National Park Service
U.S. Department of the Interior

Natural Resource Stewardship and Science

2023 Socioeconomic Research of Prince William Forest Park

Report on 2023 Data Collection

Visitors enjoy the view of Carters Pond.

NPS / CLAIRE HASSLER

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Abstract

A strong mandate and need for socioeconomic monitoring have been expressed in the National Park Service (NPS) strategic goals for science, in statements by NPS leadership, and in various official reports. Since such monitoring began in 2022, the NPS has conducted visitor surveys at 24 parks per year across the United States and associated territories. Prince William Forest Park was selected as one of these units for 2023 implementation. This socioeconomic monitoring at Prince William Forest Park uses a two-step survey methodology to capture a representative sample of visitor information, characteristics, and behavior. This process includes (1) an on-site intercept survey conducted via tablet, and (2) a post-trip survey (completed either by mail-back or online) for more in-depth trip details. The types of data collected include visitor demographics, trip characteristics/planning, and experience evaluations. Results are organized by these two survey instruments and are aimed to assist park managers in understanding current utilization and perception of park resources, assessing operations and potential issues, and facilitating communication and decision-making processes within the park and between the park and its local partners and stakeholders. Results of this and studies at the 23 other park units sampled for 2023 contribute to a SEM National Technical Report that produces national-level findings on an annual basis.

Introduction

Social science research has become increasingly recognized as a crucial component of park planning, amplifying its significance for the National Park Service (NPS). With the ever-changing landscape of visitation and a desire to provide transformative visitor experiences, understanding the needs and expectations of the visiting public has become more important than ever. The agency seeks to provide the highest quality visitor experience while also protecting the important natural and cultural resources that make these sites special.

This resounding call for nationwide socioeconomic research to help the agency better serve its visitors has garnered substantial support from external reviews and various discussions held by the Department of the Interior. As a result of this ongoing need, a pilot visitor study was conducted in 2015/2016 across selected park units throughout the United States. Building upon the valuable insights gleaned from the pilot study, the Socioeconomic Monitoring Program (SEM) Visitor Survey has been carried out in 2022 and 2023 at 24 NPS units across the country per year. Prince William Forest Park was selected as one of these 24 units in 2023. The study aims to deepen understanding of visitor demographics and characteristics at Prince William Forest Park.

The 2023 SEM Visitor Survey gathers data at a comprehensive agency level, effectively addressing the informational needs of park managers throughout the vast National Park System. The data collected during the sampling period in fall 2023 is intended to provide park managers at Prince William Forest Park with data-supported insights into their visitors while enabling robust data analysis at the agency level and beyond for future applications.

This study gathers a wealth of knowledge about visitor use, aids in finding effective management solutions, and offers insights into the visitors who experience NPS sites. The findings empower NPS managers to better comprehend visitor behaviors, inform park operations, and identify areas for enhancing the visitor experience. Moreover, these results are intended to facilitate communication and foster informed decision-making processes, both within Prince William Forest Park and in collaboration with local partners and stakeholders.

The research was carried out by a large team including Otak, Inc., RRC Associates, Inc., the Institute for Tourism and Recreation Research at the University of Montana, and GAIA Environmental Consulting.

Methods

The SEM Visitor Survey methodology is designed to capture a representative sample of visitor information, characteristics, and behavior at each sampled park through:

1. An onsite intercept survey conducted via tablet, and
2. A post-trip follow-up survey (mail-back or online) for full trip details.

This comprehensive approach provides the necessary information to make on-the-ground decisions in parks using immediate feedback from the intercept survey, while also capturing key in-depth information on visitor spending and trip characteristics for long-term planning from the post-trip survey. Additionally, the intercept survey is designed to be brief so as not to fundamentally affect visitors' experiences. The methods also permit a larger sample to be collected on key questions of interest.

Study Area

The Prince William Forest Park local area map is shown in Figure 1. The local area around Prince William Forest Park consists of Montgomery County and Prince George's County in Maryland; Loudoun County, Fauquier County, Fairfax County, Prince William County, Stafford County, Spotsylvania County, the city of Fairfax, the city of Falls Church, the city of Alexandria, the city of Arlington, the city of Manassas Park, the city of Manassas, and the city of Fredericksburg in Virginia; and Washington, DC.

Within Prince William Forest Park, the study area was comprised of three locations. Visitor Use Statistics estimates and consultation with park staff guided the selection of these study locations and the distribution of surveyor effort across them throughout the intercept survey period. Since the majority of visitors to Prince William Forest Park enter through the main entrance station, most surveyor effort was concentrated at this location, allowing for a representative sample that reflects the broader park visitor population. However, as access to the park's Cabin Camps does not require using the main entrance, additional survey efforts were conducted at these sites to ensure comprehensive visitor representation. Table 1 lists the study locations and the number of onsite intercept surveys completed at each.

Table 1. Information about sampling locations for intercept surveying within Prince William Forest Park.

Intercept Site	Number of Completed Intercept Surveys	Percent of Completed Intercept Surveys
Entrance Station	594	97.5%
Cabin Camp 4	11	1.8%
Cabin Camp 5	4	0.7%

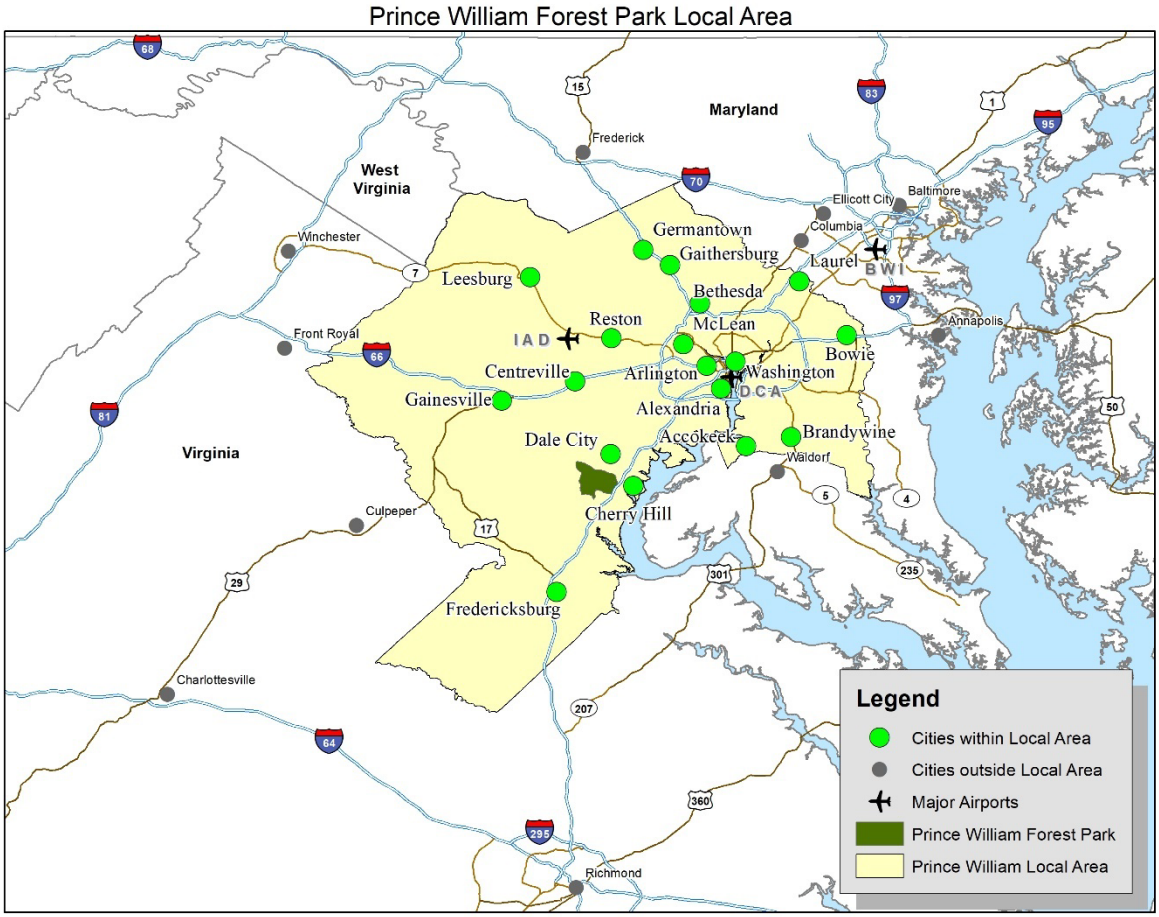

Figure 1. Prince William Forest Park local area map.

Sampling Period and Procedure

Intercept Survey

The on-site intercept survey is designed to rapidly collect visitor information as tablet-based responses. The intercept sampling was conducted during the period of September 8th through 19th, 2023. A sample of visitors were intercepted while visiting Prince William Forest Park across the designated locations listed in Table 1, above. Most respondents were intercepted in their vehicles after being pulled over as they entered the park.

Surveyors approached potential respondent groups at the site to introduce the purpose of the study and ask them to participate in a short 5–7-minute survey about their experience in Prince William Forest Park (NPS 2023a). Within the group, the adult with the next upcoming birthday was asked to participate. If the visitor was eligible (at least 18 years of age, not a Prince William Forest Park employee, and had not previously taken the survey) and agreed to participate in the study, the surveyor verbally administered the survey questions and recorded the responses on a handheld tablet device. If the visitor did not agree, surveyors asked if they would be willing to answer three non-response bias questions (see the Nonresponse Bias Analysis section, below). Upon complete or

partial refusal, the surveyor would thank the visitor for their time, log the nonresponse, and approach the next visitor group.

At the end of the intercept survey, respondents were invited to participate in a post-trip survey by mail-back or online response. Those who agreed to participate were given an envelope containing a printed copy of the post-trip survey with a postage paid envelope for mailing it back, as well as a hyperlink and instructions for accessing it online. As part of the intercept protocol, surveyors logged a unique identifier (four-digit code) from the envelope into the tablet for future connection to the post-trip survey.

Therefore, four potential outcomes were possible when intercepting visitors (see Table 2):

1. Complete refusal, refused to answer any questions, including non-response bias questions;
2. Partial refusal, answered non-response bias questions but nothing further;
3. Completed intercept, but refused to take post-trip survey; or
4. Completed intercept and took post-trip survey.

During the sampling period, three surveyors worked together to conduct the vehicle intercept surveys at the main entrance station from 9:00am to 4:00 pm each day. At Cabin Camps 4 and 5, which are open to private groups by reservation only, short survey periods were scheduled during a date and time of the reserving group's choosing. Each surveyor worked 10 seven-hour days (approximately six hours of data collection and a one-hour lunch break) and had two days off during the 12-day sampling window.

Table 2. Response outcomes – Prince William Forest Park intercept survey.

Outcome	Total
Eligible visitors contacted	654
Complete refusals	31
Partial refusals (non-response bias questions completed)	14
Intercept surveys completed	609
Post-trip surveys distributed	575
Intercept response rate	93.1%
Post-trip acceptance rate	94.4%

Post-trip Survey

The post-trip survey was distributed to participating respondents who completed the intercept survey and then agreed to take a follow-up survey after completing their trip to Prince William Forest Park. This method extended data collection and asked participants to complete the survey after their visit,

either through a postage-paid envelope provided to them, or online via a provided survey link. The post-trip survey covers visitor trip spending details, travel patterns, and perceptions of their recent visit (NPS 2023b). Both the intercept survey and the post-trip survey were tagged with a unique identifier (four-digit code) for each respondent so their onsite intercept responses could be paired with their post-trip responses. Numbers were assigned at random to the individual. The use of this code allows the data to be joined, while keeping all surveys confidential and removing respondents' identifiable information. Joining the two datasets provides a more complete picture of connecting in-park experiences and post-visit perceptions.

At the end of the intercept survey, respondents were asked for their physical mailing address or email address. This allowed for a reminder postcard or email to be sent to all contacts who provided contact information about a week following the end of each onsite data collection period. This postcard or email thanked respondents for their original participation and encouraged them to complete the post-trip survey if they had not already done so.

Three weeks after postcard mailing, a second contact (with the same unique IDs) was delivered to all outstanding addresses/emails, noting that the individual's completed questionnaire had yet to be received. The mailed survey packets included replacement surveys and postage-paid, self-addressed return envelopes. A final contact was mailed/emailed to all remaining non-respondents four weeks after sending the second contact (i.e., first full replacement survey). Table 3 shows response rate for the post-trip survey.

Table 3. Response outcomes – Prince William Forest Park post-trip survey.

Outcome	Total
Post-trip surveys distributed	575
Valid post-trip surveys completed	209
Response rate	36.3%

Nonresponse Bias Analysis

To account for potential biases between respondents and non-respondents, three questions were asked of eligible visitors contacted who did not wish to participate in the survey. The responses to these three questions can then be compared to both the larger group of respondents who completed the intercept survey, and the smaller group who completed both the intercept and post-trip surveys.

The Office of Management and Budget recommends testing for non-response bias when a response rate is less than 80%. With an intercept survey response rate of 93.1%, concern over intercept nonresponse is muted. However, because the post-trip survey response rate (36.3%) did not meet the minimum threshold, bias testing was conducted to evaluate differences between those respondents who completed the full survey (both intercept and post-trip), and those who only completed the intercept portion.

A chi-square test for homogeneity was performed for two of the questions to evaluate differences between the groups (testing was not possible for the third question due to low cell counts). A p-value of .05 is used as the indicated threshold of significance; p-values of .05 or lower indicate significant difference between groups.

The distribution of responses among full survey respondents and intercept-only respondents did not differ significantly for either of the two questions with sufficient cell counts for testing. Based on the variables measured, the post-trip survey does not have a bias due to non-response. Results of the bias testing are shown in Tables 4 through 6.

Table 4. Post-trip survey non-response bias question: “Are you a permanent or seasonal/second home resident of the local area around Prince William Forest Park?”.

Response	Frequency: Full survey respondents	Percent: Full survey respondents	Frequency: Intercept-only respondents	Percent: Intercept-only respondents
Yes	183	87.6%	358	89.5%
No	26	12.4%	42	10.5%

*p-value: 0.47

Table 5. Post-trip survey non-response bias question: “Do you currently live in the United States?”.

Response	Frequency: Full survey respondents	Percent: Full survey respondents	Frequency: Intercept-only respondents	Percent: Intercept-only respondents
Yes	209	100.0%	399	99.8%
No	0	0.0%	1	0.3%

*Cannot test due to low cell counts

Table 6. Post-trip survey non-response bias question: “On this trip away from home, have you [and your personal group] stayed, or will you stay overnight away from your permanent residence either in Prince William Forest Park and/or within the local area?”.

Response	Frequency: Full survey respondents	Percent: Full survey respondents	Frequency: Intercept-only respondents	Percent: Intercept-only respondents
Yes	25	12.0%	46	11.5%
No	184	88.0%	354	88.5%

*p-value: 0.87

Results

Results are presented separately for both the intercept and post-trip survey throughout the following section. To preserve the data for additional analyses, outliers for open-ended numeric questions (e.g., nights spent, days in local area, etc.) have not been removed. Given these outliers, medians are shown instead of means throughout the report, in order to better represent the central tendency.

Intercept Survey Results

The following section provides results of the 609 visitor intercept surveys conducted in Prince William Forest Park from September 8th through 19th, 2023. During this time, two of the park's camping facilities (Turkey Run Ridge Group Campground and Cabin Camp 3) were closed. Users of these facilities—such as scouting groups at Turkey Run and family units or couples at Cabin Camp 3—may exhibit different characteristics than other Prince William Forest Park visitors (e.g., party size, length of stay). The survey results presented in this report reflect the sample of visitors intercepted during the fieldwork period and may not represent all users of the park when it is fully operational.

All results are presented in this report, regardless of sample size, which varies by question. Caution is recommended in the interpretation of figures with sample size lower than n=30. Categories on some questions may not sum to 100% due to rounding differences and/or the opportunity to select more than one response option.

Questions 1–2: Visitor Residency

First, respondents were asked to indicate if they were permanent or seasonal residents of the local area around Prince William Forest Park. Permanent and seasonal residents were then asked for their ZIP code within the local area. Respondents who do not reside permanently or seasonally in the local area were asked if they currently live in the U.S., and if so, for their ZIP code. Figure 2 depicts responses to this group of questions.

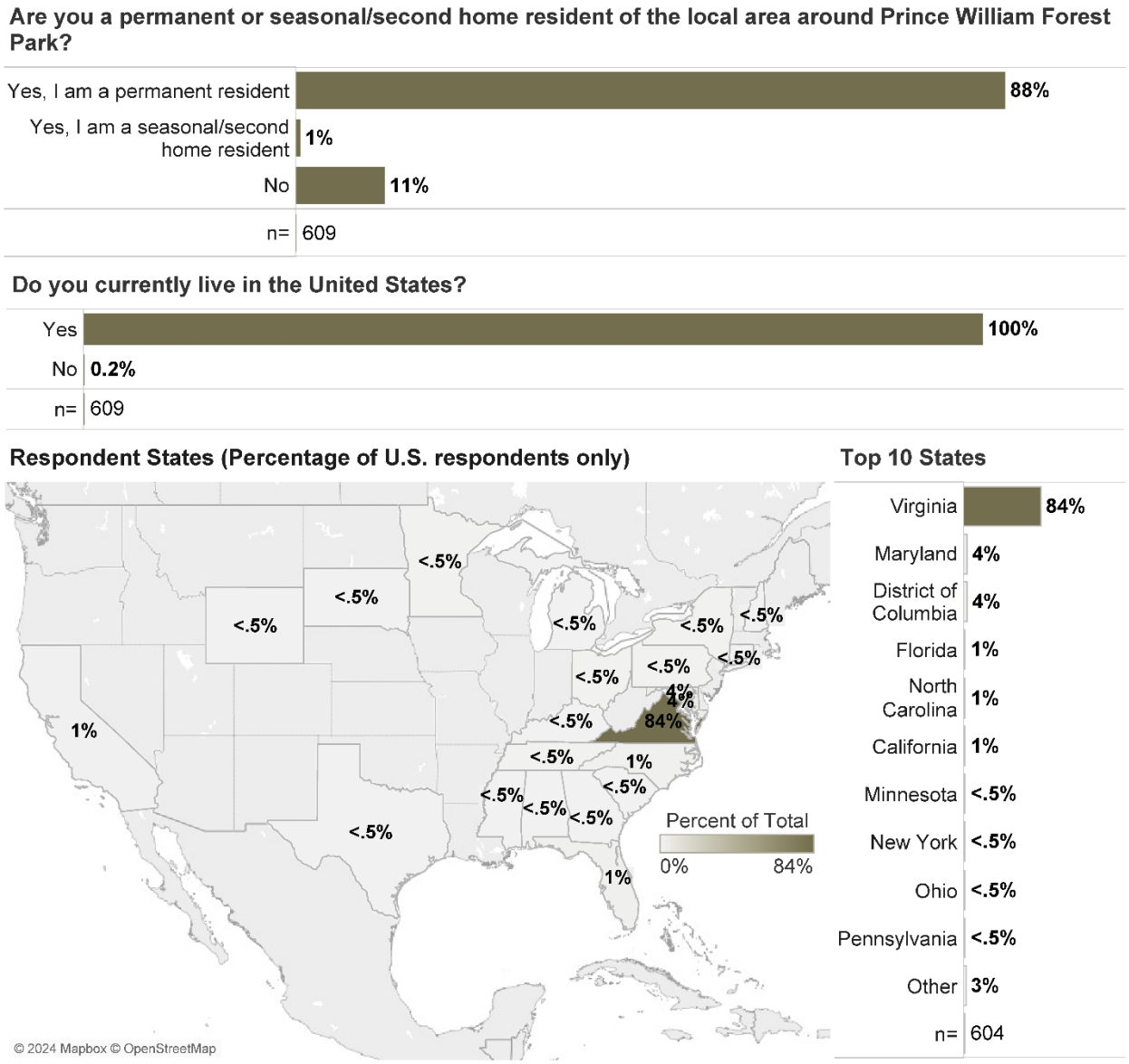

Figure 2. Respondent local residency status and geographic origin of domestic visitors surveyed at Prince William Forest Park.

- The majority of respondents (a combined 89%) stated that they were either permanent or seasonal residents of the local area around Prince William Forest Park.
- There was a large geographic concentration of respondents from Virginia (where Prince William Forest Park is located).
- Among the 100% of respondents currently residing in the U.S., 84% reside in Virginia, followed by Maryland (4%), and the District of Columbia (4%).

Question 3: Trip Purpose

Respondents who are not permanent or seasonal residents of the local area were asked about the overall purpose for their trip away from home (Figure 3).

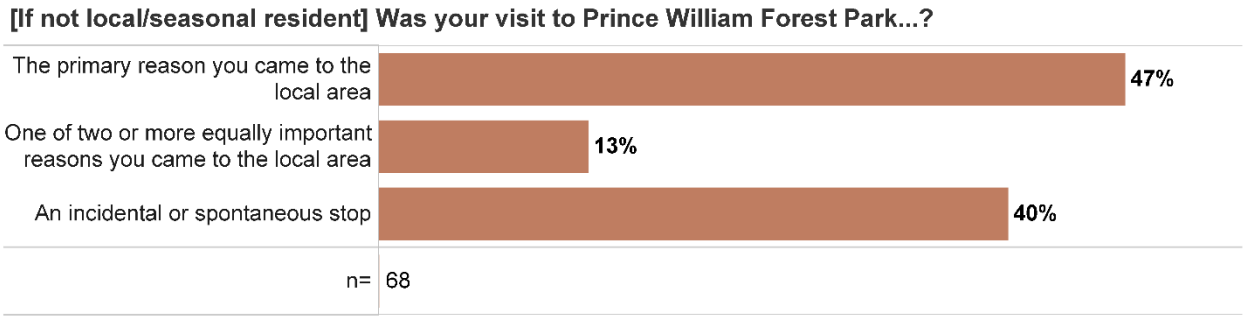

Figure 3. Role of Prince William Forest Park in overall trip purpose.

- For nearly half (47%) of non-local respondents, visiting Prince William Forest Park was the primary reason for their trip to the area.
- A small percentage (13%) of respondents who resided outside the local area (i.e., Prince William Forest Park local area, as depicted in Figure 1) stated that their visit to Prince William Forest Park was one of two or more equally important reasons that brought them to the area.
- The remaining 40% of respondents indicated their visit to Prince William Forest Park was an incidental or spontaneous stop while they were already in the area.

Question 4: Length of Stay

Respondents who are not permanent or seasonal residents of the local area around Prince William Forest Park were also asked how many days they planned to spend within that local area, including days spent in the park. All respondents, regardless of residency, were asked whether they would be staying overnight away from their permanent residence within the local area. Responses to both questions are depicted in Figure 4.

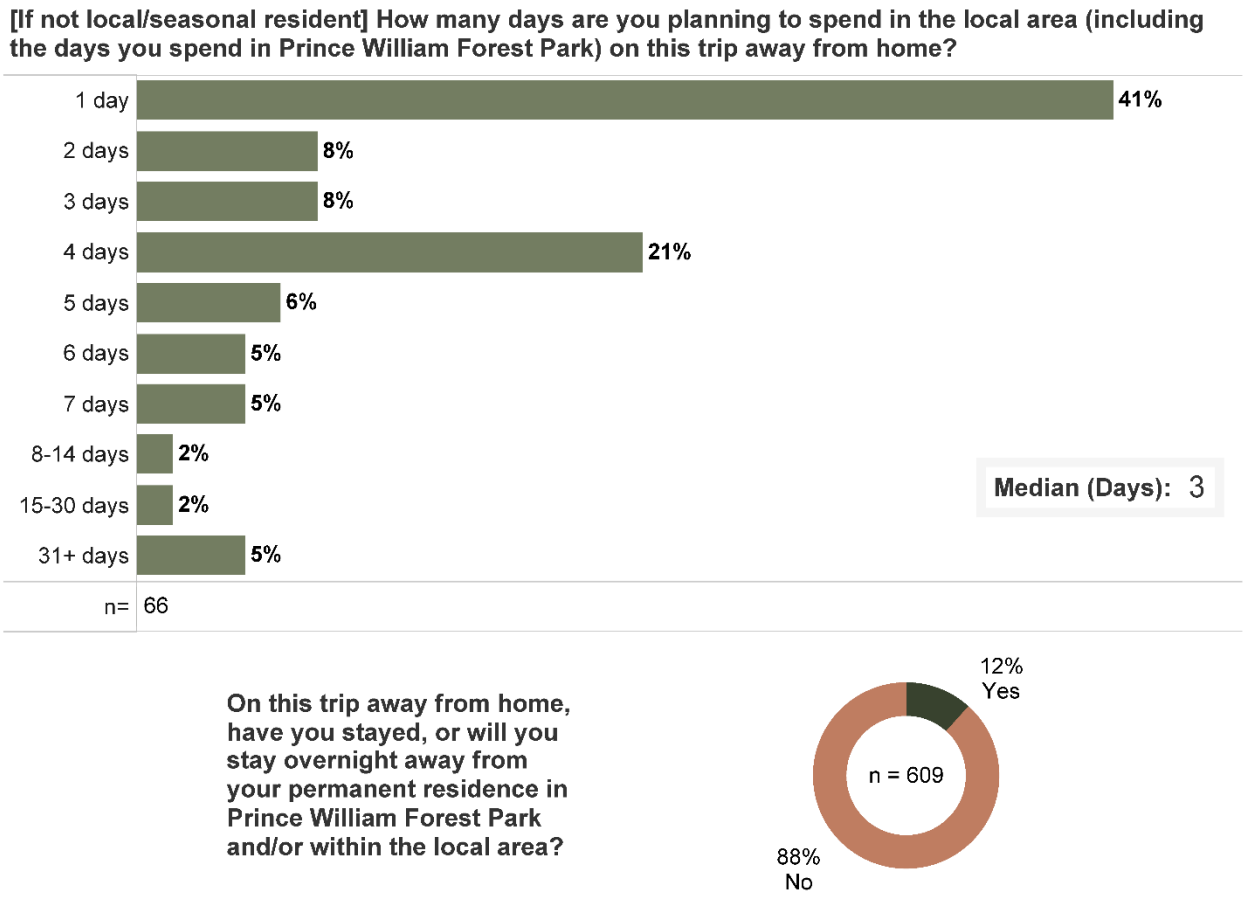

Figure 4. Time spent in the local area around Prince William Forest Park.

- Less than half of non-local respondents (41%) spent one day in the local area, while 8% spent two days, and another 8% spent three days. The median length of stay was three days.

- Additionally, a small proportion of all respondents (12%; including permanent/seasonal residents) had stayed or planned to stay overnight away from their permanent residence in the park and/or in the local area.

Questions 5-6: Overnight Visitors

If respondents indicated that they stayed overnight in the local area, they were asked about the type(s) of accommodation they used or planned to use while there (Figure 5).

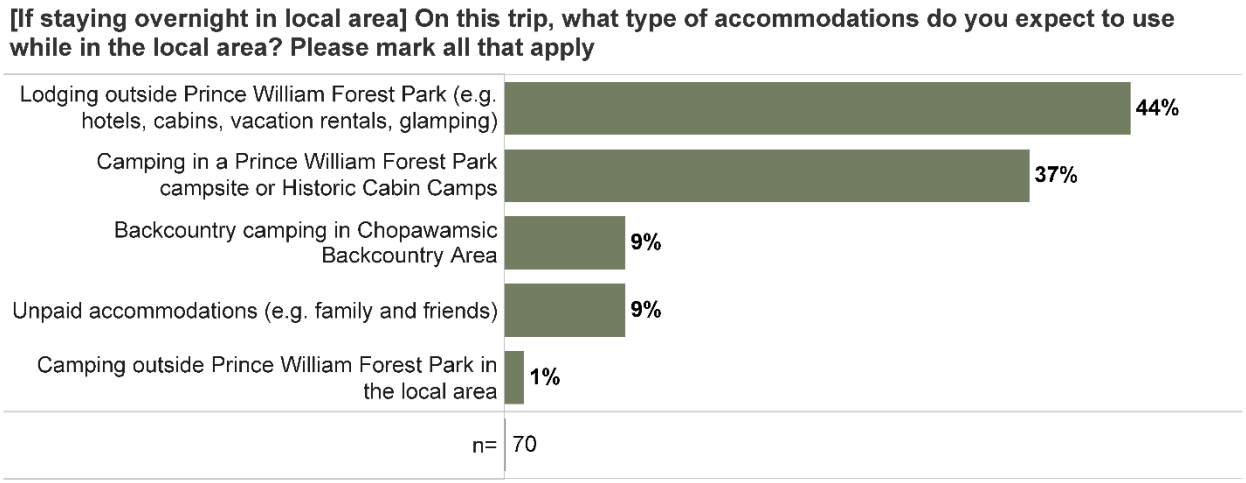

Figure 5. Accommodation types used by overnight visitors within Prince William Forest Park and in the local area surrounding it.

- Nearly half of overnight respondents (44%) stayed in lodging outside of Prince William Forest Park.
- This was followed in prevalence by overnight respondents who camped in Prince William Forest Park campsite or Historic Cabin Camps (37%), and those who backcountry camped in the Chopawamsic Backcountry Area (9%). Another 9% of respondents stayed in unpaid accommodations.

Respondents who camped in Prince William Forest Park were asked in which campground(s) they had stayed or planned to stay (Figure 6).

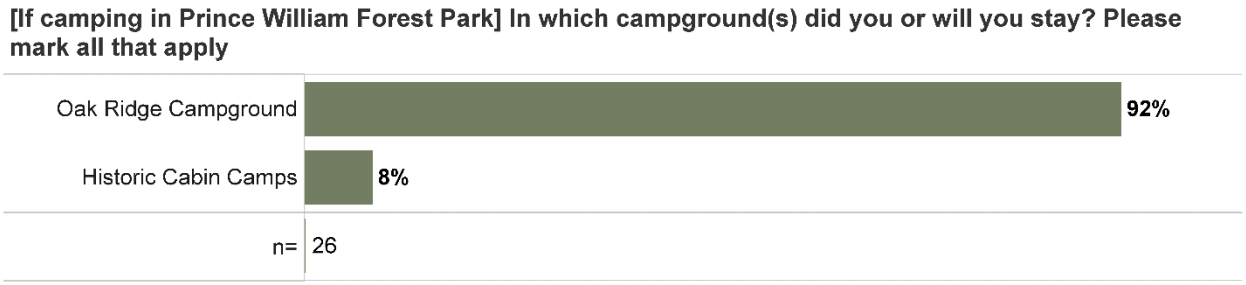

Figure 6. Campground use within Prince William Forest Park.

- Nearly all respondents (92%) who indicated that they camped in Prince William Forest Park stayed at Oak Ridge Campground, while 8% camped at Historic Cabin Camps.

Respondents were then asked to indicate the number of nights they spent or would spend in each accommodation type (Figure 7).

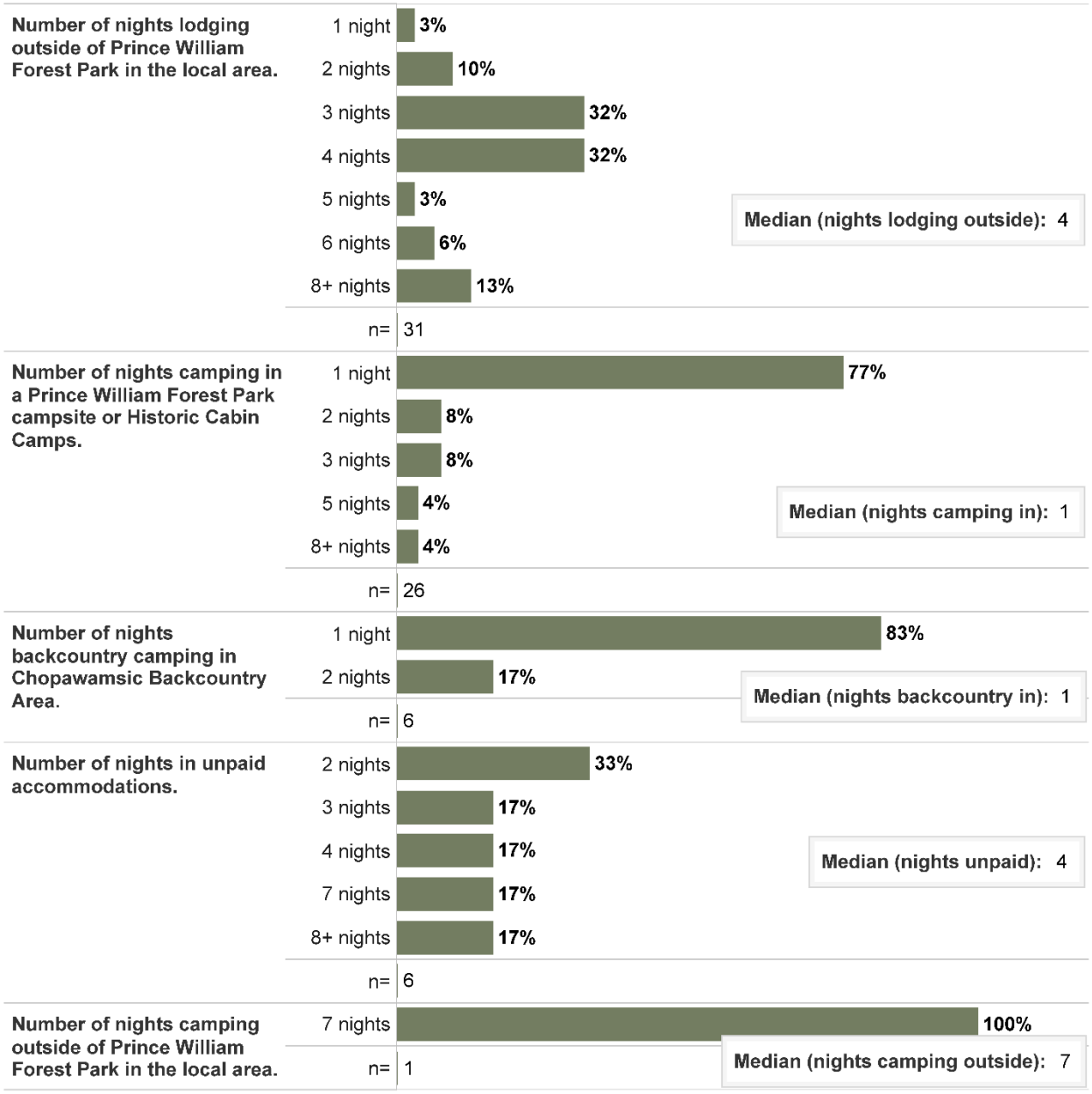

Figure 7. Number of nights spent within Prince William Forest Park and in the local area surrounding it, by accommodation type. Tabular data shown in this figure are presented in Appendix A, Table 8.

- Among the 44% of overnight respondents who lodged outside of Prince William Forest Park in the local area (per Figure 5), the median length of stay was four nights. A small proportion of respondents (13%) stayed two nights or fewer in the local area on this trip; while almost half (45%) spent three nights or fewer.

- Among the 37% of overnight respondents who camped in Prince William Forest Park (per Figure 5), the median length of stay was one night. The majority (85%) of respondents who

camped in Prince William Forest Park spent two nights or fewer in the park this trip; 93% spent three nights or fewer.

- Among the 9% of overnight respondents who camped in Chopawamsic Backcountry Area, the median length of stay was one night. All respondents spent two nights or fewer backcountry camping.

- Among the 9% of overnight respondents who stayed in unpaid accommodations in the local area (per Figure 5), the median length of stay was four nights, though the plurality (33%) stayed just two nights.

- Among the 1% of overnight respondents who camped outside of Prince William Forest Park (per Figure 5), the median length of stay was seven nights.

Questions 9-11: Party Characteristics

Respondents were asked to indicate how many adults (18 or older) and children (under 18) were in their personal group during their visit to Prince William Forest Park (Figure 8). A personal group was defined as the visitor and companions with whom they visited the park, such as a spouse, family, and/or friends, but respondents were informed not to account for the larger group with whom they may have traveled, such as a school, church, scout, or tour group.

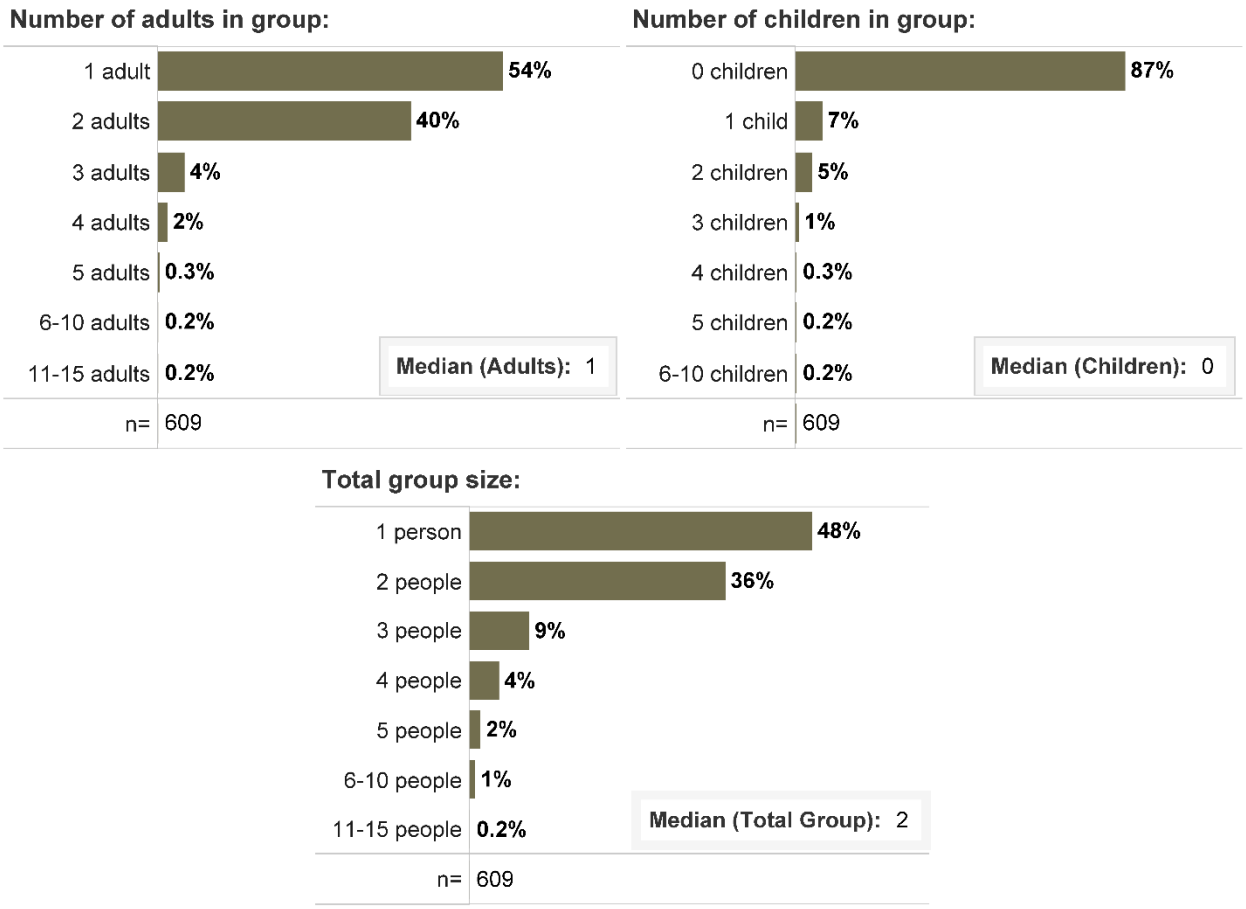

Figure 8. Number of adults and children in respondent's personal group, and total group size, while visiting Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 9.

- The median number of adults per group was one. Most groups (54%) included just one adult.
- Most groups (87%) did not include any children.

Respondents were then asked to provide the age of each member of their group (Figure 9). These data show the true age distribution of respondent groups sampled at Prince William Forest Park.

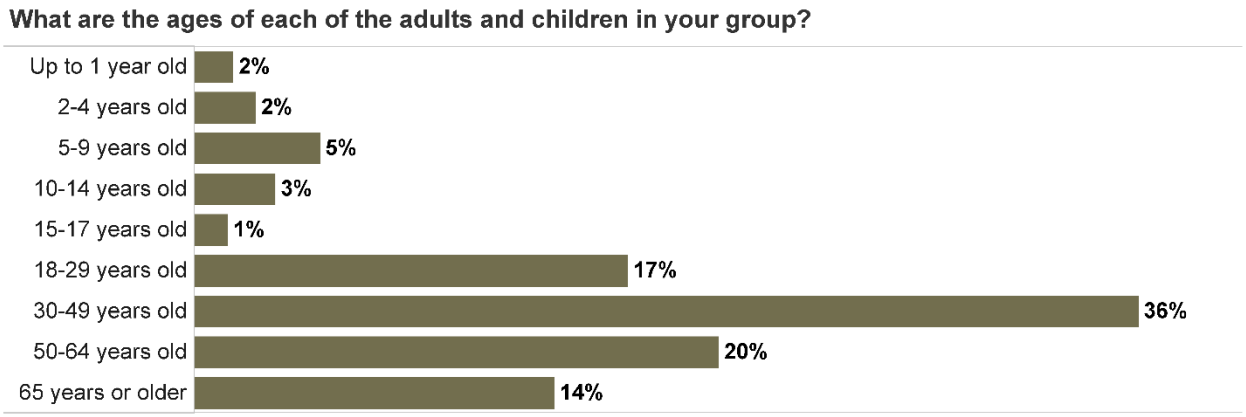

Figure 9. Age distribution of all members of respondent's personal group while visiting Prince William Forest Park.

- The most common age of the adults and children in a personal group were 30-49 years old (36%), followed by 50-64 years old (20%), and 18-29 years old (17%).

- Children (i.e., visitors under 18 years old) accounted for a combined total of just 13% of group members.

Questions 13-18: Park Use Characteristics

Respondents were asked to indicate which type of entrance fees applied to them personally on their most recent trip to Prince William Forest Park (Figure 10).

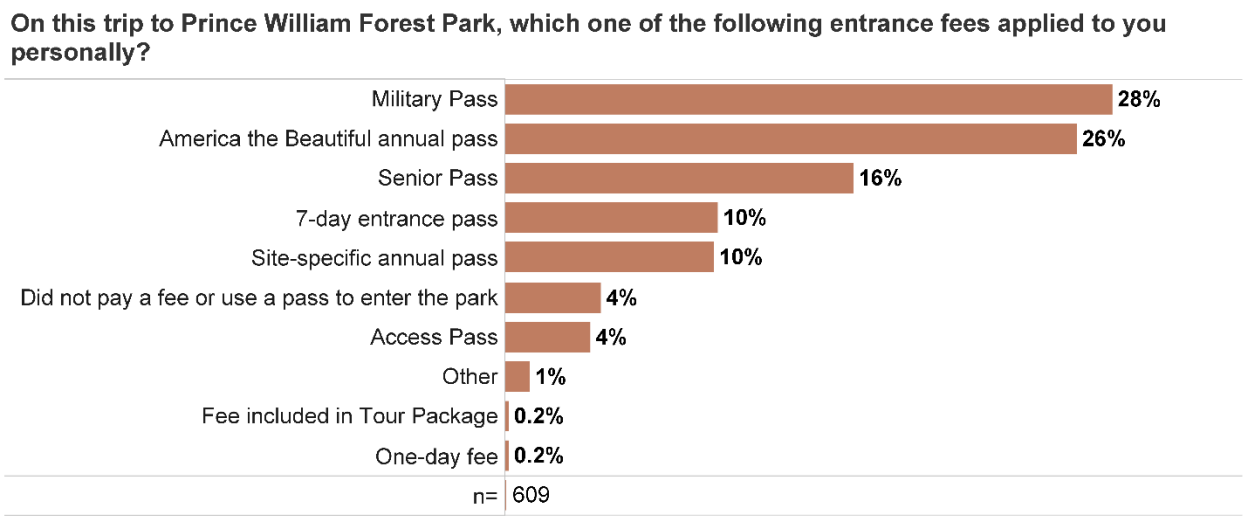

Figure 10. Entrance fees paid to enter Prince William Forest Park on the most recent trip.

- Roughly a quarter of respondents (26%) reported using an America the Beautiful annual pass, and a combined 48% entered using a Senior Pass (16%), Access Pass (4%), or Military Pass (28%).

- In contrast, 20% of respondents entered using a Prince William Forest Park-specific pass or fee (i.e., annual pass, 7-day, or single-day entrance fee).

Then, respondents were asked to indicate if they planned to visit Prince William Forest Park for more than one day, and then a series of follow-up questions about the length of time they might spend in the park (Figure 11 and Table 7).

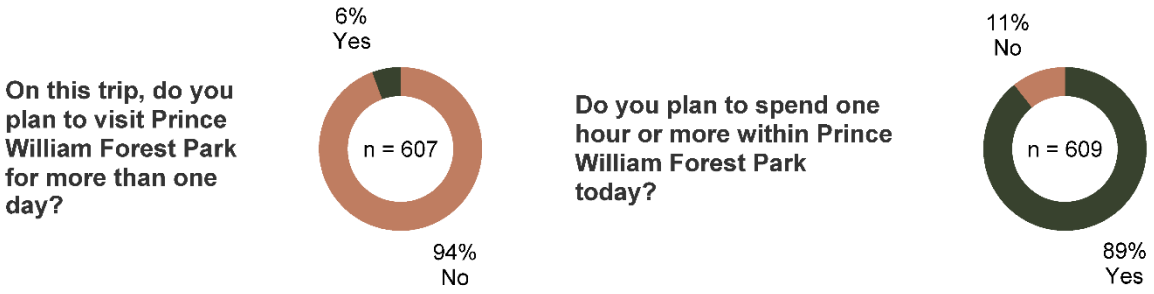

Figure 11. Length of time spent within Prince William Forest Park on this trip.

Table 7. Length of time spent within Prince William Forest Park on this trip.

Question	Sample Size (n)	Median
[If not planning to spend one hour or more] How many minutes do you plan to spend within Prince William Forest Park today?	65	30
[If planning to spend one hour or more] How many hours do you plan to spend within Prince William Forest Park today?	532	2
[If planning to visit more than one day] How many days do you plan to spend within Prince William Forest Park on this trip?	34	2
[If planning to visit more than one day] On how many different days do you expect to enter the park?	34	2

- Most respondents (89%) planned to spend one hour or more within Prince William Forest Park on the day they were surveyed. Among these visitors, median length of time spent in the park "today" was two hours.

- Among the 11% of respondents who planned to spend less than an hour within the park on the day they were surveyed, the median length of anticipated visit was 30 minutes.

- Additionally, nearly all respondents (94%) were planning to spend just a single day in Prince William Forest Park on their trip. Among the 6% of respondents who planned to visit for more than one day, the median length of visit was two days.

- Those respondents who spent more than one day in the park were also asked on how many different days they expected to enter the park; the median answer was two days.

Next, respondents were asked to indicate the most recent entrance they used to enter Prince William Forest Park (Figure 12).

Figure 12. Most recent entrance used to enter Prince William Forest Park.

- The Main Entrance was the most commonly used entrance to Prince William Forest Park among the visitors surveyed (98%), followed distantly by Pleasant Road (2%).
- The results for most recent entrance used were impacted by the volume of visitors intercepted at various sites. As shown in Table 1, 97.5% of intercept surveys were conducted just after the main entrance station.

Respondents were also presented with a list of locations within Prince William Forest Park and asked to indicate if they had been to, or planned to visit them, that day (Figure 13).

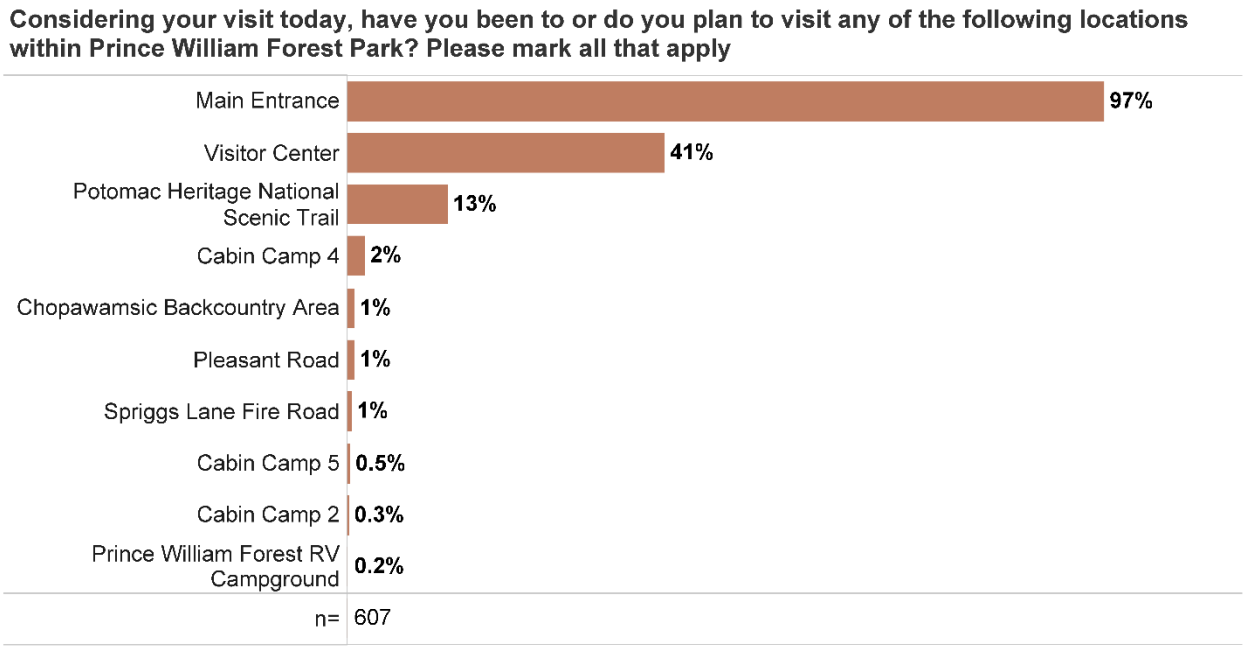

Figure 13. Park locations visited during the most recent trip to Prince William Forest Park.

- The most commonly visited location in Prince William Forest Park was Main Entrance (97% of respondents had either been there or planned to visit it on their trip), followed by Visitor Center (41%), and Potomac Heritage National Scenic Trail (13%).

- Prince William Forest RV Campground was the least-visited location from the list provided, with only 0.2% of respondents reporting having visited or planning to visit.

Question 19: Transportation

Respondents were asked about the form of transportation they used to enter Prince William Forest Park on the day they were surveyed (Figure 14).

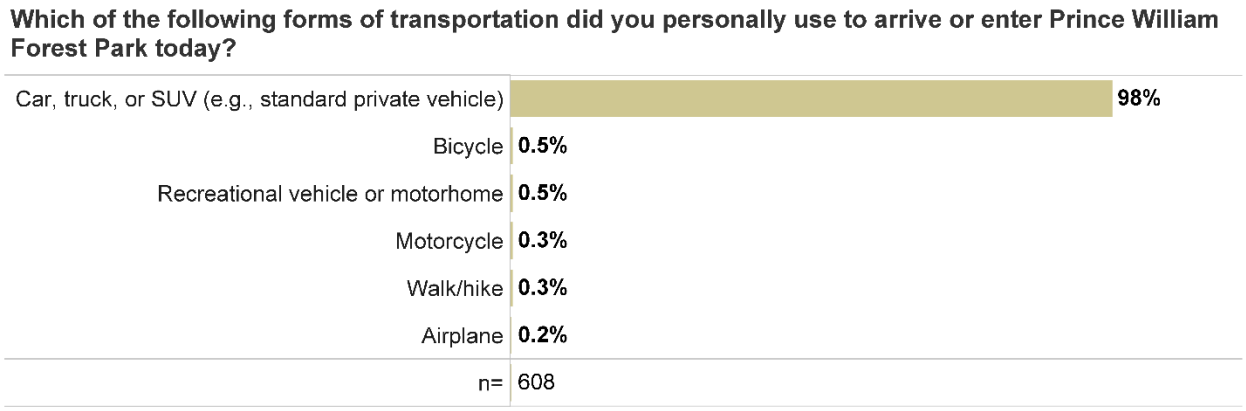

Figure 14. Form of transportation used to enter Prince William Forest Park on the day of the survey.

- The majority of respondents (98%) reported that they used their car, truck, or SUV to enter Prince William Forest Park on the day of the survey.

- This was followed distantly by use of a bicycle (0.5%), and a recreational vehicle or motorhome (0.5%).

If respondents entered the park using a multi-passenger private vehicle (i.e., car, truck or SUV, recreational vehicle or motorhome, or motorcycle), they were asked to indicate how many people were travelling in or on that vehicle (Figure 15).

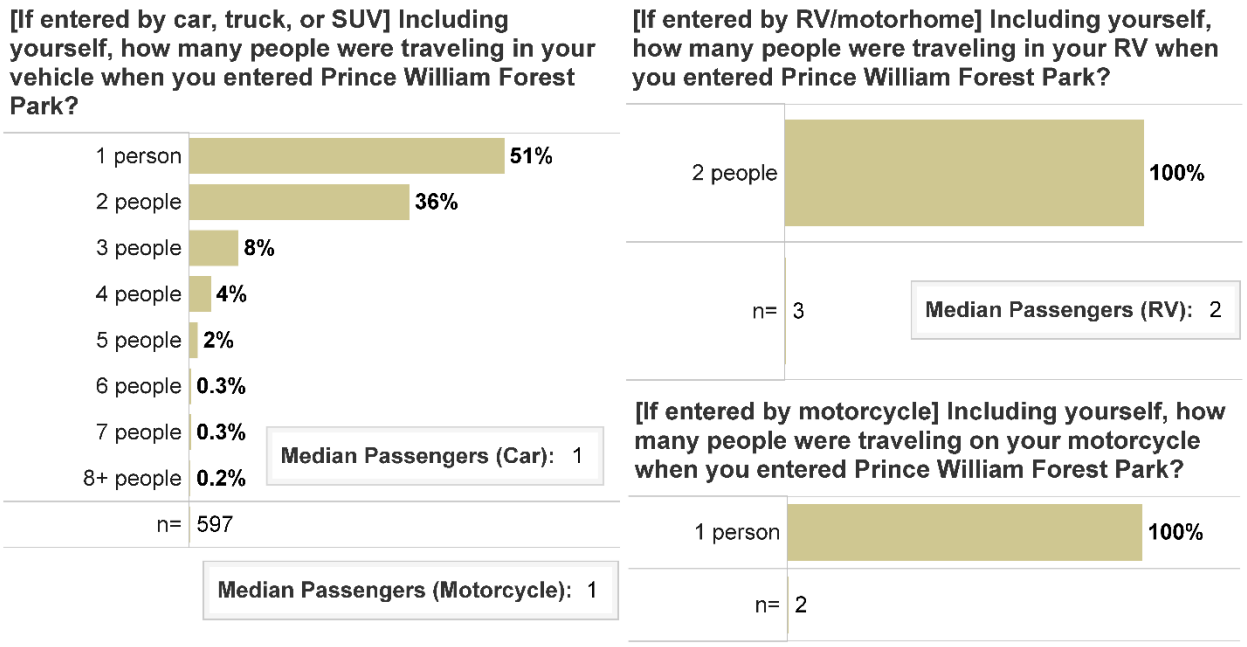

Figure 15. Number of people in or on respondent's vehicle when entering Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 10.

- About half of the respondents (51%) traveling by car reported one person. The next common group size was two people (36%), followed by three people (8%).
- All respondents entering Prince William Forest Park by RV/motorhome reported travelling in a group of two people.
- All motorcyclists were traveling on their own.

Question 21: Previous Visits to Prince William Forest Park

Respondents were asked if they were first time visitors to Prince William Forest Park. Repeat visitors were then asked how many visits they have made to Prince William Forest Park in the last 12 months and the last five years (Figure 16).

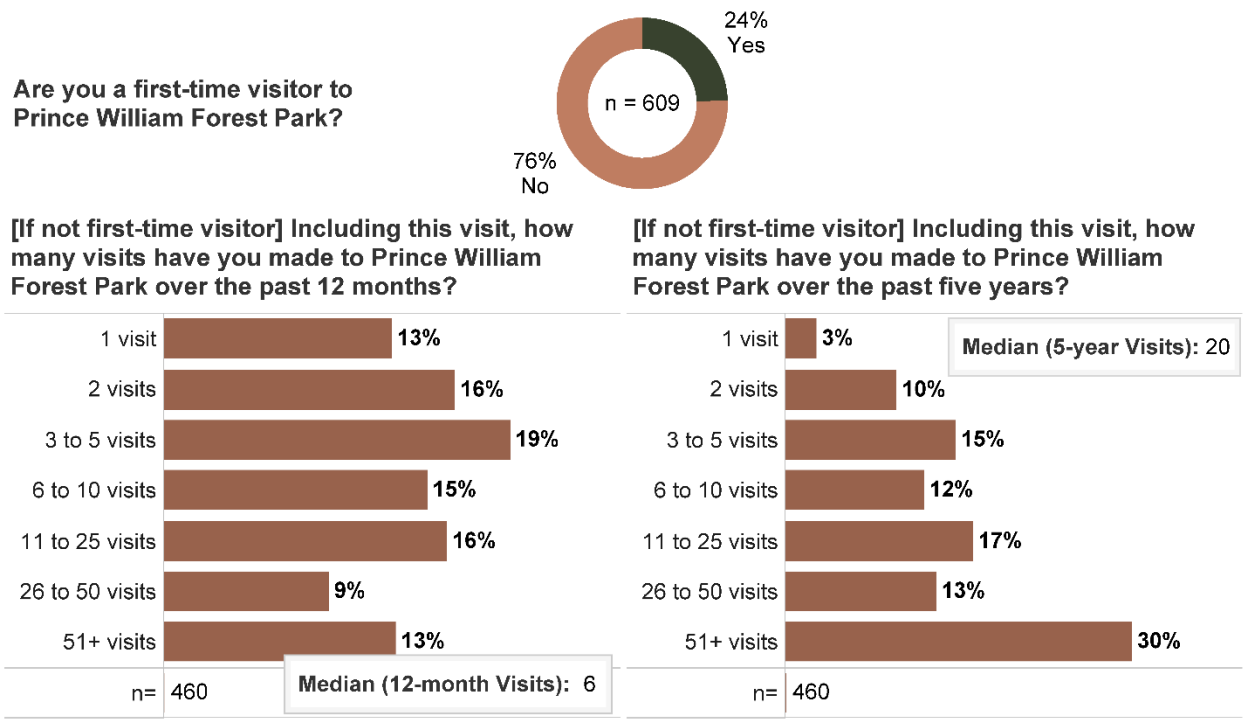

Figure 16. Previous visits to Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 11.

- About a quarter of respondents (24%) were on their first ever trip to Prince William Forest Park.
- Among the 76% of respondents who were repeat visitors, a small percentage (13%) were on their first visit in the past 12 months. Over half of respondents (53%) who were repeat visitors to Prince William Forest Park had visited more than five times in the past year.
- However, the majority of repeat visitors (97%) had visited at least one prior time in the past five years.
- The median number of visits made in the past five years was 20, including the current trip; 60% of repeat visitors had made more than 10 visits in the past five years.

Question 22: Previous Visits to Other NPS Units

Finally, respondents were asked how many visits they made to other NPS sites over the past 12 months (Figure 17).

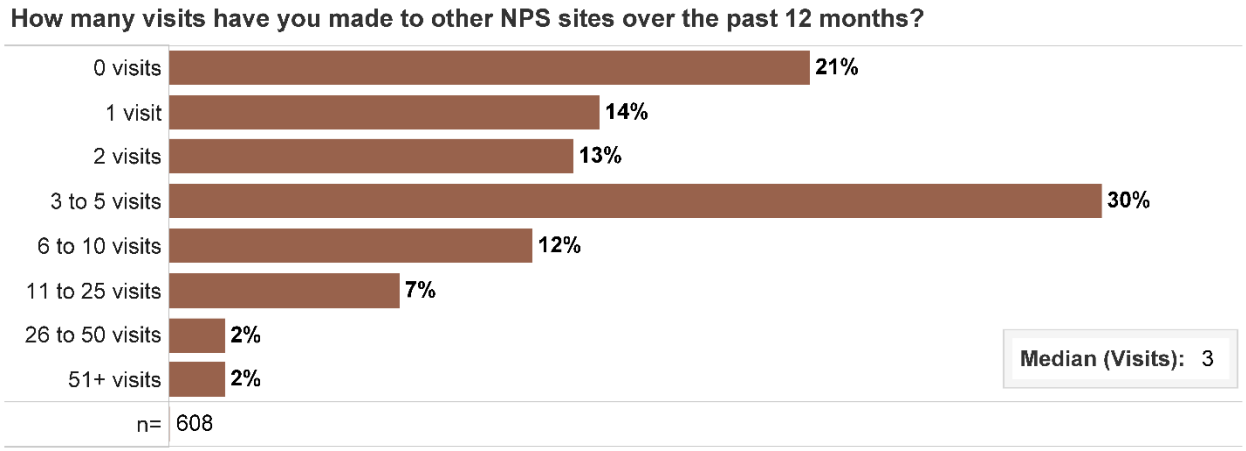

Figure 17. Visits made to other NPS sites within the past year. Tabular data shown in this figure are presented in Appendix A, Table 12.

- Most respondents (80%) had made at least one visit to other NPS site(s) in the past year.
- The median number of visits made to other NPS site(s) in the past 12 months was three, though a combined 53% had made three or more visits in the past year.

Post-trip Survey Results

The following section provides results of the 209 post-trip visitor surveys received by mail-back or online following fieldwork conducted in Prince William Forest Park in fall 2023. Again, caution is recommended in the interpretation of figures with sample size lower than n=30, and categories on some questions may not sum to 100% due to rounding differences and/or the opportunity to select more than one response option.

Questions 1–2: Information about Prince William Forest Park

First, respondents were asked what sources they used to obtain information about Prince William Forest Park prior to their trip, and whether they had the information they needed on their trip (Figure 18).

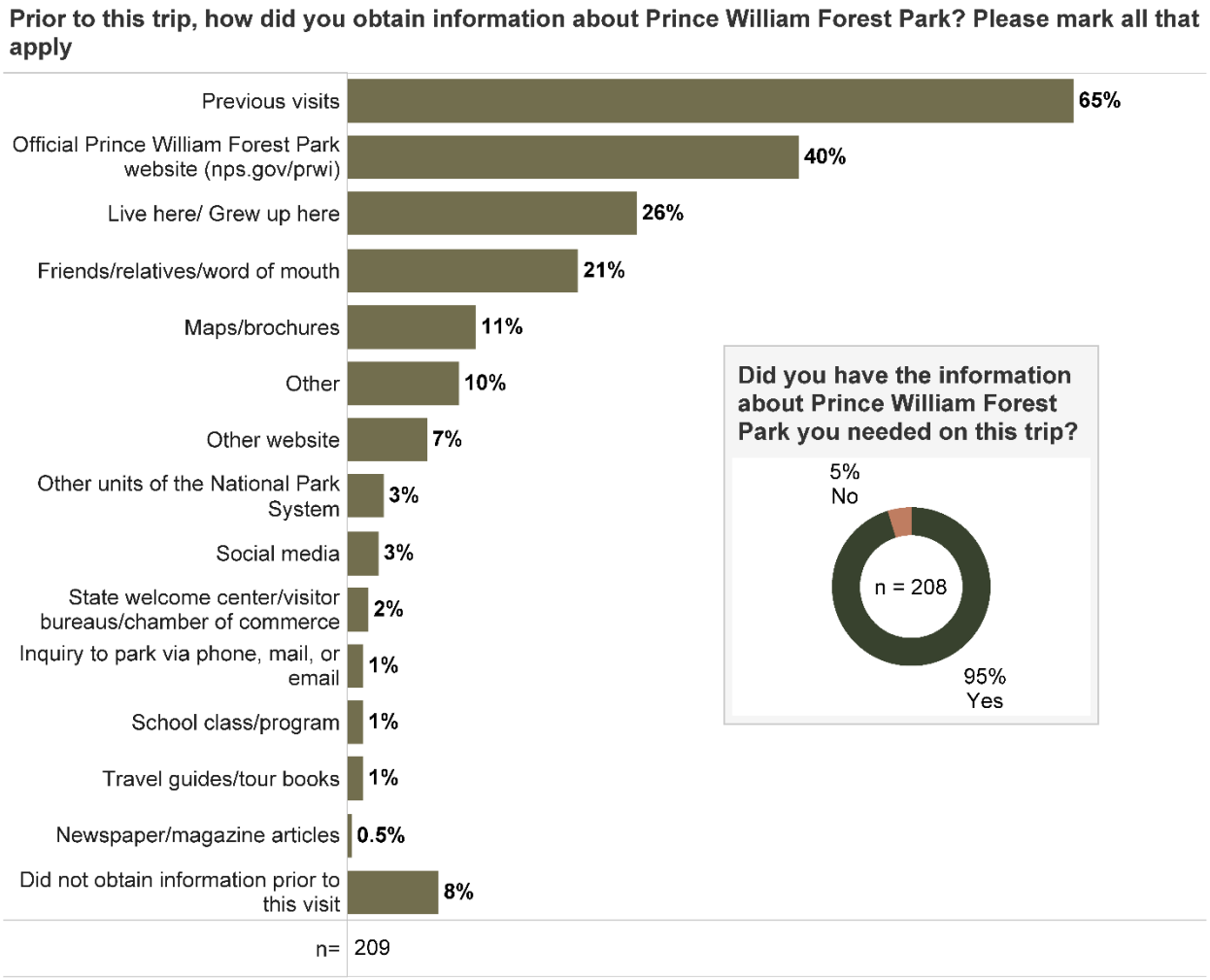

Figure 18. Sources used to obtain information about Prince William Forest Park prior to the trip.

- The most used resource was previous visits, with 65% of respondents reportedly using it. The second most common source was the official Prince William Forest Park website (40%), followed by live here/grew up here (26%), friends/relatives/word of mouth (21%), and maps/brochures (11%).

- In a follow-up question, 95% of respondents said that they had the information about Prince William Forest Park that they needed on their trip, while 5% indicated that there was information that they needed but did not have.

- In an open-ended follow-up question, those who did not have the information they needed on this trip were asked to elaborate.

Question 3: Transportation

While in the intercept survey, respondents indicated a mode of transportation they used to enter the park on the day of the intercept, the post-trip survey asked respondents to select all forms of

transportation they personally used to travel from their home to Prince William Forest Park on their trip (Figure 19).

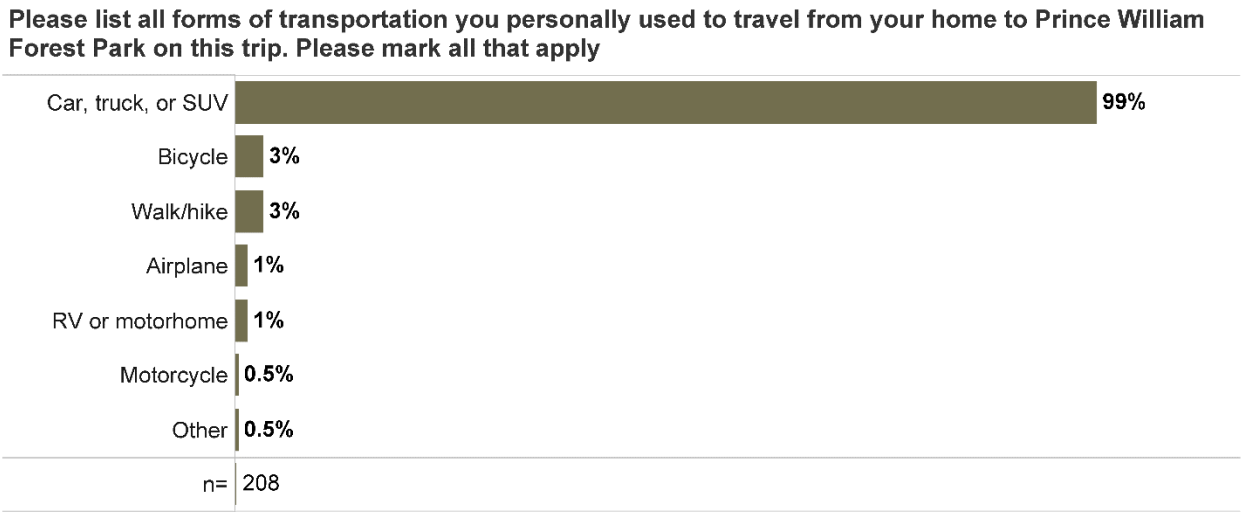

Figure 19. Forms of transportation used to travel from home to Prince William Forest Park on the recent trip.

- Nearly all respondents (99%) used a personal vehicle, such as a car, truck, or SUV, at some point during their trip from home to Prince William Forest Park.
- The next most common modes of travel were a bicycle and walk/hike (3% each).

Question 4: Travel Party Composition

Respondents were asked what type of group they were with during their visit to Prince William Forest Park on the day of the survey (Figure 20).

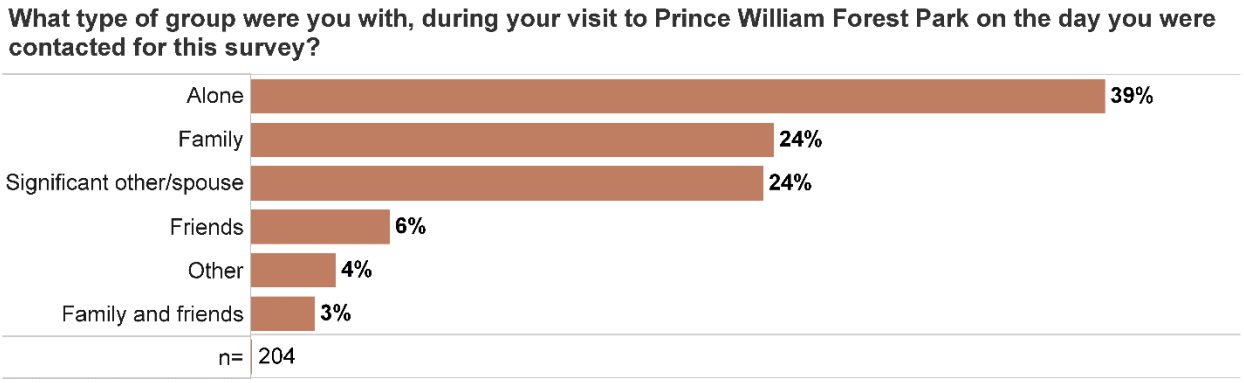

Figure 20. Travel party composition during Prince William Forest Park visit.

- Over a third of respondents (39%) visited Prince William Forest Park alone on the day of the survey.

- About a quarter of respondents (24%) explored Prince William Forest Park with their family, and another 24% visited the park with their significant other or spouse.

Questions 11-13: Trip Characteristics

Respondents were asked if they visited other National Park Service sites on their trip away from home (Figure 21).

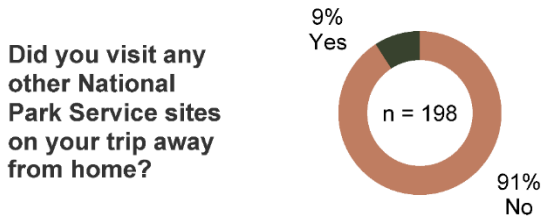

Figure 21. NPS sites visited on trip away from home.

- Only 9% of all respondents had visited other NPS sites on their trip, while 91% identified Prince William Forest Park as the only NPS site they visited while away from home.

- In an open-ended follow-up question, those who had visited other NPS sites on their trip were asked to list which one(s).

Survey respondents were then asked to identify all activities that they participated in while visiting Prince William Forest Park, and which of those was their primary activity (Figure 22).

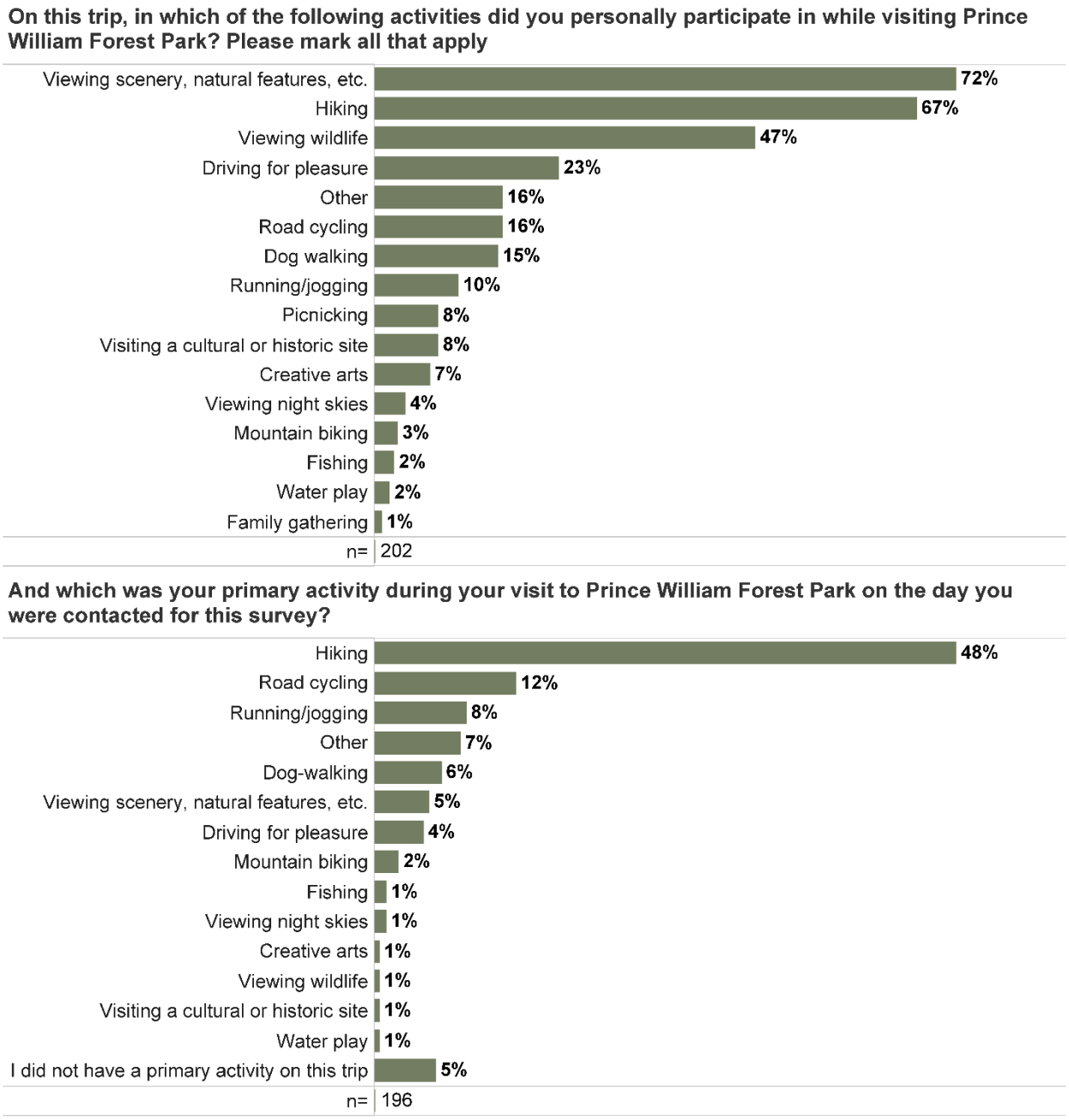

Figure 22. Participation in activities at Prince William Forest Park.

- Most respondents reported viewing scenery, natural features, etc. (72%) and hiking (67%).
- Viewing night skies, mountain biking, fishing, water play, and family gathering were all uncommon activities (reported by 5% or fewer of respondents).
- Almost half of respondents (48%) reported hiking as their primary activity, followed by road cycling (12%).

- Notably, while almost half of respondents (47%) reported viewing wildlife during their trip, only 1% identified this as their primary activity.

Questions 14–15: Reasons to Visit

Survey respondents were asked to rate the importance of various reasons to visit Prince William Forest Park on their trip and were then asked which of those was the most important reason for them to visit Prince William Forest Park (Figure 23).

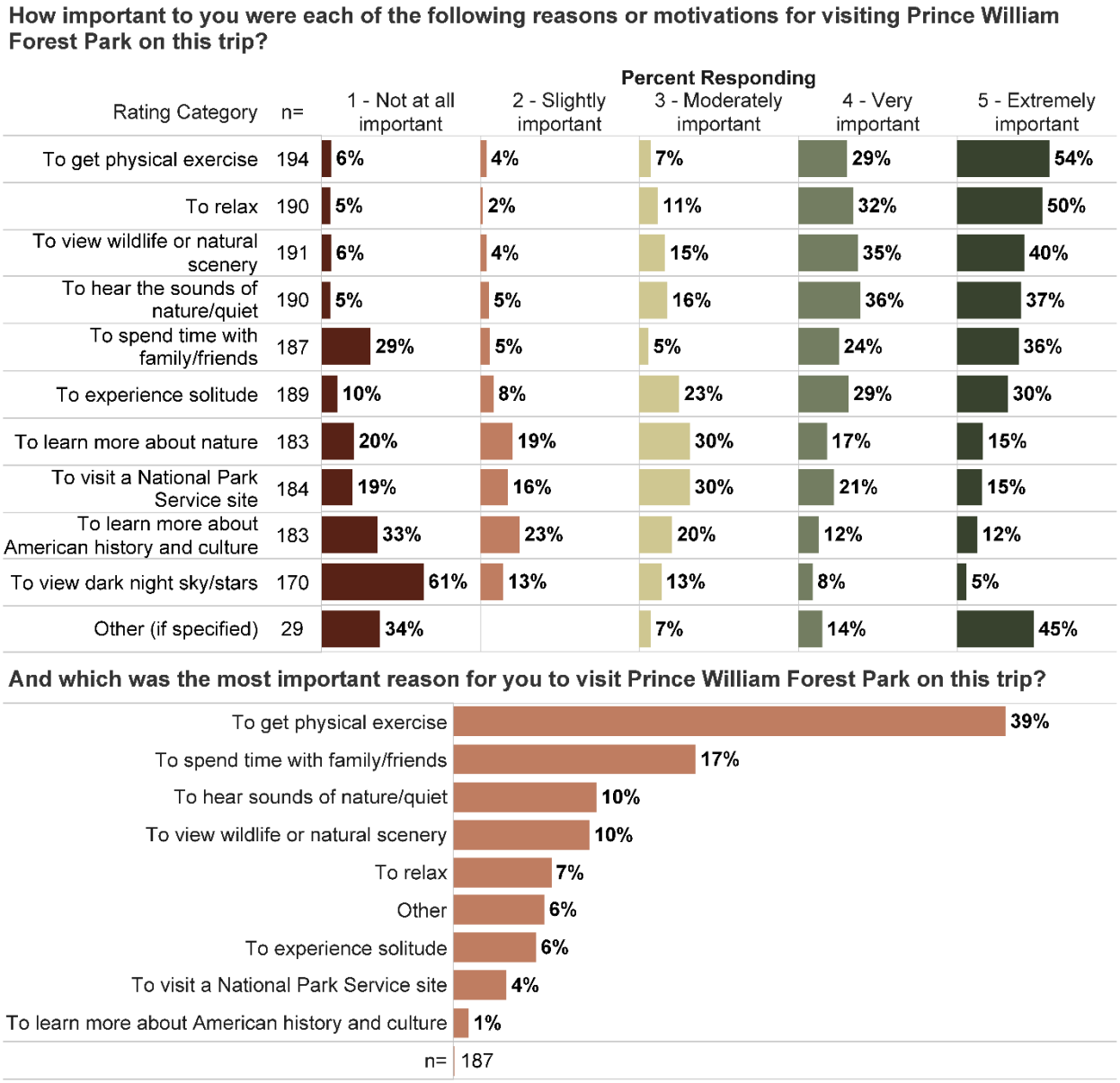

Figure 23. Reasons or motivations to visit Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 13.

- At least half of respondents chose getting physical exercise (54%) and relaxing (50%) as extremely important reasons for their trip to Prince William Forest Park.

- Other important reasons rated were viewing wildlife and natural scenery, hearing the sounds of nature/quiet, and spending time with family/friends (40%, 37% and 36% of respondents, respectively, rated them as extremely important).

- The least important reasons rated were viewing dark night sky/stars and learning more about American history and culture (only 5% and 12% of respondents, respectively, reported them as extremely important, and 61% and 31% of respondents, respectively, rated them as not at all important).

- The most common response about the most important reason for their visit was to get physical exercise (39%), followed by to spend time with family and friends (17%).

Questions 16–18: Programs, Services, and Learning

Respondents were asked to identify all programs and services in which they personally participated in Prince William Forest Park during their trip (Figure 24).

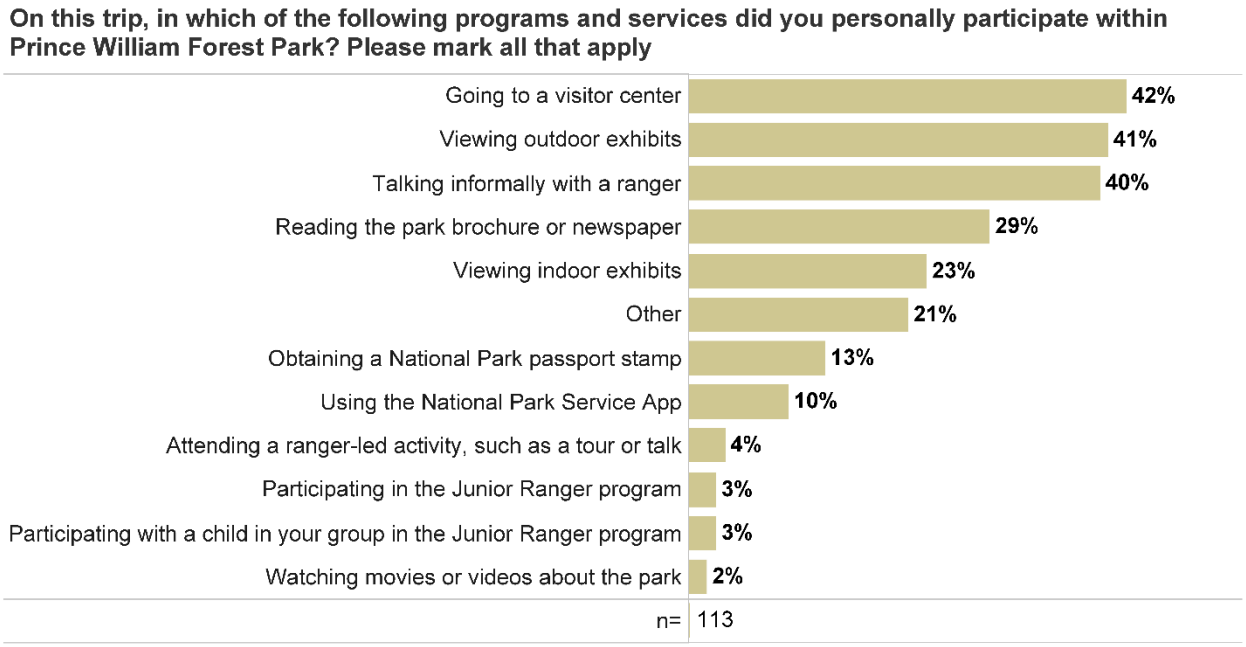

Figure 24. Participation in programs at Prince William Forest Park.

- The three most-used programs and services were going to a visitor center, viewing outdoor exhibits, and talking informally with a ranger, with close to half of respondents (42%, 41%, and 40%, respectively) reporting participating in each of them.

Two follow-up questions asked if respondents learned anything from park staff, programs, and/or exhibits about American history, nature, and/or culture, and what specific subjects they would like to learn about in the future (Figure 25).

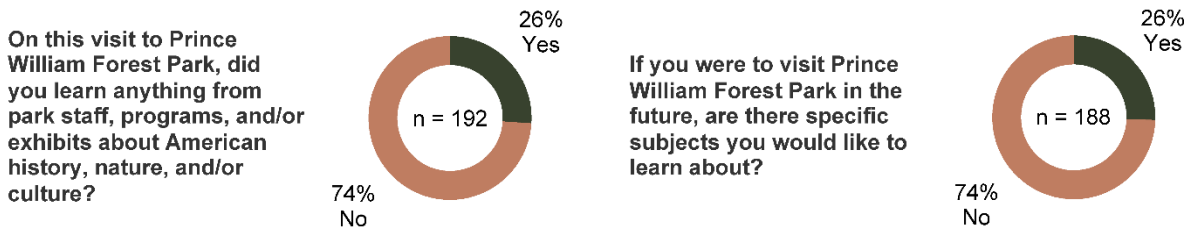

Figure 25. Learning.

- About a quarter of respondents (26%) reported that they learned something from park staff, programs, and/or exhibits about American history, nature, and/or culture.
- Additionally, a quarter of respondents (26%) reported that if they were to visit Prince William Forest Park in the future, there are specific subjects they would like to learn about.
- Respondents who said yes to either of these two questions were asked to elaborate.

Questions 19–20: Use of Devices

Two survey questions were focused on the use of electronic devices, their importance, and the quality of service provided. First, respondents were asked which personal electronic devices they used while in Prince William Forest Park (Figure 26).

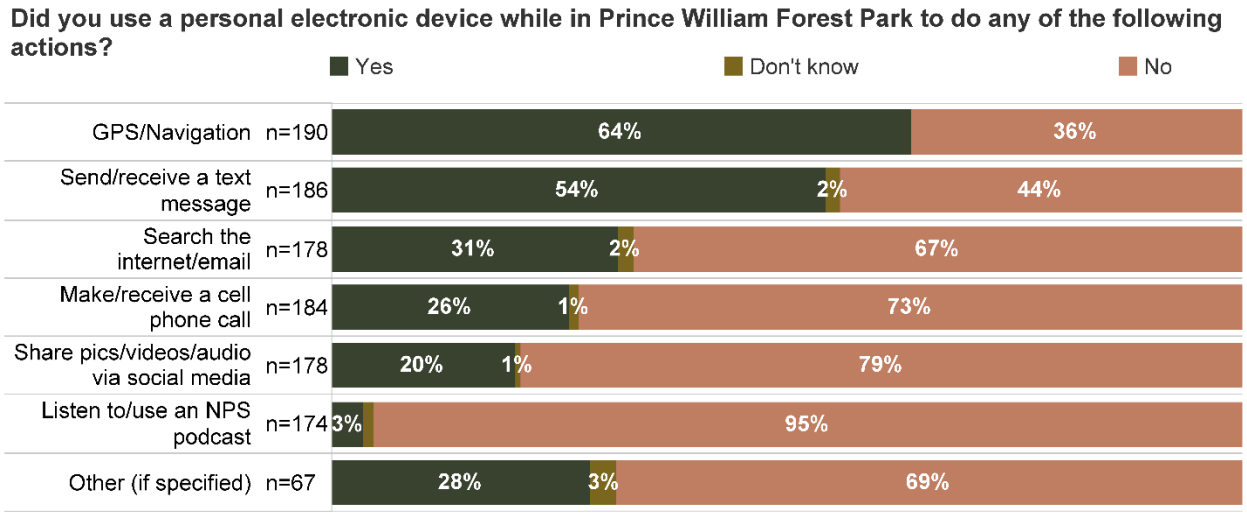

Figure 26. Use of personal electronic devices while visiting Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 14.

- Almost two thirds of respondents (64%) reported using GPS/Navigation, and over half of respondents (54%) reported sending/receiving a text message.

- Conversely, only 3% of respondents listened to or used an NPS podcast.

Then, respondents were asked to rate both the importance of each of these electronic device uses (Figure 27), and the quality of their service (Figure 28).

How important to you was it during your visit to Prince William Forest Park to use personal electronic devices to do each of the following?

Rating Category	n=	Percent Responding: 1 - Not at all important	2 - Slightly important	3 - Moderately important	4 - Very important	5 - Extremely important
GPS/Navigation	192	20%	11%	17%	23%	28%
Send/receive a text message	191	24%	21%	24%	17%	14%
Search the internet/email	181	52%	20%	14%	7%	7%
Make/receive a cell phone call	193	30%	21%	22%	15%	13%
Share pics/videos/audio via social media	186	65%	16%	11%	5%	3%
Listen to/use an NPS podcast	183	77%	13%	6%	2%	2%
Other (if specified)	44	66%	9%	2%	7%	16%

Categories sorted in descending order by percent answering "Yes" to "Did you use a personal electronic device while in the park to do any of the following actions?" (With "Other" anchored at bottom)

Figure 27. The importance of the use of personal electronic devices while visiting Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 15.

- The most important device uses were GPS/Navigation and sending/receiving a text message (28% and 14% of respondents, respectively, rated them as extremely important).

- Listening to and using an NPS podcast was rated as extremely important only by 2% of respondents, and not at all important by 77% of respondents.

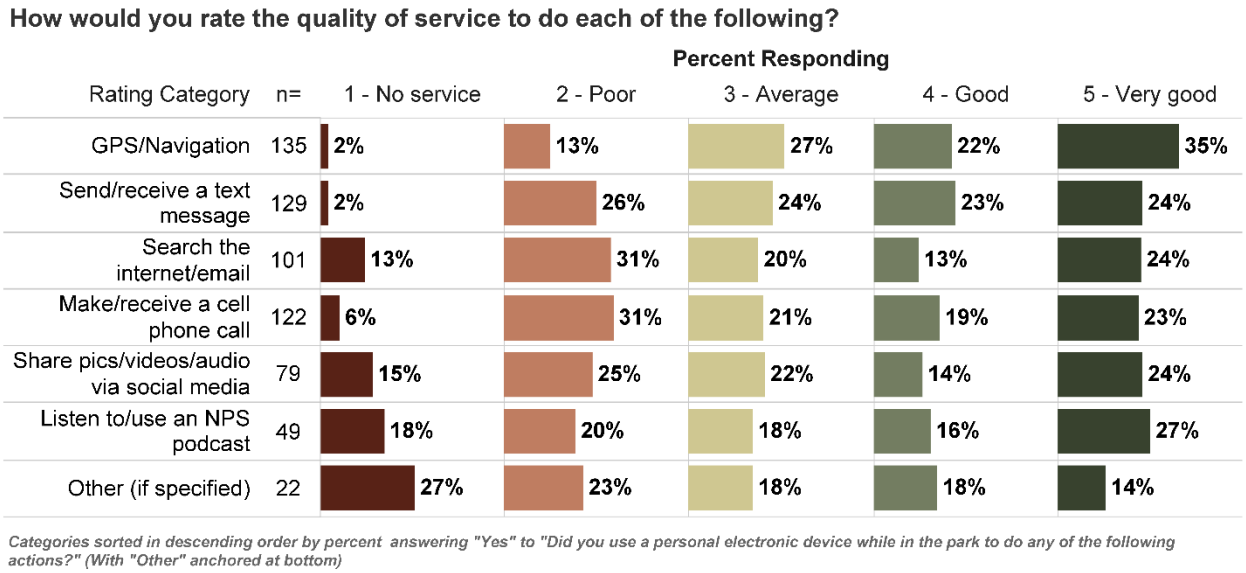

Figure 28. Quality of service for personal electronic devices while visiting Prince William Forest Park. Tabular data shown in this figure are presented in Appendix A, Table 16.

- GPS/Navigation was rated as very good or good by 35% and 22% of respondents, respectively. Just 2% of respondents reported that they had no service.

- A small proportion of respondents (ranged from 2% to 18%, depending on the service) reported that they also had no service to send/receive a text message, search the internet/email, make/receive a cell phone call, share pics/videos/audio via social media, and listen to/use an NPS podcast.

- However, a quarter of respondents (ranging from 23% to 27%, depending on the service) rated these services as very good.

Question 21: Physical Difficulties

Respondents were asked if anyone in their personal group had a physical condition that made it difficult to access or participate in park activities or services during their visit to Prince William Forest Park. If such a condition was identified, respondents were asked to specify the type of difficulty (Figure 29).

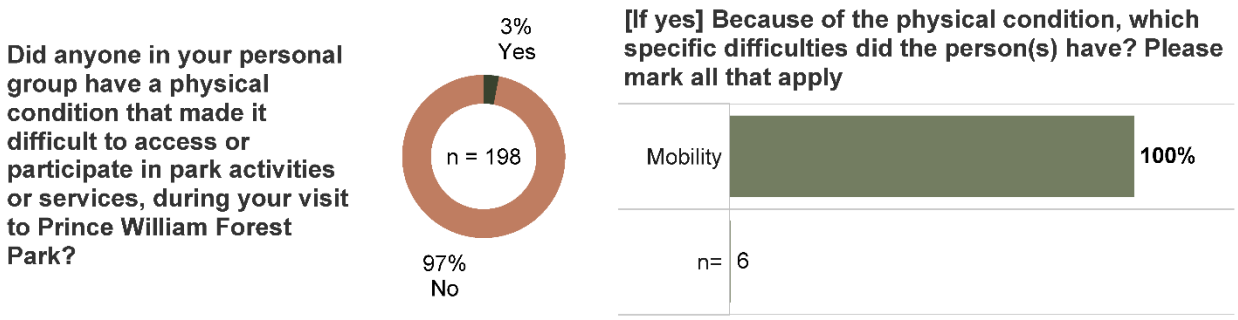

Figure 29. Physical difficulties while visiting Prince William Forest Park.

- The majority of respondents (97%) reported that nobody in their personal group had a physical condition that made it difficult to access or participate in park activities or services during their visit to Prince William Forest Park.

- Among the 3% of respondents who identified at least one difficulty, 100% reported mobility issues in their group.

Questions 24-27: Visitor Experience

Respondents were asked if their visit to Prince William Forest Park met their expectations (Figure 30).

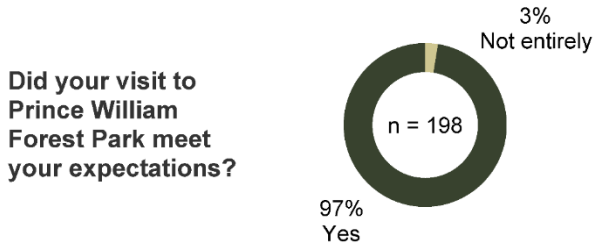

Figure 30. Meeting Prince William Forest Park expectations.

- The majority of respondents (97%) reported that their visit to Prince William Forest Park met their expectations, while 3% of respondents said it did not meet their expectations entirely, and no respondents indicated that it did not meet their expectations at all.

- In an open-ended follow-up question, respondents were asked to elaborate on their responses.

Respondents were then given several statements about Prince William Forest Park and asked to indicate their level of agreement or disagreement with each given statement (Figure 31).

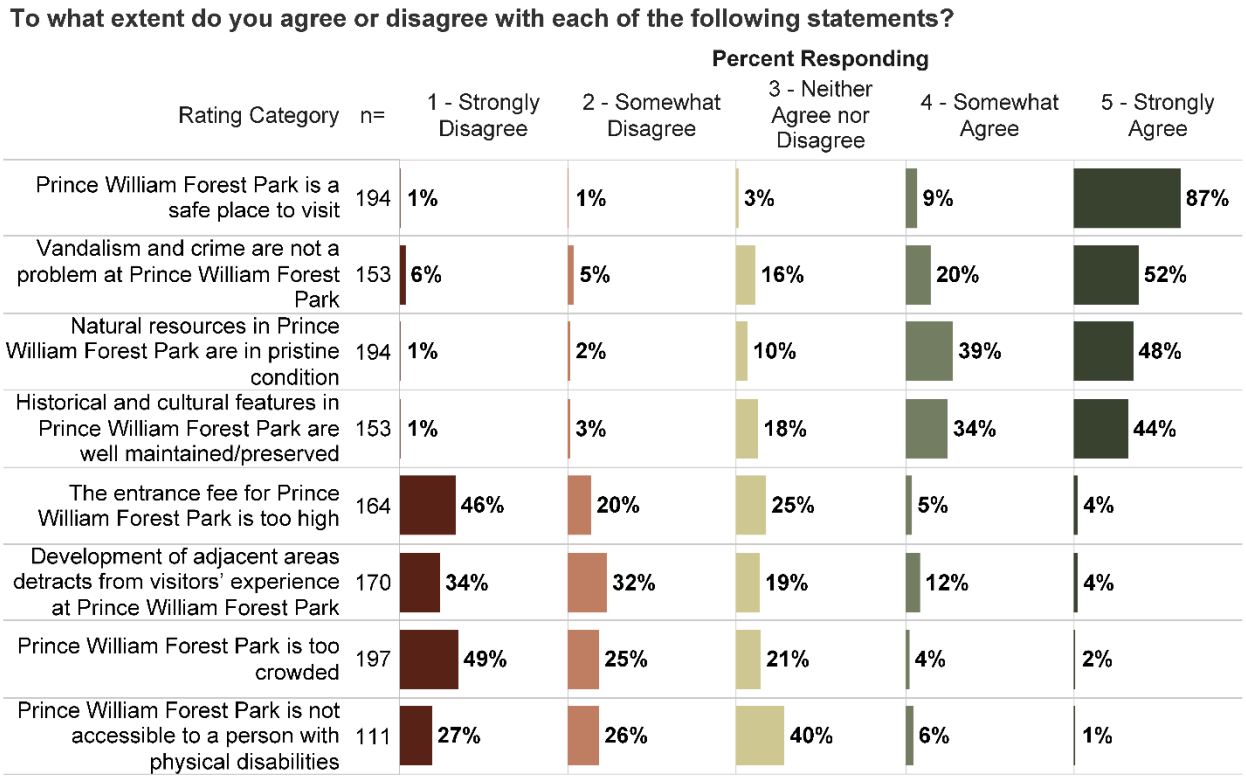

Figure 31. Rating Prince William Forest Park experience. Tabular data shown in this figure are presented in Appendix A, Table 17.

- From all the statements listed, "Prince William Forest Park is a safe place to visit" received the most consensus with a combined 96% of respondents saying they either strongly or somewhat agree with it. That was followed by "Natural resources in Prince William Forest Park are in pristine condition" and "Historical and cultural features in Prince William Forest Park are well maintained/preserved" (87% and 78% of respondents, respectively, strongly or somewhat agreed with these statements).

- Conversely, "Prince William Forest Park is too crowded "Prince William Forest Park is not accessible to a person with physical disabilities" received the least support, with only 6-7% of respondents either somewhat or strongly agreeing with these statements, and 49% and 27% of respondents, respectively, strongly disagreeing with each of them.

Next, respondents were asked to rate the quality of park facilities, visitor services, and recreational opportunities in Prince William Forest Park (Figure 32).

How would you rate the quality of the park facilities, visitor services, and recreational opportunities in Prince William Forest Park?

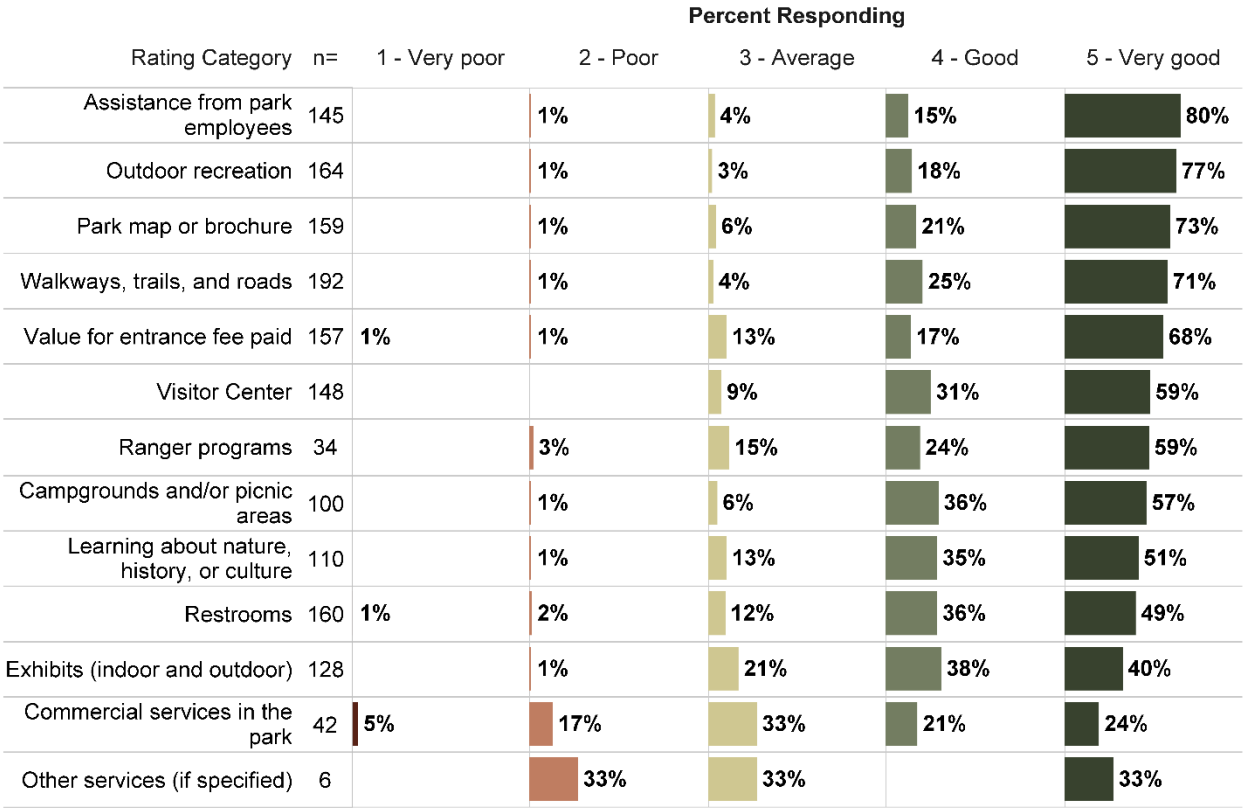

Figure 32. Rating the quality of specific Prince William Forest Park facilities, visitor services, and recreational opportunities. Tabular data shown in this figure are presented in Appendix A, Table 18.

- Over half of respondents (ranging from 51% to 80%) rated learning about nature, history, and culture, campgrounds and/or picnic areas, ranger programs, the Visitor Center, the value for the entrance fee paid, walkways, trails, and roads, park map or brochure, outdoor recreation, and assistance from park employees as very good.

- Conversely, fewer than half of respondents rated the restrooms, exhibits (outdoor and indoor), and commercial services in the park as very good. For some of these ratings categories, respondents were most likely to say that they were either not available, or they did not use them.

Finally, respondents were asked to rate overall quality of the park facilities, visitor services, and recreation opportunities (Figure 33).

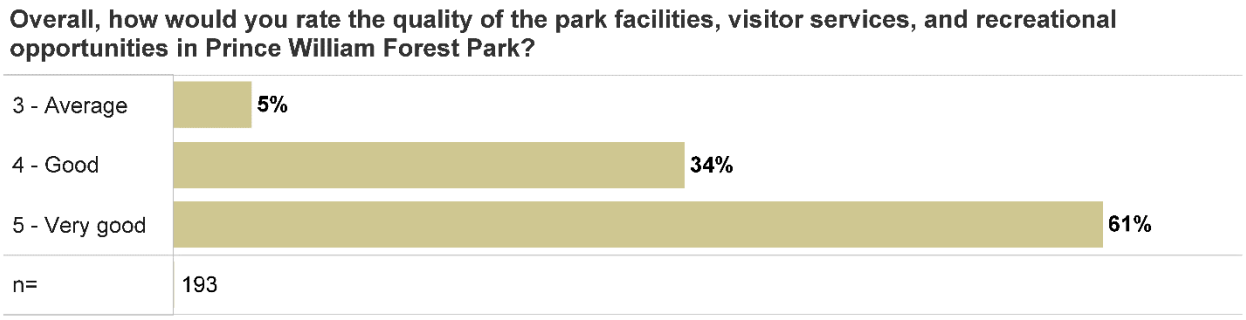

Figure 33. Rating overall quality of Prince William Forest Park facilities, visitor services, and recreational opportunities.

- In general, the majority of respondents (61%) rated the quality of the park facilities, visitor services, and recreational opportunities in Prince William Forest Park as very good, and another 34% rated them as good.

- Only 5% of respondents rated the overall quality as average, and no one rated them as poor or very poor.

Questions 30-38: Background/Demographics

In the final section of the post-trip survey, respondents were asked various questions about their personal and household demographics. Figure 34 depicts descriptive statistics for respondent gender, age, and education.

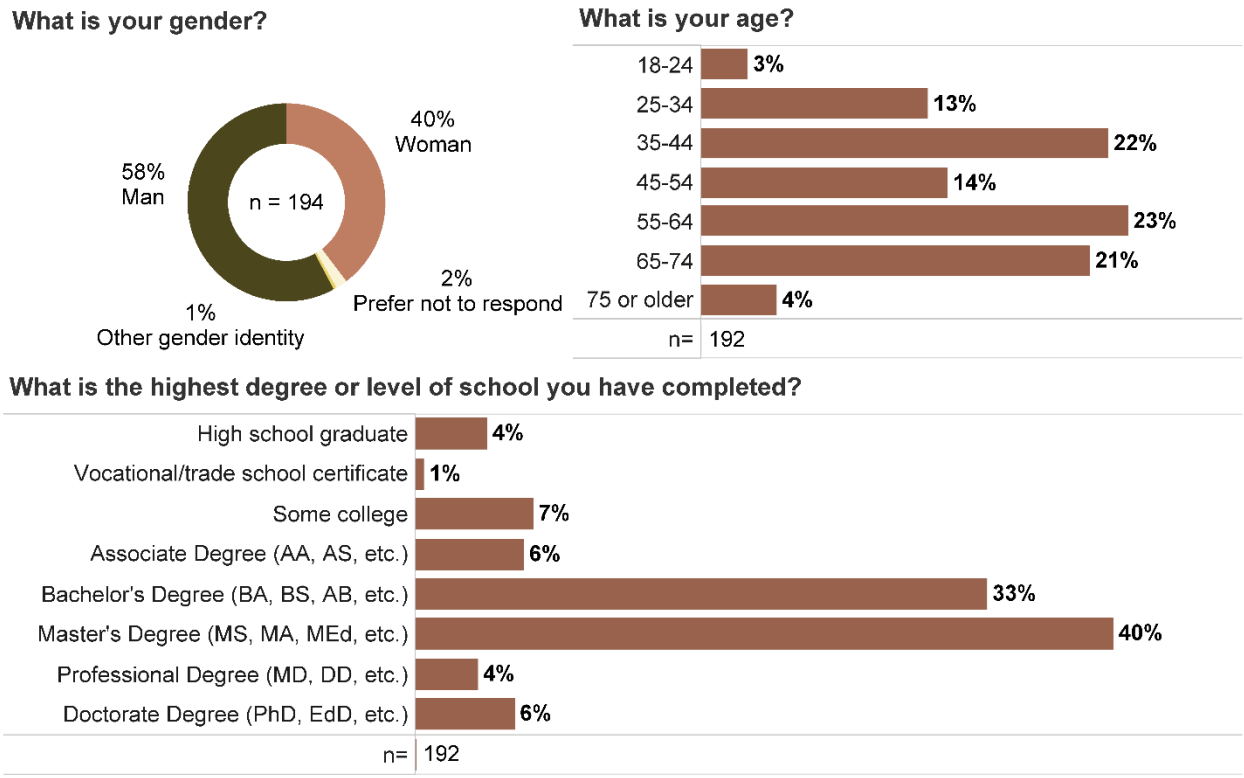

Figure 34. Respondent demographics: gender, age, and level of education.

- Post-trip survey respondents were more likely to be men than women (58% vs 40%). Another 1% had another gender identity, while 2% preferred not to disclose their gender identity.

- The most common age categories were 55-64 years old (23%), 35-44 years old (22%), and 65-74 years old (21%). The least represented age group were 18-24 years old (only 3% of the participants surveyed).

- Most survey respondents reported obtaining higher education, with a combined 89% having some college degree, and a plurality (40%) holding a master's degree.

Respondents were also asked to identify their race(s) and if they were of Hispanic, Latino or Spanish Origin (Figure 35).

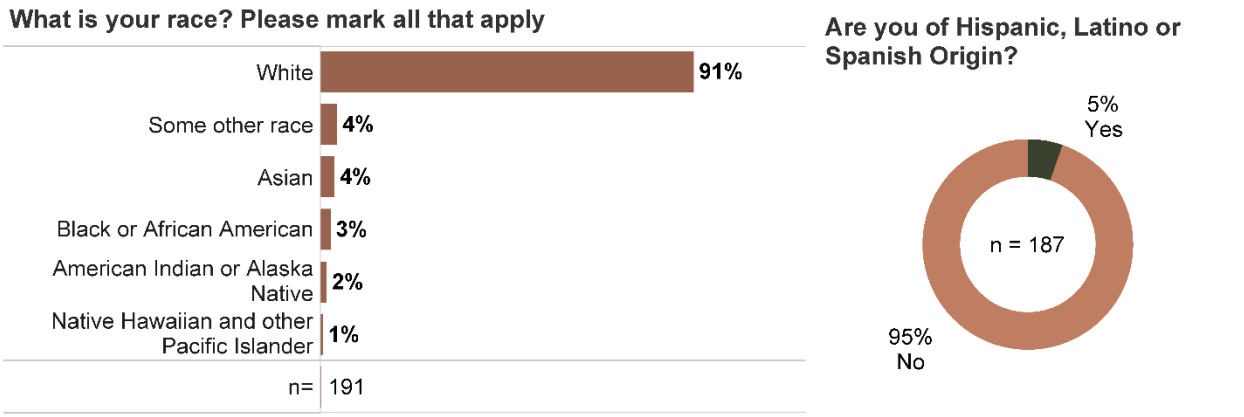

Figure 35. Respondent demographics: race and ethnicity.

- The majority of respondents (91%) were White, while 4% were Asian, and 4% were of some other race.
- Most respondents (95%) were not of Hispanic, Latino or Spanish origin.

At a household level, respondents were asked to report annual income and number of contributors, as well as how many people (adults and children) live in their household (Figure 36).

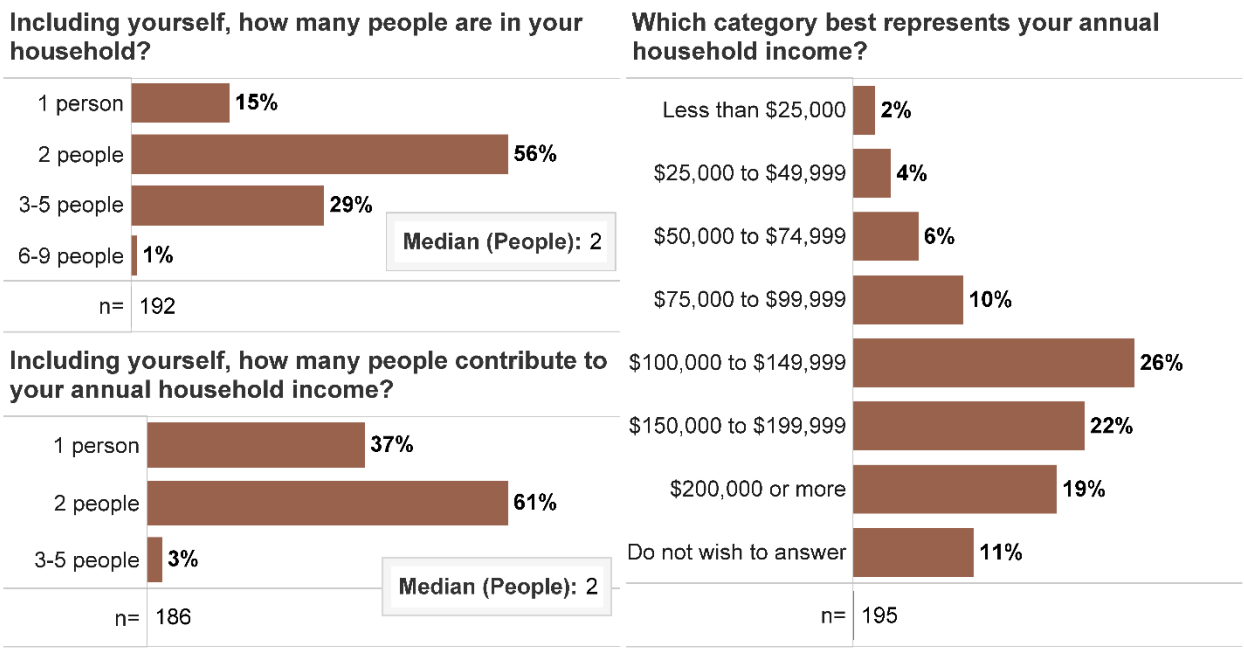

Figure 36. Household demographics: annual household income and household size. Tabular data shown in this figure are presented in Appendix A, Table 19.

- Over half of respondents (56%) had two people in their household, followed by three to five people (29%) and one person (another 15%).

- In addition to obtaining higher education, visitors surveyed at Prince William Forest Park also reported relatively high levels of income. Almost a quarter of respondents (26%) reported that their annual household income was between $100,000 to $149,999, and another 22% earned between $150,000 and $199,999.

- Most respondents (61%) came from a dual-income household.

Finally, respondents were asked about their language preference (Figure 37).

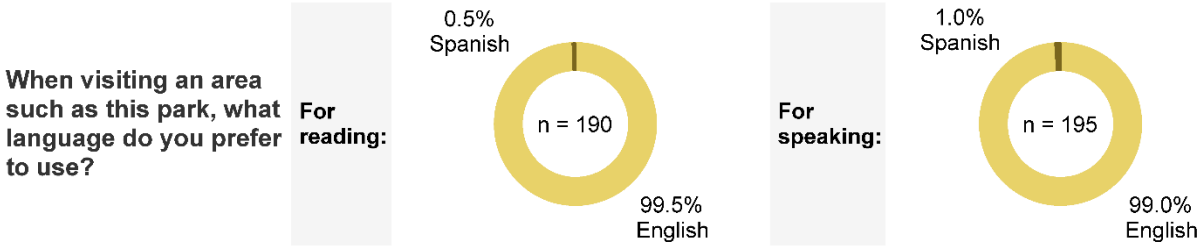

Figure 37. Respondent's language preference.

- While 5% of respondents were of Hispanic, Latino or Spanish, the overwhelming majority of respondents (99%) preferred to use English both for reading and speaking when visiting an area such as Prince William Forest Park.

- Only 1% or less of respondents preferred Spanish for either reading and/or speaking.

References

National Park Service (NPS). 2023a. 2023 socioeconomic monitoring of Prince William Forest Park: Visitor intercept survey. https://irma.nps.gov/DataStore/Reference/Profile/2305562

National Park Service (NPS). 2023b. 2023 socioeconomic monitoring of Prince William Forest Park: Visitor post-trip survey. https://irma.nps.gov/DataStore/Reference/Profile/2305564

Appendix A: Accessible Tables

This appendix contains accessible tables with tabular data from figures found in the body of the report.

Table 8. Data from Figure 7. Number of nights spent in the local area around Prince William Forest Park, by accommodation type.

Accommodation Type	Sample Size (n)	Median
Backcountry Camping in Chopawamsic Backcountry Area	6	1
Camping in a Prince William Forest Park campsite or Historic Cabin Camps	26	1
Camping outside Prince William Forest Park	1	7
Lodging in Prince William Forest Park	31	4
Lodging outside Prince William Forest Park	6	4
Unpaid accommodations	6	1

Table 9. Data from Figure 8. Number of adults and children in respondent's personal group, and total group size, while visiting Prince William Forest Park.

Age Category	Sample Size (n)	Median
Adults	609	1
Children	609	0
Total group size	609	2

Table 10. Data from Figure 15. Number of people in respondent's vehicle when entering Prince William Forest Park.

Question	Sample Size (n)	Median
[If entered by car, truck, or SUV] Including yourself, how many people were traveling in your vehicle when you entered Prince William Forest Park?	597	1
[If entered by RV/motorhome] Including yourself, how many people were traveling in your RV when you entered Prince William Forest Park?	3	2
[If entered by motorcycle] Including yourself, how many people were traveling on your motorcycle when you entered Prince William Forest Park?	2	1

Table 11. Data from Figure 16. Previous visits to Prince William Forest Park.

Question	Sample Size (n)	Median
[If not first-time visitor] Including this visit, how many visits have you made to Prince William Forest Park over the past 12 months?	460	6
[If not first-time visitor] Including this visit, how many visits have you made to Prince William Forest Park over the past five years?	460	20

Table 12. Data from Figure 17. Visits made to other NPS sites within the past year.

Question	Sample Size (n)	Median
How many visits have you made to other NPS sites over the past 12 months?	608	3

Table 13. Data from Figure 23. Reasons or motivations to visit Prince William Forest Park.

Rating Category	Sample Size (n)
To visit a National Park Service site	184
To experience solitude	189
To hear the sounds of nature/quiet	190
To learn more about nature	183
To learn more about American history and culture	183
To spend time with family/friends	187
To get physical exercise	194
To view wildlife or natural scenery	191
To relax	190
To view dark night sky/stars	170
Other (if specified)	29

Table 14. Data from Figure 26. Use of personal electronic devices while visiting Prince William Forest Park.

Device Use	Sample Size (n)
Make/receive a cell phone call	184
Send/receive a text message	186
Search the internet/email	178
GPS/Navigation	190
Share pics/videos/audio via social media	178
Listen to/use an NPS podcast	174
Other (if specified)	67

Table 15. Data from Figure 27. The importance of the use of personal electronic devices while visiting Prince William Forest Park.

Device Use	Sample Size (n)
Make/receive a cell phone call	193
Send/receive a text message	191
Search the internet/email	181
GPS/Navigation	192
Share pics/videos/audio via social media	186
Listen to/use an NPS podcast	183
Other (if specified)	44

Table 16. Data from Figure 28. Quality of service for personal electronic devices while visiting Prince William Forest Park.

Device Use	Sample Size (n)
Make/receive a cell phone call	122
Send/receive a text message	129
Search the internet/email	101
GPS/Navigation	135
Share pics/videos/audio via social media	79
Listen to/use an NPS podcast	49
Other (if specified)	22

Table 17. Data from Figure 31. Rating Prince William Forest Park experience.

Rating Category	Sample Size (n)
Prince William Forest Park is a safe place to visit	194
Prince William Forest Park is too crowded	197
Natural resources in Prince William Forest Park are in pristine condition	194
The entrance fee for Prince William Forest Park is too high	164
Vandalism and crime are not a problem at Prince William Forest Park	153
Prince William Forest Park is not accessible to a person with physical disabilities	111
Historical and cultural features in Prince William Forest Park are well maintained/preserved	153
Development of adjacent areas detracts from visitors' experience at Prince William Forest Park	170

Table 18. Data from Figure 32. Rating the quality of Prince William Forest Park facilities, visitor services, and recreational opportunities.

Rating Category	Sample Size (n)
Visitor Center	148
Exhibits (indoor and outdoor)	128
Restrooms	160
Walkways, trails, and roads	192
Campgrounds and/or picnic areas	100
Assistance from park employees	145
Park map or brochure	159
Ranger programs	34
Value for entrance fee paid	157
Commercial services in the park (food, lodging, gifts, rental, etc.)	42
Other services (if specified)	6
Learning about nature, history, or culture	110
Outdoor recreation (sightseeing, camping, bicycling, boating, hiking, etc.)	164

Table 19. Data from Figure 36. Household demographics: annual household income and household size.

Question	Sample Size (n)	Median
Including yourself, how many people are in your household?	192	2
Including yourself, how many people contribute to your annual household income?	186	2