



## 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: 4/17/18

**PROJECT TITLE: Visitor Use Survey for the Rim to Rim Corridor at Grand Canyon National Park**

**ABSTRACT:** (not to exceed 150 words)

Many outdoor recreation activities, such as hiking and trail running, may impacts to the park resources and to the visitor experience. Potential impacts to trails include increased muddiness, compaction, rutting, and erosion. Potential social conflicts tend to revolve around shared use with other visitors and crowding. With an increased use of parks and protected areas, understanding impacts of this increased use, both physically and socially, is of critical importance in order to maintain the resources of the Rim to Rim Corridor within Grand Canyon National Park. This study was designed to collect data about levels, types, patterns, and impacts of visitor activities within the Rim to Rim Corridor and thus, help inform the ongoing and future planning process related to visitor use management.

### PRINCIPAL INVESTIGATOR CONTACT INFORMATION:

Name: Ryan Sharp, PhD  
Affiliation: Kansas State University  
Address: 2021 Throckmorton, Manhattan, KS 66506  
Phone: 785-532-1665  
Email: [ryansharp@ksu.edu](mailto:ryansharp@ksu.edu)

### PARK OR PROGRAM LIAISON CONTACT INFORMATION:

Name: Michael Kearsley  
Park: Grand Canyon National Park  
Address: 1825 S Thompson St., Suite 200 Flagstaff, AZ 86001  
Phone: 928.638.7462  
Email: [michael\\_kearsley@nps.gov](mailto:michael_kearsley@nps.gov)

---

**PROJECT INFORMATION:**

Where will the collection take place? Grand Canyon National Park (GRCA)

Sampling Period Start Date: March 2018

Sampling Period End Date: October 2018

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

- Mail-Back Questionnaire     Face-to-Face Interview     Focus Groups  
 On-Site Questionnaire     Telephone Survey     Other (List)

Will an electronic device be used to collect information?

- No     Yes – Type of Device: Tablet Computer (e.g. iPad)
- 

**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.*

---

Grand Canyon National Park (GRCA) is considered to be one of the natural wonders of the world and is one of the most visited sites in the National Park Service System. According to the 2017 NPS Visitor Use Statistics, more than six million visitors were recorded in the park, which is an increase of about 500k from the previous year. With the projected increase in the number of annual visitors and recreational use, managers are concerned about social impacts of crowding and conflicts related to visitor use and recreation behavior. Although recreation management is an issue in every area of the park, the primary purpose of this collection is to provide visitor use information for that will be used by managers during the planning of backcountry management options for the Rim-to-Rim hike.

The "Rim-to-Rim" hike from the South Rim to the North Rim of the Grand Canyon is a 24 mile journey that has become a bucket list goal for many people. Based on anecdotal observation from park staff, there is increased in the number of visitors attempting this hike each year. The last study in 2006, found that up to 787 people took day hikes along the Bright Angel's Landing trail, 567 along the South Kaibab Trail, and 208 along the North Kaibab Trail. The park staff believes that use has continued to increase significantly along these trails and estimates that up to 800 people per day attempt the Rim-to-Rim trail on the busiest days of the year.

More and more, public land management occurs in a complicated environment that bridges social science and natural resource management. While scientists usually make decisions based on ecological and biological evidence, park managers are recognizing the need for data related to the social and psychological attachments as it relates to visitor use. Because of this, there is a need to identify and understand visitors' perceptions and attitudes towards any potential

management actions that may affect visitor behaviors. GRCA managers requested this information because they need to understand current conditions within the corridor, identify potential indicators and thresholds that may affect visitor management strategies and update existing plans aimed at providing high quality visitor experiences and protecting ecological and cultural resources. To that end, an on-site visitor survey will be used to collect information from visitors at the Bright Angel and the South and North Kaibab Trailheads.

**SURVEY METHODOLOGY:**

**(A) Respondent Universe:**

The respondent universe for this collection will be a systematic sample of all adult recreation users (age 18 and older), at the following intercept locations during the study periods (March 2018 - October 2018).

**Table 1: Survey Locations and Users to be surveyed**

Intercept Location	Recreation Users to be Surveyed
Bright Angel Trailhead	Hikers/Trail Runners/Backpackers/Float Trip Passengers
South Kaibab Trailhead	Hikers/Trail Runners/Backpackers/Float Trip Passengers
North Kaibab Trailhead	Hikers/Trail Runners/Backpackers/Float Trip Passengers

**(B) Sampling Plan / Procedures:**

According to the NPS visitor use statistics, approximately 6,280,398 people visited the park in 2017. Exact number of visitors at each location is not known, however the sample for this collection will fall across the fall, spring, and summer seasons, and is intended to capture a representative sample for each location. The numbers provided in the tables below are estimates based on: 1) previous studies, 2) areas of high, medium and low use, and 3) park manager input.

In order to accurately gauge experiences, visitors will be approached at the end of their experience as they are exiting the sampling areas. Sampling will occur at each of the trailheads, listed below, which allow access into the Rim to Rim Corridor from 9am to 5pm during the sampling periods. Someone will be stationed at each site on each sampling day. The tables below provide an example of the proposed sampling schedule.

**Table 2: Number of Sampling Days at Each Site**

Trailhead	Spring		Summer		Fall		TOTAL DAYS per SITE
	Week Days	Weekend Days	Week Days	Weekend Days	Week Days	Weekend Days	
Bright Angel	8	8	2	2	2	2	0
South Kaibab	8	8	2	2	2	2	0
North Kaibab	4	4	2	2	2	2	16

During the sampling period, we expect to contact 2,550 visitors. Based upon our sampling methods we anticipate that we will have to contact at least 150 visitors at each site during each four-day sampling period. We expect to contact a combined total of at least 1,100 people in the spring, 650 in the summer, and 800 in the fall at each site at the end of each sampling period.

**Table 3: Estimated Number of Visitor Contacts**

Location	Estimated Number of Visitor Contacts			
	Spring	Summer	Fall	TOTAL
Bright Angel Trailhead	400	250	300	950
South Kaibab Trailhead	400	250	300	950
North Kaibab Trailhead	300	150	200	650
<b>Total</b>	1,100	650	800	2,550

Someone will be stationed at each sample location between the hours of 9 am and 5 pm, for a total of 8 hours each day. During this time, a random sample of every 3<sup>rd</sup> visitor (or visitor group) will be approached and asked to participate in the collection. If a group of visitors is approached, the person with the most recent birthday will be chosen to take the survey. We expect that, on average, 50% of the people contacted will agree to complete the survey.

**(C) Instrument Administration:**

The initial contact with visitors will be used to explain the study and determine if visitors are interested in participating (see script below). This should take approximately one minute. If a group is encountered, the survey interviewer will ask the individual within the group with the next birthday to serve as the respondent. All visitors that refuse to participate will be asked if they would be willing to take two minutes to respond to non-response bias questions(see item E below). The number of refusals will be recorded and used to calculate the overall response rate for the collection.

Visitors selected for participating in the survey will be read the following script:

*“Hello, I am conducting a survey managers at the Grand Canyon to better understand your experience while on the trails within the rim to rim corridor at the park today. Your participation is voluntary and all responses will be kept anonymous. Would you be willing to take a 10-minute survey and give it back to the interviewer?”*

- ➔If **YES** – then ask, “has any member of your group been asked to participate in this survey before?”
  - If **“YES”** (already asked to participate) then, *“Thank you for agreeing to participate in this study. Have a great day.”*
  - If **“NO”** (have not been previously asked to participate) then, *“Thank you for agreeing to participate. Who in your group is at least 18 years old and has the next birthday? The interviewer will:*
    - *Ask the visitor to start the process by answering the non-response bias questions (listed below).*

- Record responses in spaces provided on the tracking sheet.
- Hand the tablet to the participant and ask them to return it to the administrator upon completion of the survey.

➔If NO- (soft refusal) - ask them if they would be willing to answer the non-response bias questions (listed below) and then thank them for their time. Record responses in spaces provided on the tracking sheet.

➔If NO- (hard refusal) - end the contact and thank them for their time.

**(D) Expected Response Rate / Confidence Level:**

The response rate for each of the collections is based on surveys at similar park sites. Based on the survey sample sizes, there will be 95% confidence that the survey findings will be accurate to within 3-5 percentage points. To achieve this, we will likely have to contact approximately 2,550 visitors assuming a 50% response rate. The proposed sample sizes will be adequate for bivariate comparisons and will allow for comparisons between study sites and more sophisticated multivariate analysis. For dichotomous response variables, estimates will be accurate within the margins of error and confidence intervals will be somewhat larger for questions with more than two response categories.

The number of refusals at each location will be recorded and reported in a survey log and will be used in calculating the overall response rate.

Location	Total number Initial Contacts	Acceptance 50%	Non-respondents (Soft refusals) 50%	Non-response survey 20%	Hard Refusals 80%
Bright Angel Trailhead	950	475	475	95	380
South Kaibab Trailhead	950	475	475	95	380
North Kaibab Trailhead	650	325	325	65	260
TOTAL	2,550	1,275	1,275	255	1,020

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

During the initial contact, the interviewer will ask each visitor four questions taken from the survey. These questions will be used in a non-response bias analysis.

1) What type of group are you traveling with today?

2) How many people are in your group?

3) How did this visit fit into your travel plans (i.e., primary destination, one of several destinations, or not a planned destination)?

4) How old is the person who will complete the questionnaire?

5) How concerned are you for your safety when traveling within the corridor? Not at all concerned, Slightly concerned, Neutral, Moderately concerned, Extremely concerned

Responses will be recorded on a log for every survey contact. Results of the non-response bias check will be described in a report and the implications for park planning and management will be discussed.

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

The questionnaire format and many of the questions have been used in many survey instruments previously approved by OMB. The questions are taken from the currently approved list of questions in NPS Pool of Known Questions (OMB 1024-0224; Current Expirations Date: 5-31-2019). Variations of the questions have been reviewed by GRCA managers and faculty from Kansas State University. The questionnaire was tested on eight voluntary members of the general public for burden length and clarity of the questions. Feedback from the volunteers was incorporated in the final questionnaire.

**BURDEN ESTIMATES:**

Overall, we plan to approach a total of 2,550 individuals at all sites during the sampling periods. Among which we anticipate that 1,275 individuals will agree to participate and complete a survey while on site. We expect that 1,275 (50%) visitors will refuse to participate and for those individuals, we record their reason for refusal.

Of all the visitors contacted (n=1,275) we expect that it will take one minute to ask if they would be willing to participate in the study (1,275 x 1 minutes = 21 hours). We expect that 20% (n=255) of the on-site refusals will agree to answer the four non-response bias questions. We anticipate that it will take no more than one minute to answer the questions resulting in a total of 4.25 hours for the non-response survey (255 x 1 minutes = 4.25 hours).

The remaining 1,020 visitors refusing to accept any part of the invitation to participate will not incur a respondent burden and for those individuals, we will attempt to record their reason for refusal.

We expect that after the initial contact, an additional 15 minutes will be required to complete and return the on-site questionnaire (1,275 responses x 15 minutes = 319 hours). The annual respondent burden for this collection combines the initial contact, plus the non-response survey, and the time to complete the on-site survey for an estimated 348 hours.

	Responses	Completion Time * (minutes)	Burden Hours
Completed questionnaire	1,275	16	340
Non-response survey	255	2	8
Total burden requested under this ICR:	<b>0</b>		<b>348</b>

\* Initial contact time added to completion time

---

**REPORTING PLAN:**

The study results will be presented in internal agency reports for NPS managers at the park. Response frequencies will be tabulated and measures of central tendency computed (e.g., mean, median, mode, as appropriate). The reports will be archived with the NPS Social Science Program for inclusion in the Social Science Studies Collection as required by the NSP Programmatic Approval Process. Hard copies will be available upon request.

## 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.