to reduce crowding during the peak season (59%), expanding the trail network in the park to provide additional recreation opportunities (65%), and implementing a voluntary shuttle system to increase modes of access (72%).
- A majority of winter visitor groups reported that they would “support” or “strongly support” implementing an advance timed entry reservations to the park to reduce crowding during the peak season (62%), expanding the trail network in the park to provide additional recreation opportunities (68%), implementing a voluntary shuttle system to increase modes of access (65%).
- Summer visitor groups were more likely than winter visitor groups to “support” or “strongly support” expanding parking areas at key attraction sites, allowing for more visitors on the related trails (53% and 35%, respectively), and implementing a voluntary shuttle system to increase modes of access (72% and 65%, respectively).

\* total percentages do not equal 100 due to rounding

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

**Table 14.** Support or opposition to management practices

Management practice	Season	N	Strongly Support	Support	Neither Support nor Oppose	Oppose	Strongly Oppose	Do not Know/No Opinion	Total	Statistic
Expand parking areas at key attraction sites, allowing for more visitors on the related trails	Summer	353	23%	30%	17%	22%	6%	2%	100%	X <sup>2</sup> =41.004; p<0.001
	Winter	418	9%	26%	20%	31%	10%	4%	100%	
Implement advance timed entry reservations to the park to reduce crowding during the peak season	Summer	348	17%	42%	14%	18%	5%	3%	100%	X <sup>2</sup> =6.671; p=0.246
	Winter	419	17%	45%	16%	12%	6%	5%	100%	
Expand trail network in the park to provide additional recreation opportunities	Summer	350	17%	48%	20%	11%	1%	3%	100%	X <sup>2</sup> =9.721; p=0.084
	Winter	419	24%	44%	18%	7%	3%	4%	100%	
Implement advance timed entry reservations to visit specific areas of the park (i.e., site-specific permits)	Summer	350	9%	28%	21%	31%	9%	3%	100%	X <sup>2</sup> =4.812; p=0.439
	Winter	418	10%	33%	19%	25%	9%	4%	100%	
Implement mandatory shuttle system to reduce traffic congestion	Summer	347	8%	20%	18%	36%	16%	2%	100%	X <sup>2</sup> =3.764; p=0.584
	Winter	415	8%	19%	20%	31%	20%	2%	100%	
Implement voluntary shuttle system to increase modes of access	Summer	351	15%	57%	14%	10%	2%	3%	100%	X <sup>2</sup> =13.876; p=0.016
	Winter	415	17%	48%	20%	7%	5%	3%	100%	
Temporarily close congested parking areas	Summer	352	3%	28%	28%	29%	7%	5%	100%	X <sup>2</sup> =7.789; p=0.168
	Winter	414	6%	31%	26%	24%	9%	5%	100%	

\* total percentages do not equal 100 due to rounding

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

## Visitor background information

### U.S. visitors' state of residence

#### Question 20

What is your home ZIP code or home country if not U.S.?

Results (Table 15, Table 16, Figure 47, Figure 48)

- The most popular states of residence for U.S. visitors in the summer were California (13%) and Colorado (9%).
- The most popular states of residence for U.S. visitors in the winter were Utah (14%), California (12%), and Colorado (11%).

**Table 15.** U.S. State of residence: Mail-back survey – Summer

State	Number of visitors	Percent of U.S. visitors* (N = 349)	Percent of all visitors* (N = 350)
California	45	13	13
Colorado	30	9	9
Texas	23	7	7
Florida	17	5	5
Ohio	15	4	4
Georgia	13	4	4
Illinois	13	4	4
Utah	13	4	4
Arizona	11	3	3
Virginia	11	3	3
Washington	10	3	3
North Carolina	9	3	3
Pennsylvania	9	3	3
Missouri	8	2	2
Oklahoma	8	2	2
Tennessee	8	2	2
Minnesota	7	2	2
Nebraska	7	2	2
Oregon	7	2	2
Indiana	6	2	2
Michigan	6	2	2
New York	6	2	2
26 other states	67	19	19
Total	349	102	102

Other states each had less than 2% visitors

\* total percentages do not equal 100 due to rounding

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

**Table 16.** U.S. State of residence: Mail-back survey – Winter

<b>State</b>	<b>Number of visitors</b>	<b>Percent of U.S. visitors (N = 408)</b>	<b>Percent of all visitors (N = 416)</b>
Utah	59	14	13
California	47	12	11
Colorado	46	11	10
Texas	17	4	4
Florida	15	4	3
New York	15	4	3
Ohio	14	3	3
Wisconsin	14	3	3
Minnesota	10	2	2
Washington	10	2	2
Illinois	8	2	2
Missouri	8	2	2
Oregon	8	2	2
Pennsylvania	8	2	2
Virginia	8	2	2
Arizona	7	2	2
Kansas	7	2	2
North Carolina	7	2	2
26 other states	100	25	24
<b>Total</b>	<b>408</b>	<b>100</b>	<b>94</b>

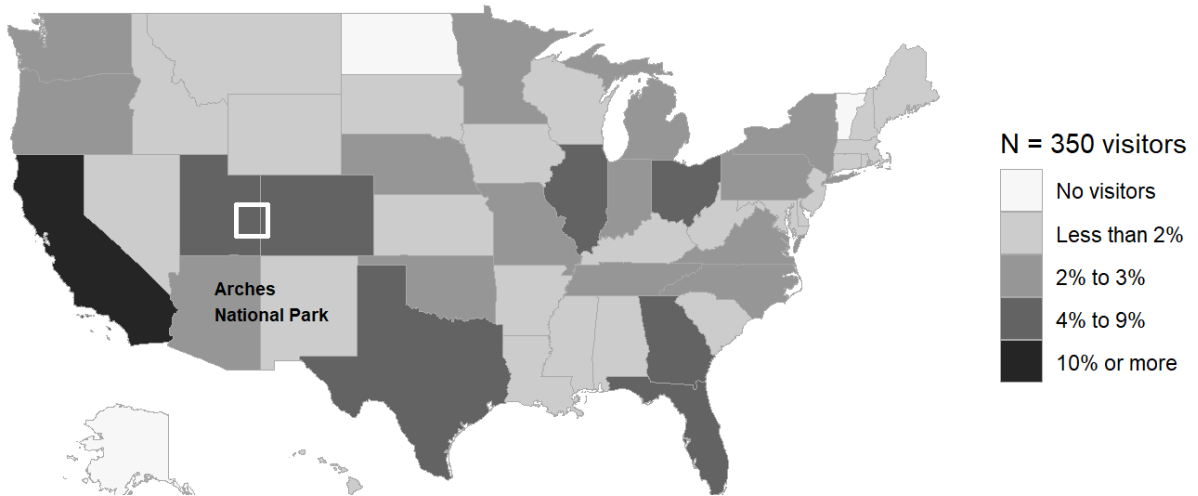
Other states each had less than 2% visitors

\* total percentages do not equal 100 due to rounding

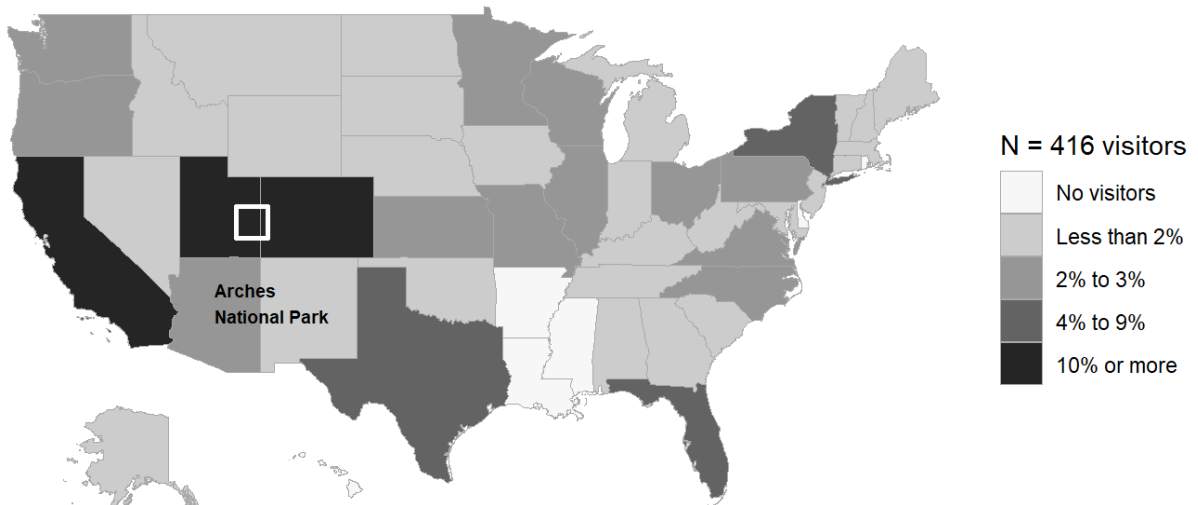
\*\* total percentages do not equal 100 because visitors could select more than one answer

Geographic origin of U.S. residents

Question 20



**Figure 47.** Mail-back survey proportion of U.S. visitors by state of residence – Summer



**Figure 48.** Mail-back survey proportion of U.S. visitors by state of residence – Winter

\* total percentages do not equal 100 due to rounding

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

International visitors' country of residence

Question 20

What is your home ZIP code or home country if not U.S.?

Results (Table 17, Table 18)

- 100% of summer international visitors were from Canada.
- 38% of winter international visitors were from Canada.

**Table 17.** Country of residence: Mail-back survey – Summer

Country	Number of visitors	Percent of international visitors (N = 1)	Percent of all visitors (N = 350)
Canada	1	100	<1
Total	1	100	<1

All countries are included

**Table 18.** Country of residence: Mail-back survey – Winter

Country	Number of visitors	Percent of international visitors* (N = 8)	Percent of all visitors (N = 416)
Canada	3	38	1
Australia	1	12	<1
Israel	1	12	<1
Netherlands	1	12	<1
UAE	1	12	<1
UK	1	12	<1
Total	8	98	2

All countries are included

\* total percentages do not equal 100 due to rounding

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

## Age

### Question 21

What is your age?

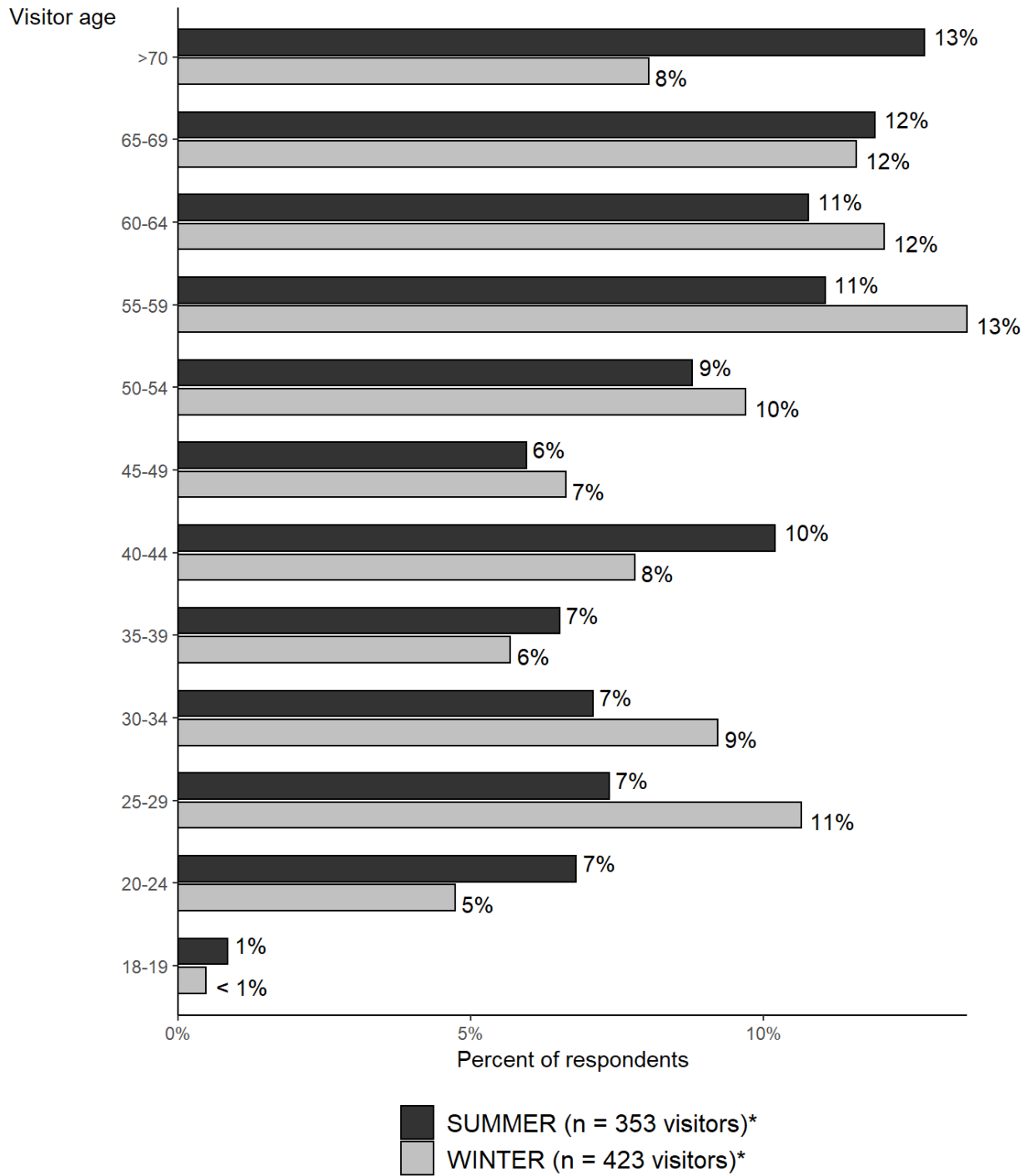
Note: Response was limited to just the group member completing the mail-back survey.

### Results (Figure 49)

- One-quarter of summer visitors (25%) and 20% of winter visitors were 65 years or older.
- Nearly one-quarter of summer visitors (22%) and 25% of winter visitors were 55 to 64 years old.
- About one-third of summer visitors (32%) and one-third of winter visitors (31%) were 35 to 54 years old.
- Nearly one-quarter of summer visitors (22%) and 26% of winter visitors were 18 to 34 years old.
- On average, summer and winter visitors were about 49 years old (see Appendix 5 in the Appendices companion document).

\* total percentages do not equal 100 due to rounding

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



$\chi^2=12.382$ ;  $p=0.336$

**Figure 49.** Respondent age

\* total percentages do not equal 100 due to rounding

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

Gender

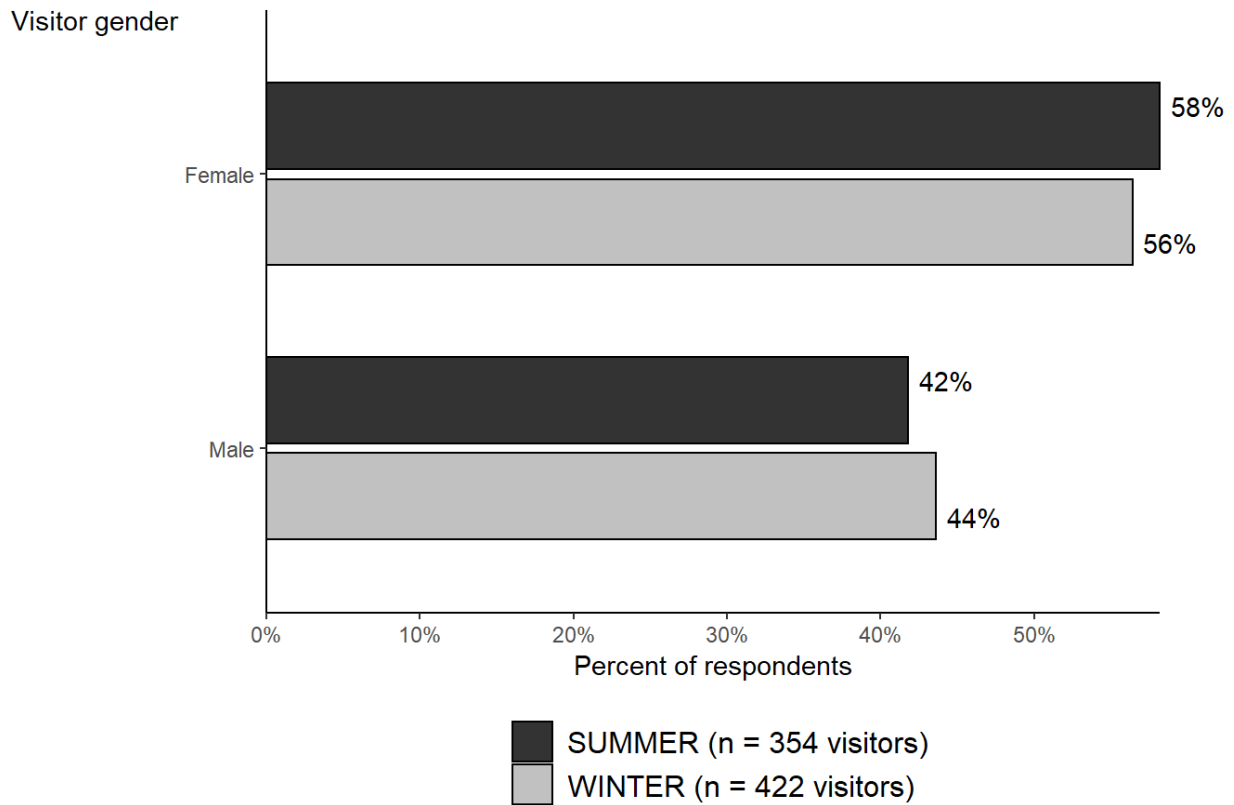
Question 22

What is your gender?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 50)

- A majority of summer visitors (58%) and winter visitors (56%) were female.



$X^2=0.185$ ;  $p=0.667$

**Figure 50.** Respondent gender

\* total percentages do not equal 100 due to rounding

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

Ethnicity

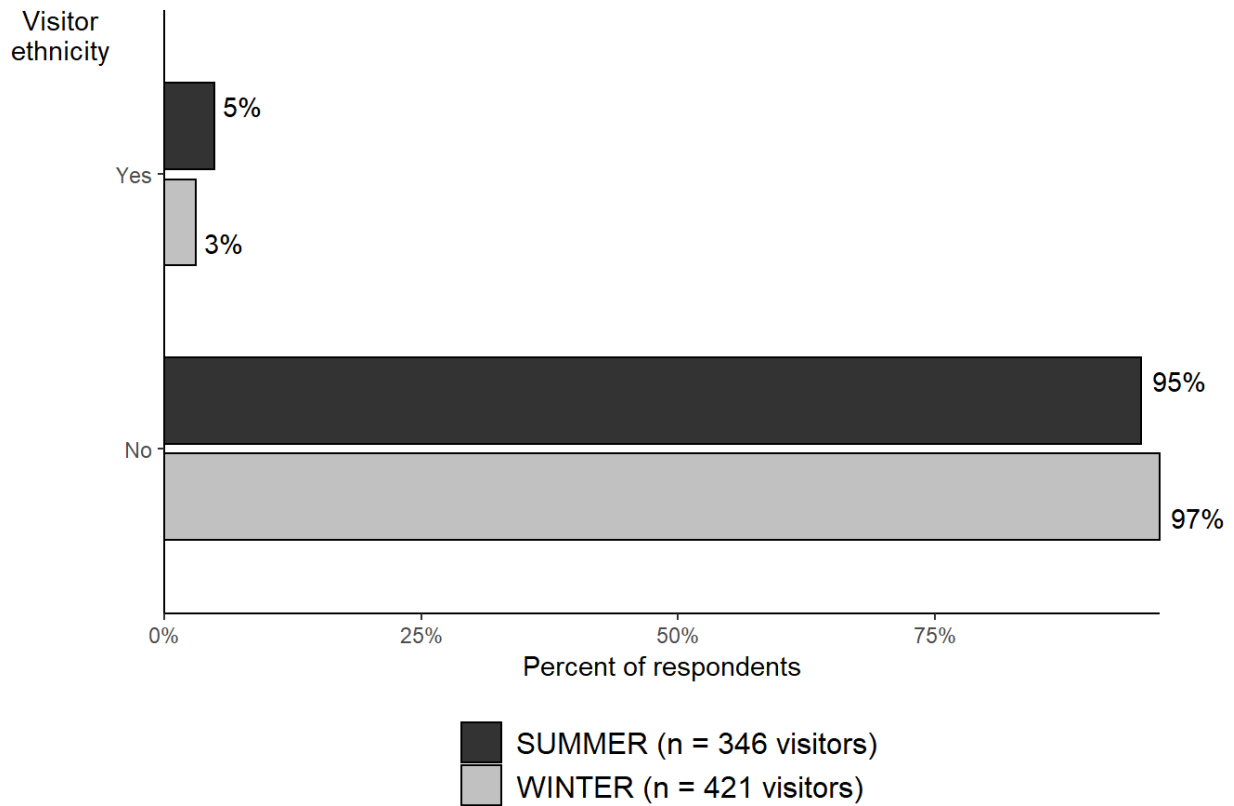
Question 23

Are you of Hispanic or Latino origin?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 51)

- A small percentage of summer visitors (5%) and winter visitors (3%) were of Hispanic or Latino origin.



$X^2=1.233$ ;  $p=0.267$

**Figure 51.** Respondent ethnicity

\* total percentages do not equal 100 due to rounding

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

Race

Question 24

What is your race?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 52)

- Most summer visitors (90%) and winter visitors (92%) were white.
- A small percentage of summer visitors (9%) and winter visitors (7%) were Asian.
- Very few visitors in either season were Black or African American (1% in both seasons), American Indian or Alaska Native (3% in both seasons)
- No visitors contacted in either season identified as Native Hawaiian or other Pacific Islander.

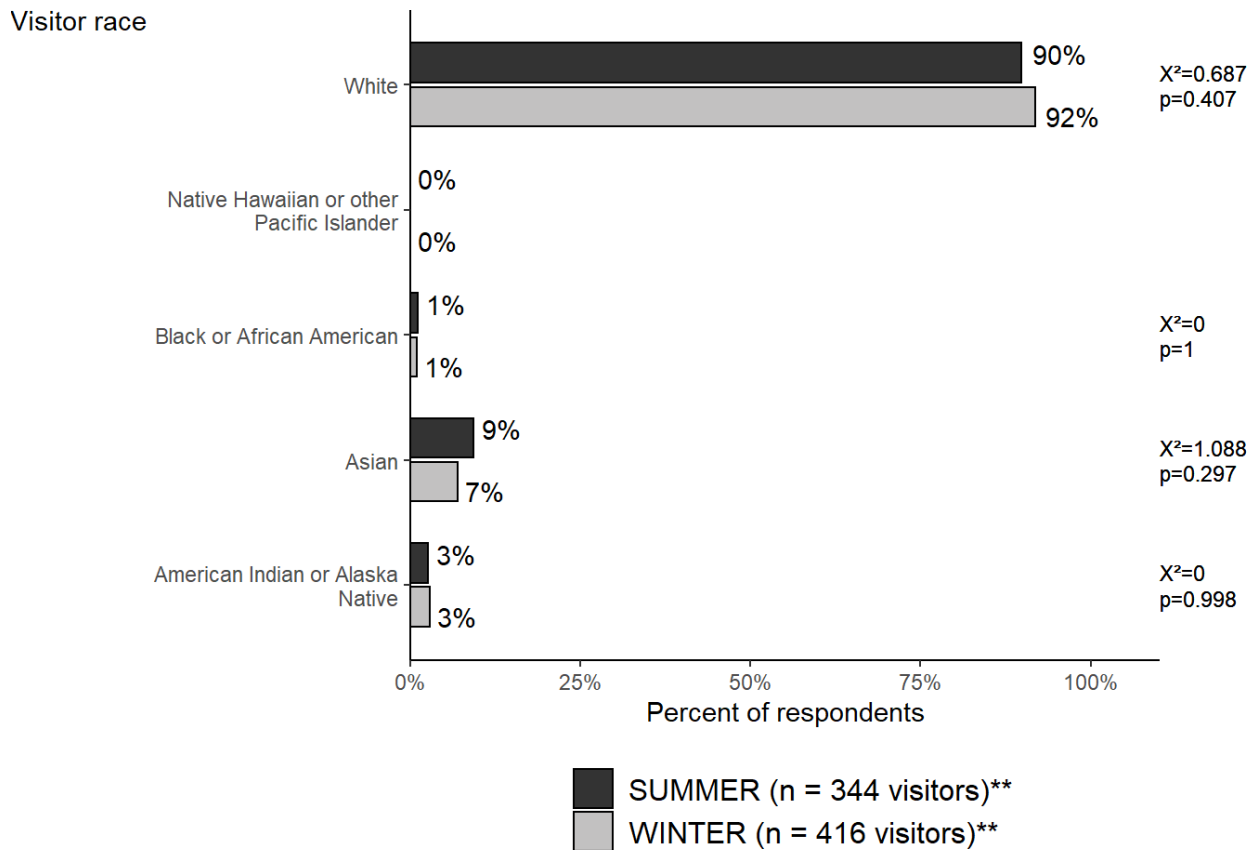


Figure 52. Respondent race

\* total percentages do not equal 100 due to rounding

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

Education

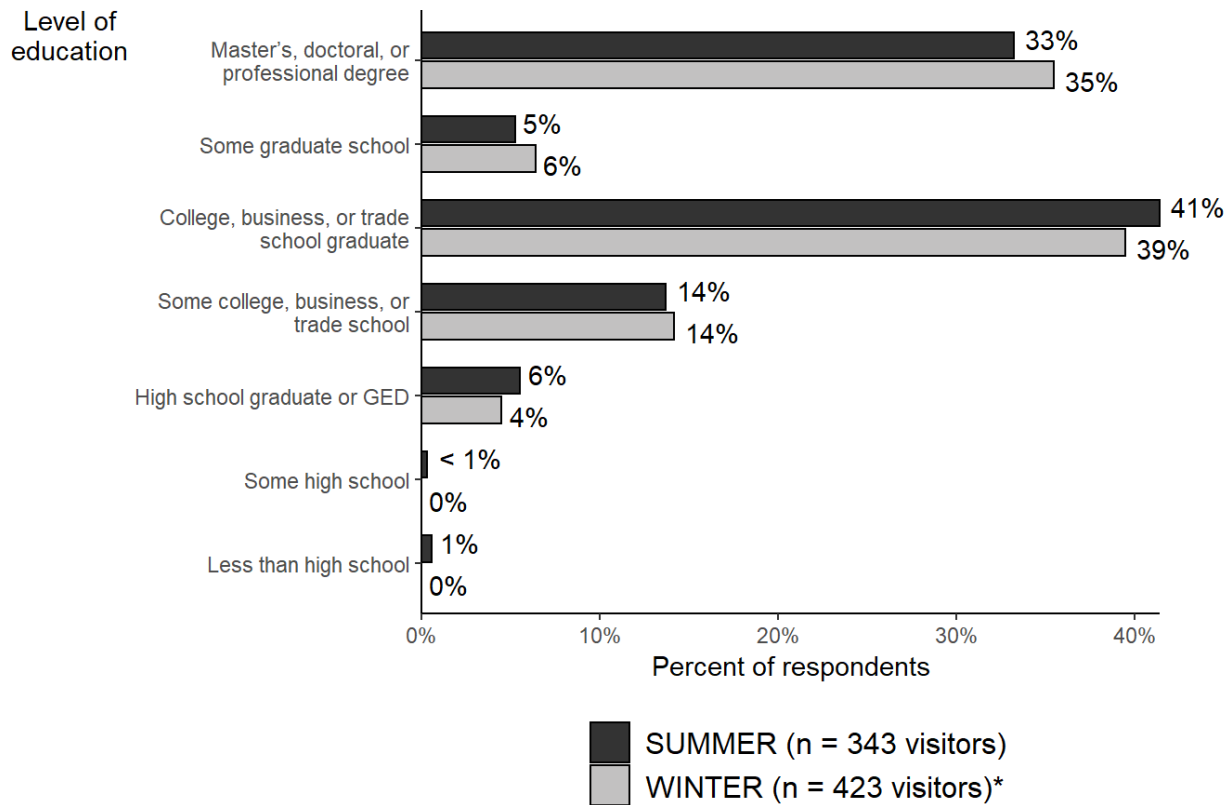
Question 25

What is the highest degree or level of school you have completed?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 53)

- About one-third of summer visitors (33%) and winter visitors (35%) completed a master’s, doctoral, or professional degree.
- Over one-third of summer visitors (41%) and 39% of winter visitors were college, business, or trade school graduates.



X<sup>2</sup>=5.011; p=0.542

Figure 53. Respondent level of education

\* total percentages do not equal 100 due to rounding

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

Household income

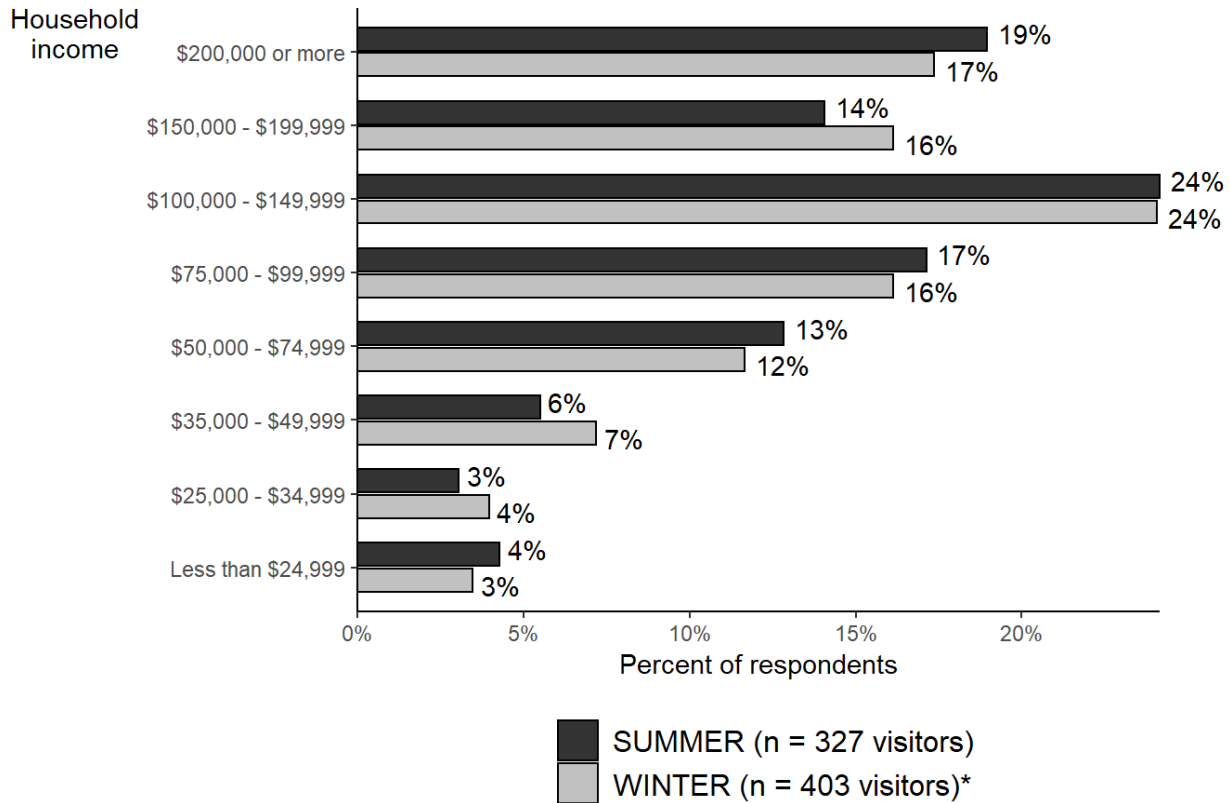
Question 26

Which category best describes your household income last year before taxes?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 54)

- About one-quarter of summer visitors (24%) and winter visitors (24%) had an annual household income between \$100,000 and \$149,000.
- About one-fifth of summer visitors (19%) and winter visitors (17%) had an annual household income of \$200,000 or more.



X<sup>2</sup>=2.603; p=0.919

Figure 54. Respondent household income

\* 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 contributors to household income

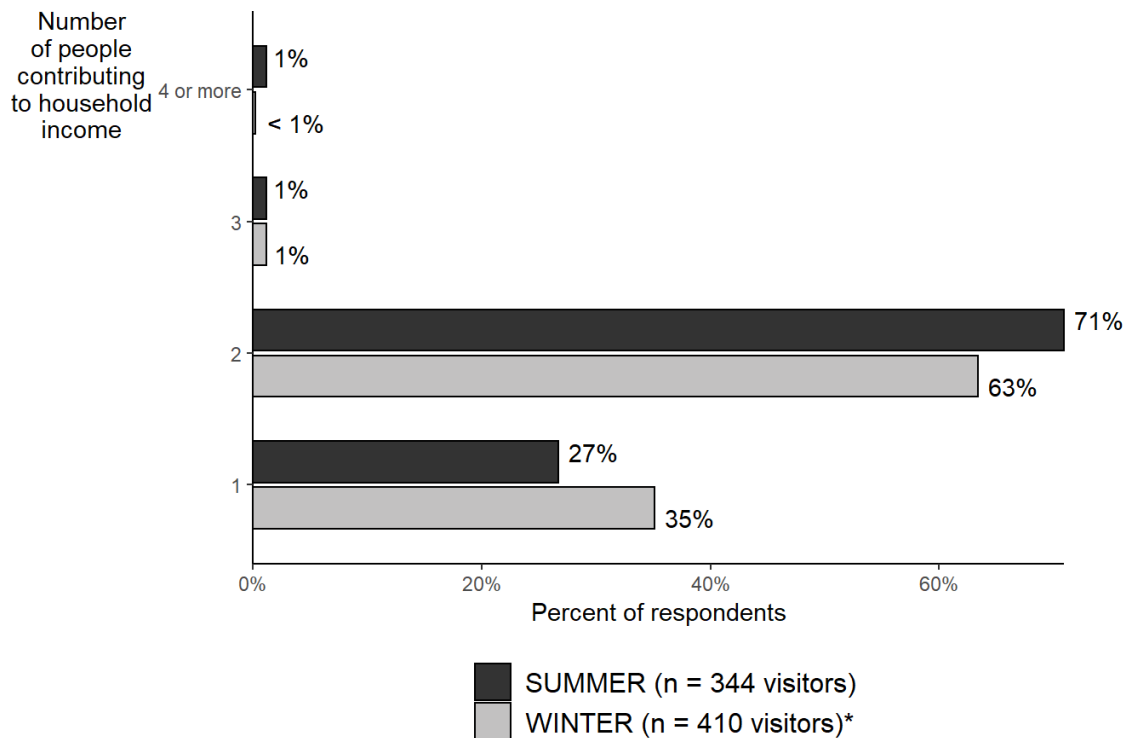
Question 27

Including yourself, how many people contribute to your annual household income?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 55)

- A majority of summer visitors (71%) and winter visitors (63%) had two contributors to their household income.
- About one-quarter of summer visitors (27%) and one-third of winter visitors (35%) were the sole contributor to their household income.
- Summer visitors were more likely than winter visitors to report two contributors to their household income (71% and 63%, respectively), while winter visitors were more likely than summer visitors to report being the sole contributor to their household income (35% and 27%, respectively).



X<sup>2</sup>=8.162; p=0.043

**Figure 55.** Contributors to household income

\* total percentages do not equal 100 due to rounding

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

Household size

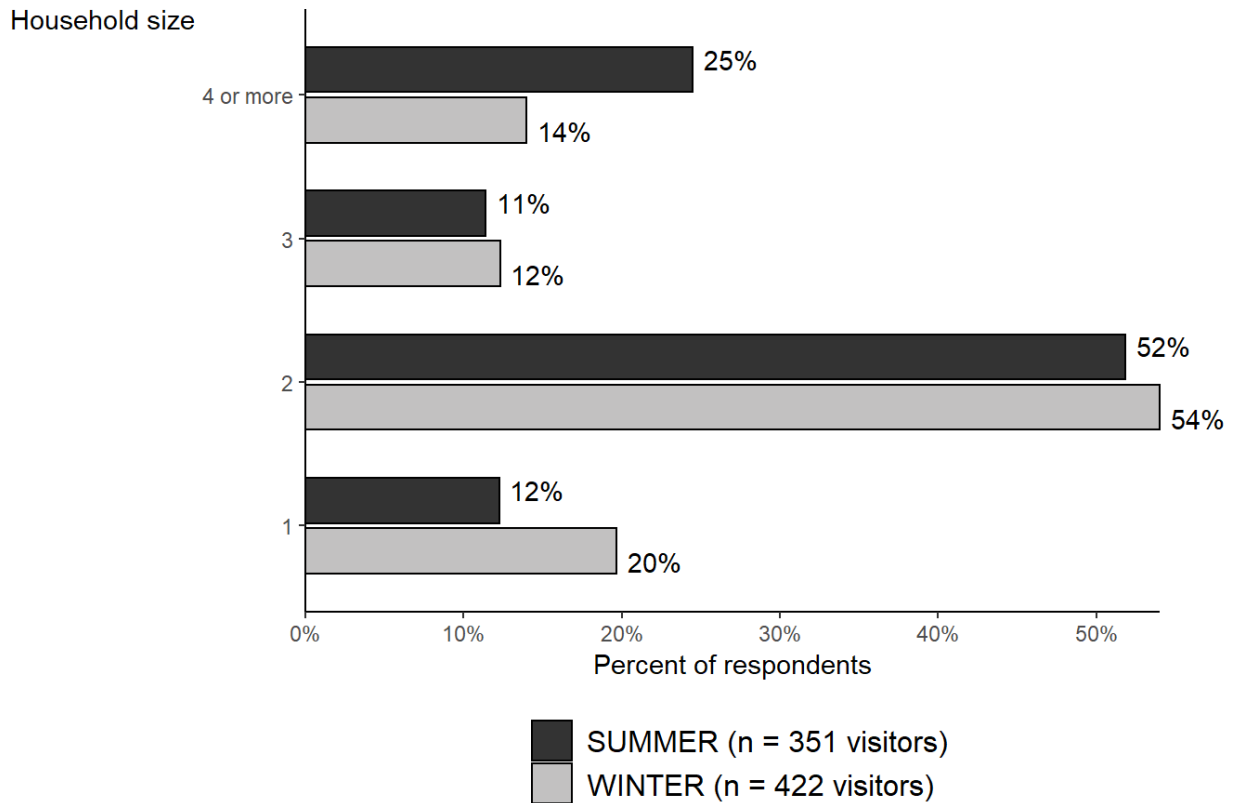
Question 28

Including yourself, how many people are in your household?

Note: Response was limited to just the group member completing the mail-back survey.

Results (Figure 56)

- About half of summer visitors (52%) and winter visitors (54%) had a household of two people.
- Summer visitors were more likely than winter visitors to report households of four or more people (25% and 14%, respectively), while winter visitors were more likely than summer visitors to report households of one person (20% and 12%, respectively).



$\chi^2=18.083$ ;  $p<0.001$

**Figure 56.** Respondent household size

\* total percentages do not equal 100 due to rounding

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

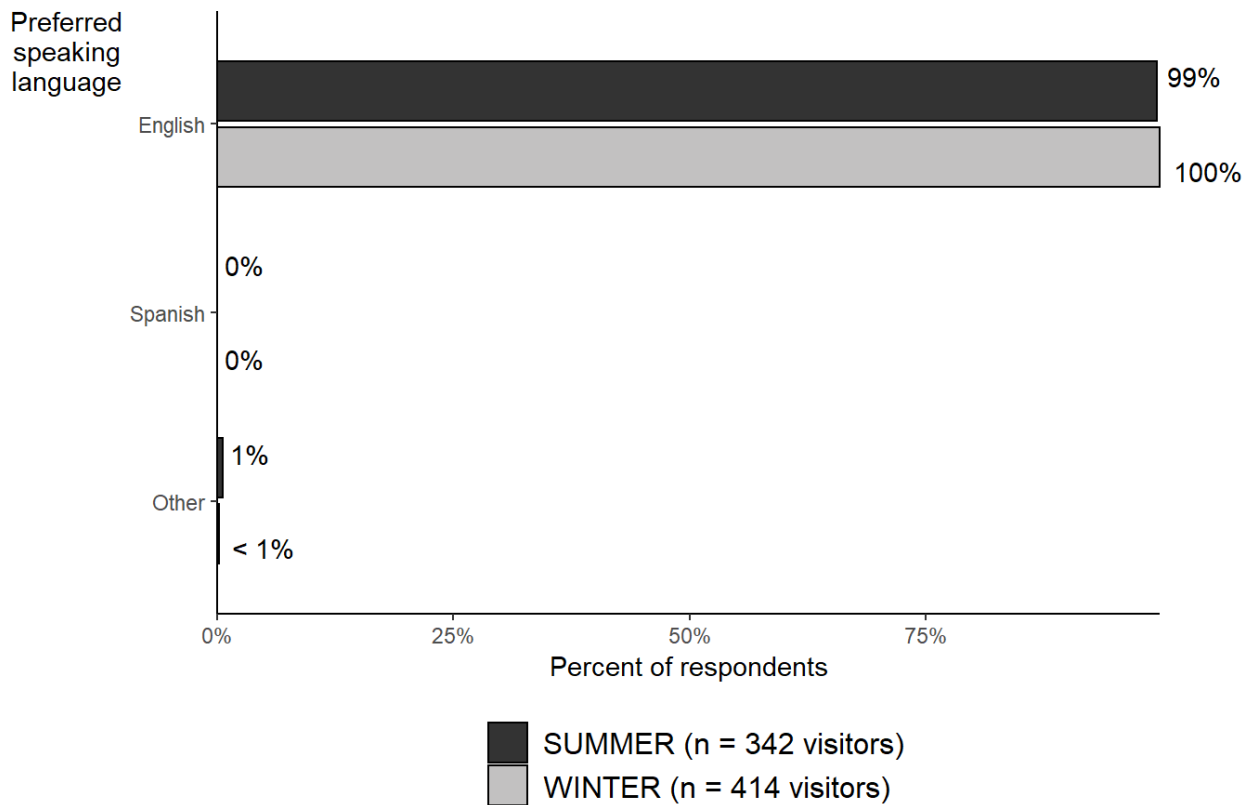
Preferred speaking language

Question 29

When visiting an area such as Arches National Park, what language do you personally prefer to use?

Results (Figure 57)

- Nearly all summer and winter visitors reported English as their preferred language for speaking.
- Other languages preferred by summer and winter visitors are listed in Appendices 3 and 4 in the Appendices companion document.



$X^2=0.028$ ;  $p=0.868$

**Figure 57.** Preferred speaking language

\* total percentages do not equal 100 due to rounding

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

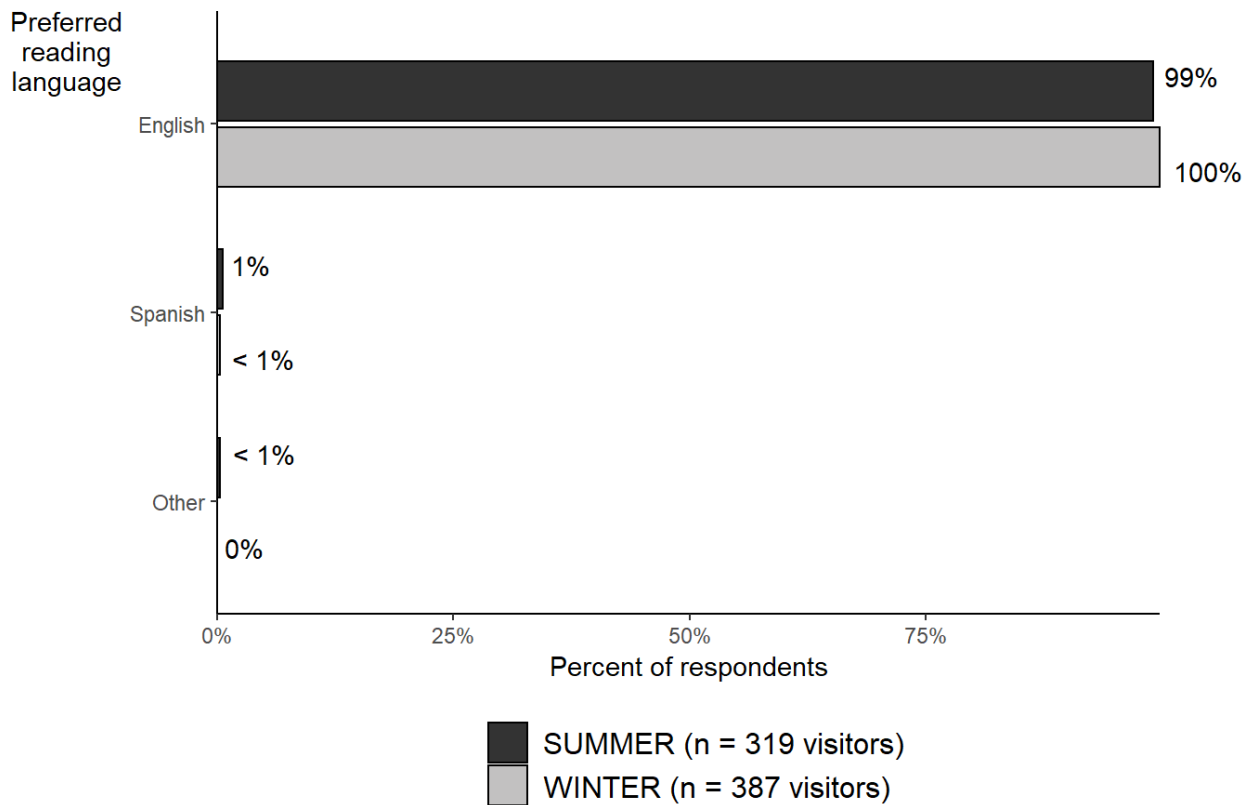
Preferred reading language

Question 29

When visiting an area such as Arches National Park, what language do you personally prefer to use?

Results (Figure 58)

- Nearly all summer and winter visitors reported English as their preferred language for reading.
- Other languages preferred by summer visitors are listed in Appendix 3 (Appendices companion document).



$X^2=1.78$ ;  $p=0.411$

**Figure 58.** Preferred reading language

\* total percentages do not equal 100 due to rounding

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

***Visitor comments***

Question 30

Is there anything else you would like to tell us about Arches National Park's facilities, services, or recreational opportunities?

Results

- Results are transcribed verbatim in Appendices 3 and 4 (Appendices companion document).

## Literature Cited

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