



PROGRAMMATIC REVIEW AND CLEARANCE PROCESS FOR NPS-SPONSORED PUBLIC SURVEYS



The scope of the Programmatic Review and Clearance Process for NPS-Sponsored Public Surveys is limited and will only include individual surveys of park visitors, potential park visitors, and residents of communities near parks. Use of the programmatic review will be limited to non-controversial surveys of park visitors, potential park visitors, and/or residents of communities near parks that are not likely to include topics of significant interest in the review process. Additionally, this process is limited to non-controversial information collections that do not attract attention to significant, sensitive, or political issues. Examples of significant, sensitive, or political issues include: seeking opinions regarding political figures; obtaining citizen feedback related to high-visibility or high-impact issues like the reintroduction of wolves in Yellowstone National Park, the delisting of specific Endangered Species, or drilling in the Arctic National Wildlife Refuge.

SUBMISSION DATE: 11-30-2020

PROJECT TITLE: Visitor Experience Survey: Arches and Canyonlands National Park

ABSTRACT: (not to exceed 150 words)

In the past ten years, Arches National Park (ARCH) and Canyonlands National Park (CANY) have seen large increases in annual recreation visits, with corresponding expansions to peak and shoulder seasons. In order to make informed decisions about visitor use management and park planning, park managers in ARCH and CANY require updated data on this new, larger visitor population, particularly about visitor preferences, behaviors, trip characteristics and spending estimates. This collection will use a mail-back questionnaire at ARCH and CANY, administered in both winter and summer seasons, to collect information from visitors.

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PROJECT INFORMATION:

Where will the collection take place? Arches National Park and Canyonlands National Park

Sampling Period #1: Start Date: February 6, 2021

End Date February 28, 2021

Sampling Period #2: Start Date: May 22, 2021

End Date June 13, 2021

Type of Information Collection Instrument: (Check ALL that Apply)

Mail-Back Questionnaire

On-Site Questionnaire

Telephone Survey

Face-to-Face Interview

Focus Groups

Other (List)

Will an electronic device be used to collect information? No Yes -

SURVEY JUSTIFICATION:

Social science research in support of park planning and management is mandated in the NPS Management Policies 2006 (Section 8.11.1, "Social Science Studies"). The NPS pursues a policy that facilitates social science studies in support of the NPS mission to protect resources and enhance the enjoyment of present and future generations (National Park Service Act of 1916, 38 Stat 535, 16 USC 1, et seq.). NPS policy mandates that social science research will be used to provide an understanding of park visitors, the non-visiting public, gateway communities and regions, and human interactions with park resources. Such studies are needed to provide a scientific basis for park planning and development.

Visitation to parks in the National Park Service's Southeast Utah Group (SEUG) has dramatically increased in recent years. Between 2008 and 2018, Arches National Park (ARCH) and Canyonlands National Park (CANY) have both experienced unprecedented increases in recreational visitation (ARCH 79.1% and CANY 69.3%, respectively). This increased visitation has expanded the peak and shoulder seasons at ARCH and CANY and has occurred in tandem with several congestion-related issues. ARCH and CANY are currently considering various visitor use management strategies to address these issues, and updated information about visitors and their trip characteristics is needed to facilitate communication and decision processes. Furthermore, updated visitor spending data is needed to support upcoming park planning processes, as current information related to visitor spending estimates and effects relies on expenditure data that is more than 20 years old.

To facilitate the development of potential visitor use management strategies and upcoming planning processes, a mail-back visitor survey will be conducted at both ARCH and CANY to collect information related to demographics, trip motivations, visitation behaviors, visitor spending behaviors, and socioeconomic data. Data about visitors and trip characteristics are needed from the growing visitor population to gauge visitor support for management strategies that may include changes to park reservation and permit systems and other visitor use management strategies. Understanding visitor spending behavior in local communities in conjunction with trip characteristics will help the parks plan their visitor use management strategies to minimize negative impacts and maintain or enhance positive impacts to visitor spending in nearby communities. The surveys will be conducted once in the winter season of 2021 and once in the summer of 2021 to estimate differences in visitor populations, preferences, and behaviors during the winter and summer seasons.

SURVEY METHODOLOGY

(A) Respondent Universe:

The respondent universe for the ARCH collection will be all recreational visitors, age 18 and older, who visit ARCH during the sampling period, and the respondent universe for the CANY collection will be all recreational visitors, age 18 and older, who visit CANY (Needles District or Island in the Sky District) during the sampling periods.

Sampling Period #1: Start Date: February 6, 2021

End Date February 28, 2021

Sampling Period #2: Start Date: May 22, 2021

End Date June 13, 2021

(B) Sampling Plan / Procedures:

A self-administered mail-back questionnaire will be distributed on-site in a mail-back packet. The sampling of visitors for the mail-back questionnaires will occur for two 10-day sampling periods: the winter off-season (February 2021) and the summer peak season (May and June 2021). Both sampling periods will include at least four weekend days and six weekdays to capture mixed levels of use throughout each sampling period. During each sampling period, visitors will be contacted using vehicle intercepts within proximity of:

- 1) ARCH park entrance
- 2) CANY Island in the Sky Entrance Station/Visitor Center and
- 3) CANY Needles Entrance Station/Visitor Center.

At each location, visitors will be randomly selected using a timed interval approach. One visitor group will be selected every N minutes of the day (where N ~ 6-minute intervals each hour). This approach will allow for an even distribution of questionnaires throughout the sampling period (across days and hours). A summary of visitor sampling days, broken down by site, season, and day type, is provided in Table 1.

Table 1. Sampling Days Per Site - Mail-back Visitor Questionnaire

Location	February 2021		May-June 2021		TOTAL
	Weekday	Weekend day	Weekday	Weekend day	
Arches National Park	6	4	6	4	20
Canyonlands National Park Island in the Sky District	3	2	3	2	10
Needles District	3	2	3	2	10

We expect to contact a combined total of 2,890 visitors during both sample periods at the three sample locations. During both sampling periods at ARCH, we expect to contact 1,600 (n=800/season). We expect to contact 490 visitors during the winter sampling period at CANY. Given an assumed completion rate of 50% in both parks (see Section D below), to reach the total number of visitor contacts in ARCH (n=1,600) we must contact at least 80 visitor groups per sampling day. During the winter sampling period in CANY, we must contact at least 49 visitor groups per day to reach the estimated the total number of visitor contacts (n= 490) during the winter sampling season. A total number of 800 visitor groups (80 visitor groups per day) will be contacted in CANY during the summer sampling period. The expected number of visitor contacts, broken down by site, season, and day type, is summarized in Table 2.

Table 2. Number of Visitors Contacted

Location	February 2021		May-June 2021		TOTAL
	Weekday	Weekend day	Weekday	Weekend day	
Arches National Park	480	320	480	320	1600
Canyonlands National Park	294	196	480	320	1290
Total	774	516	960	640	4,180

The following protocol will be used to implement the timed interval approach to select participants:

1. At the designated start time, the survey administrator will contact the first visitor group to enter the survey area and ask them to participate in the survey. If the group agrees to participate, the survey administrator will initiate the collection process (see Section C below). At the end of each positive contact, the survey administrator will wait until the start of the next time interval before selecting the next visitor group.
2. When there is a negative contact (i.e., refusal), the survey administrator will conduct the non-response bias check (see Section E below). After the non-response bias check, the survey administrator will select the very next visitor group until a positive contact is made. Once a positive contact is made, the survey administrator will not make another selection until the start of the next time interval. The survey administrator will repeat this sequence of steps throughout the sampling day. All visitors contacted will be asked to answer the non-response bias questions.

(C) Instrument Administration:

The survey packets will include a booklet-sized questionnaire and a pre-addressed envelope affixed with U.S. first class postage.

The survey design and sampling plan for the collection is based on The Tailored Design Method (TDM) (Dillman, 2014) with an emphasis on mixed modes of delivery: on-site solicitation, mail-back survey, and follow-up procedures. The TDM has been shown to increase response rates, improve accuracy, and reduce cost and burden hours. The methodology has been used in more than 250 surveys conducted by the NPS Visitor Services Project (VSP) as well as for the pilot Socioeconomic Monitoring efforts conducted by RSG.

At the start of each sampling period, the first visitor group entering the sampling area will be greeted and asked if they would be willing to participate. Approximately one minute will be used during the initial contact to explain the purpose of the study and to select the adult member of the of the group (18 years or older) with the next birthday to serve as the respondent for the survey. That individual will be: 1) asked to answer the non-response bias questions, 2) given a survey packet and 3) asked to fill out an address card providing their name, address, and questionnaire code number from the questionnaire). This information will only be used to follow-up with all visitors accepting a survey packet. Following Dillman's TDM, within 10 days of the last day of sampling, all visitors who agreed to participate will be sent a thank you/reminder postcard. A reminder letter, replacement questionnaire, and postage-paid return envelope will be sent to all non-respondents approximately two weeks after sending the postcard reminder. A final reminder letter, replacement questionnaire, and postage-paid return envelope will be mailed to all remaining non-respondents three weeks after mailing the first reminder letter. After the second reminder, all files containing the visitors' contact information collected on-site will be destroyed.

All visitors asked to participate in the survey will be asked to respond to several non-response bias questions (Section E below) The survey administrator will record observable information (i.e., current time and initial contact's gender) in a survey log. Observational data will be collected whether or not visitors agree to participate or answer the non-response bias questions. The number of refusals will be recorded and used to calculate the overall response rate at each park unit and for the study overall.

The following sample script will be used during the initial contact:

“Hello, I am conducting a survey for [PARK] to help managers understand your experience at the park today. Your participation is voluntary and all responses will be kept anonymous. Would you be willing to complete a questionnaire (show packet) and mail it back using the included postage-paid envelope?”

→If **YES** – then ask, *“has any member of your group already participated in this survey?”*

- If **“YES”** (previously agreed to participate) then, *“Thank you for agreeing to participate in this study, we hope that you will return the questionnaire soon, if you have not already. Have a great day.”*
- If **“NO”** (have not previously agreed to participate - only one adult in the group) then,

Thank you! [hand respondent packet; point to stamp]. Here’s the questionnaire. You can mail it back in the same envelope. We need your name and address to send you a replacement if we don’t hear from you in two weeks [hand address card], and I have a few quick questions.

[The surveyor will ask them to start the process by answering the non-response bias questions (listed in Section E).]

- If **“NO”** (have not previously agreed to participate - more than one adult in the group) then,

Thank you! We can only have one adult respondent per group. Whose birthday is next? [wait for response]. You’ll be our respondent [hand respondent packet; point to stamp]. Here’s the questionnaire. You can mail it back in the same envelope. We need your name and address to send you a replacement if we don’t hear from you in two weeks [hand address card], and I have a few quick questions.

[The surveyor will ask them to start the process by answering the non-response bias questions (listed in Section E).]

→If **NO-** (soft refusal) then, *“No problem. Instead, I have a few quick questions I’d like to ask you now that would really help the park.”* [The surveyor will record responses in spaces provided on the tracking sheet and then thank them for their time]

→If **NO-** (hard refusal) – *“No problem. Thank you for your time.”*

All survey administrators will be trained on every aspect of on-site surveying, including survey administration, avoiding sampling bias, and handling all types of survey situations, especially safety of visitors and the administrator. Quality control will be ensured by monitoring interviewers in the field, and by checking their contact logs at the end of each sampling day. If on-site acceptance rates are lower than the expected 80% during the sampling period, an experienced on-site field supervisor will provide additional training and support for the survey administration process, including:

- Ensuring that survey administration protocols are being followed properly,
- Recommending the adjustment of the specific bounds of the survey administration area to better capture flows of visitors, and
- Recommending the reduction of the time interval.

A total of 2,890 visitor contacts are expected across the study (summer, $n=1,290$; winter, $n=1,600$). It is anticipated that 80% of the 2,890 contacted visitors will agree to participate on-site, however it expected that 50% of the visitors contacted will complete and return the questionnaire.

This acceptance rate and response rate is consistent with response rates for similar mail-back surveys conducted by RSG in national park units around the country. As a result, we anticipate that we will receive 400 completed surveys from visitors contacted during the summer sampling periods in each park and during the winter sampling period in ARCH. We anticipate that we will receive 245 completed surveys from visitors contacted during the winter sampling period in CANY, for a total of 800 surveys from ARCH and 645 surveys from CANY, and 1445 surveys across the study. **Table 3** Error: Reference source not found below provides a summary of this information.

The number of visitor contacts, on-site acceptances, and refusals will be evaluated after each sampling day. If the number of on-site acceptances is not on track with the target, the time interval between groups will be adjusted the following sampling day to meet overall target sample size. The expected acceptance and completion targets are intended to ensure that an adequate sample will be generated so that there will be 95% confidence that the survey findings will be accurate to approximately 5 percentage points for the summer samples at both parks and the ARCH winter sample, and 6 percentage points for the CANY winter sample (based on the formula where confidence level = $1 \div \sqrt{N}$, where N = target distribution number). It is anticipated that park conditions during the sampling periods will provide the opportunities to reach these targets. According to NPS Visitor Use Statistics, CANY received 9,705 recreational visitors, and ARCH received 30,239 recreational visitors in February of 2019. In May and June of 2019, CANY averaged 101,880 recreational visitors/month, and ARCH averaged 221,340 recreational visitors/month.

Table 3. Anticipated Onsite Survey Response Rates

	Total Number of Visitor Contacts	Onsite Acceptance (80% of contacts)	Expected completion rate (50% of contacts)	Completed Non-Response Surveys (75% of total refusals)	Hard Refusals (25% of total refusals)
ARCH					
Winter	800	640	400	120	40
Summer	800	640	400	120	40
CANY					
Winter	490	392	245	74	24
Summer	800	640	400	120	40
TOTAL	2,890	2,312	1,145	434	144

(E) Strategies for dealing with potential non-response bias:

The following four questions will be used in a non-response bias analysis for the on-site questionnaire:

- 1) Is this trip your first time visiting [PARK]?
Yes
No
- 2) Was your visit to [Park] the primary purpose for your overall trip away from home?
Yes
No

- 3) On this trip away from home, have you stayed, or will you stay overnight in [Park] and/or within the local area?
Yes
No
- 4) How much time will you spend within [Park] on this trip?
_____ Number of hours, if you are only spending 1 day at [Park]
_____ Number of days, if you are spending more than 1 day at [Park]

These questions will be asked of all contacted visitor groups when initially contacted and who do not give a “hard refusal.” Responses to these questions will be recorded by the survey administrator in the survey contact log. Responses from visitors who agree to participate onsite will be compared with the answers from those who did not agree to participate. This method will also serve as the non-response bias check for visitors who accepted a survey packet but did not return the completed questionnaire. The responses to the onsite non-respondent questions for this group will be compared with responses of visitors who return the questionnaire. Results of the non-response bias check will be reported and any implications for applicability of survey results to generalizations about the study population will be discussed.

(F) Description of any pre-testing and peer review of the methods and/or instrument:

All of the questions in this survey are based on questions in the currently approved NPS Pool of Known Questions (1024-0224). Similar questions have been used in other studies completed by RSG, where question clarity and understanding from respondents has been demonstrated. These questions have been reviewed by NPS managers and PhD- and MS-level survey research consultants at RSG.

RSG’s previous experience with questionnaires similar in content, language and length confirms that wording of the questions is clear and reasonable, and that accurate completion times were incorporated into the burden estimate below.

BURDEN ESTIMATES

The total respondent burden for this collection is estimated to be 553 hours. Table 4 provides a summary of burden estimates. We have estimated respondent burden as follows:

- Initial contact/acceptance – (Instructions/Non-Response Bias Check and completed survey): 524 hours
The initial contact will take about three-minutes to determine eligibility, acceptance of the invitation to participate and to provide instructions, conduct the non-response bias check, and complete the address card. An additional 20-minutes will be needed to complete and return the questionnaire (1,445 respondents x 23 minute = 524 hours).
- Initial contact/refusal with non-response bias check (non-respondents): 29 hours
The non-response bias check will take about three-minutes to complete. The time will be used to request participation and conduct the non-response bias check, One minute will used to conduct the non-response bias check with all non-respondents that do not provide hard refusals (578 respondents x 3

minute = 29 hours).

Table 4. Burden Estimates

	Completed Responses	Completion Time * (minutes)	Burden Hours (rounded up)
On-site non-response survey	578	3	29
On-site Contact and completed mail-back survey	1,445	20	524
Total burden requested under this ICR	0	--	00

Initial contact time of one minute is added to the time to complete the surveys

REPORTING PLAN:

The study results will be presented in an internal report for park managers. Results of statistical analyses and summary statistics will be compiled (e.g. response frequencies, measures of central tendency, correlations, Chi-square, analysis of variance, factor analysis, and scale reliability analysis, as appropriate). Final reporting will be delivered to park managers in electronic format, and posted as a Natural Resource Data Series in the NPS Data Store

(<https://irma.nps.gov/DataStore/Reference/Profile/>) as required by the NPS Programmatic Review Process.

REFERENCES

Dillman, D. A., Smyth, J. D., & Christian, L.M. (2014). *Internet, phone, mail, and mixed-mode surveys: The tailored design method*, 4th Edition, Hoboken NJ: John Wiley & Sons, Inc.

NOTICES

Privacy Act Statement

General: This information is provided pursuant to Public Law 93-579 (Privacy Act of 1974), December 21, 1984, for individuals completing this form.

Authority: National Park Service Research mandate (54 USC 100702)

Purpose and Uses: This information will be used by The NPS Information Collections Coordinator to ensure appropriate documentation of information collections conducted in areas managed by or that are sponsored by the National Park Service.

Effects of Nondisclosure: Providing information is mandatory to submit Information Collection Requests to Programmatic Review Process.

Paperwork Reduction Act Statement

We are collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501) and is authorized by the National Park Service Research mandate (54 USC 100702). This information will be used by The NPS Information Collections Coordinator to ensure appropriate documentation of information collections conducted in areas managed by or that are sponsored by the National Park Service. All parts of the form must be completed in order for your request to be considered. We may not conduct or sponsor and you are not required to respond to, this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number. OMB has reviewed and approved The National Park Service Programmatic Review Process and assigned OMB Control Number 1024-0224.

Estimated Burden Statement

Public Reporting burden for this form is estimated to average 60 minutes per collection, including the time it takes for reviewing instructions, gathering information and completing and reviewing the form. This time does not include the editorial time required to finalize the submission. Comments regarding this burden estimate or any aspect of this form should be sent to the Information Collection Clearance Coordinator, National Park Service, 1201 Oakridge Dr., Fort Collins, CO 80525.
