



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: 5/9/2017

PROJECT TITLE: Zion National Park Visitor Use Study

ABSTRACT: (not to exceed 150 words)

Visitation to Zion National Park (ZION) has been increasing for decades; during the last few years, visitor numbers have increased even more rapidly. ZION managers are particularly concerned with notable increases in levels of visitor use at key recreation locations such as Angels Landing, the Riverside Walk Trail, and the Narrows. To address these concerns, ZION managers desire to understand the temporal and spatial distributions of visitor use at Angels Landing, along with the Riverside Walk Trail, and in the Narrows to evaluate how current visitor use levels meet management expectations for resource protection, visitor health and safety, and visitors' expectations. This collection will provide ZION managers with information on visitation patterns and volumes, visitor experience quality, and safety perceptions using on-site visitor surveys and route card surveys. Ongoing visitor use planning efforts and the need to address increasing visitor experience and safety concerns necessitate a collection in summer 2017.

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PROJECT INFORMATION:

Where will the collection take place? Zion National Park (ZION)

Sampling Period Start Date: June 15, 2017 **Sampling Period End Date:** July 30, 2017

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

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

Will an electronic device be used to collect information? No Yes - **Type of Device:**

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 Zion National Park (ZION) has been increasing for decades, and during the last few years, visitor numbers have increased even more rapidly. ZION reached one million recreation visits for the first time in 1975. By 1990, visitation had doubled, and by 2014 the park recorded three million recreation visits. Visitation in 2015 was up 15% from 2014 levels to 3.65 million recreation visits. In addition to increased overall visitation, the "peak season" at the park has extended, and now lasts from early spring to late fall. Visitation numbers are expected to continue growing for the foreseeable future for several reasons including local population growth, population projects for the state of Utah, and a robust promotional campaign to visit Utah parks highlighting ZION. As visitation continues to increase, park managers are challenged to provide access to coveted recreation opportunities while ensuring the quality of visitors' experiences.

ZION managers are primarily concerned with increasing levels of use on the Angels Landing Trail and in the Narrows. Along the Angels Landing Trail, park managers have reported periodic events where visitor crowding limits the ability of visitors to travel along narrow sections of trail safely and comfortably. Additionally, isolated instances of severe injuries and fatalities along the Angels Landing Trail further underscore the need for park managers to understand the implications of increased visitor use. In the Narrows, park managers frequently report visitor crowding throughout the canyon. This increased use has negatively impacted visitors' experiences and is known to have negative impacts associated with water quality and erosion in and along the Virgin River.

To help park managers better understand the issues this on-site visitor questionnaire and route card survey will be administered to visitors on the Angels Landing Trail and the Riverside Walk Trail/the Narrows. The questionnaire will be

used to evaluate location-specific visitor perceptions of crowding, safety, and experiences. The questionnaire will be administered to visitors exiting either the Angels Landing Trail or the Narrows. The route card survey will be used to collect spatial and temporal information about visitor travel patterns along the Angels Landing Trail, the Riverside Walk Trail, and the Narrows for the duration of visitors' trips at these locations. Specifically, the route card survey will provide information on visitor travel times between key points of interest at each sample location (Angels Landing or the Narrows). The route card survey will also provide information on the pattern of travel between key points of interest. Because the route card survey will be administered at the beginning of a visitor's trip, it will collect spatial and temporal information in real-time as the trip is occurring, rather than rely on visitors' recollections of spatial and temporal information at the completion of their trip. In this way, the route card survey will allow for the collection of more robust and precise spatial and temporal travel pattern data than can be collected via the on-site questionnaire (administered at the end of a visitor's trip). The route card survey data will be paired with other measures of visitor use volumes to generate estimates of visitor densities at key locations along the Angels Landing Trail, Riverside Walk Trail, and the Narrows.

The on-site questionnaire and route card survey data collected will help inform the development of indicators and thresholds by the ZION management team for a Visitor Use Management Plan and will allow park managers to incorporate visitor opinions, perceptions, and experiences into longer-term visitor use management decisions.

SURVEY METHODOLOGY:

(A) Respondent Universe:

The respondent universe for this collection will be all recreational visitors, age 18 or older, within proximity of Angels Landing and the Narrows during the sampling period. Site-specific questionnaires will be distributed to eligible visitors at each location.

(B) Sampling Plan / Procedures:

The sampling plan described below is for the proposed visitor study including 1) on-site visitor questionnaire, and 2) on-site route card survey. Location specific on-site questionnaires and route cards will be administered at the Angles Landing Trail and along the Riverside Walk Trail/the Narrows.

On-site Visitor Questionnaire

A location-specific on-site visitor questionnaire will be administered to visitors exiting from the following two trail locations in ZION: 1) the end of the Angels Landing Trail, located at Scout’s Lookout, and 2) the end of the Narrows, located at the end of the paved Riverside Walk Trail. The location-specific on-site visitor questionnaires will be administered for a total of 10 days at each location. Throughout the duration of the study period, the sampling days will be stratified across weekdays and weekend days such that each site will be sampled for five weekdays and five weekend days and/or holiday (Table 1). Sampling will be conducted over an 8-hour period on each sampling day at each sampling location, starting between 7:00 am and 10:00 am and concluding between 3:00 pm and 6:00 pm on each sampling day, to coincide with peak periods of visitor use. Sampling locations will be staffed with the appropriate number of survey administrators to ensure daily targets are met on weekends and weekdays.

Table 1. Sampling Days Per Site - On-site Visitor Questionnaire

Location	June		July		TOTAL
	Week day	Week end	Week day	Week End*	
Angels Landing Trail	4	2	1	3	10
The Narrows/Riverside Walk Trail	4	2	1	3	10
TOTAL	8	4	2	6	20

*Note: Includes Monday, July 3rd, and Tuesday, July 4th as weekend days due to holiday visitation.

The visitor questionnaire will be administered as an on-site completion survey; participants will be expected to complete and return the questionnaire to the survey administrator before leaving sample intercept area. At each intercept location, a “first-after-last completed” sampling approach will be used to select random visitor groups to participate in the study. At the start of the sampling period, the first visitor group to exit will be greeted and asked if their visit to the sampling location (i.e., either the Angels Landing Trail or the Narrows) has concluded for the day. If the visitor group answers “yes”, the study administrator will introduce the purpose of the study and ask if the visitor

group is willing to participate. If a visitor group agrees to participate, they will be asked which member of the group (at least 18 years old) has the next birthday; the individual with the next birthday will be asked to complete the questionnaire for the group. This will be done to randomize the selection of the individual within the group to complete the questionnaire. Upon completion of the questionnaire by the participant, the survey administrator will collect the completed questionnaire and thank the participant for their time. The survey administrator will then approach the next exiting visitor group and repeat the above specified intercept process. If an approached visitor group responds “no” to the question of whether or not their visit to the sampling location is completed for the day, the survey administrator will record the group as ineligible, thank them for their time, and will approach the next exiting visitor group.

After being contacted to participate in the survey, an interview, lasting approximately two minutes, will be conducted with all eligible visitor groups, regardless of whether or not they agreed to participate in the study. The answers to these pre-selected questions will be used to perform a non-response bias analysis in which responses from participants are compared to responses from visitors refusing to participate in the study.

The target number of completed questionnaires, per location, is 480 questionnaires. This target number is intended to ensure that an adequate sample will be generated so that there will be a 95% confidence that the survey findings will be accurate to approximately 5 percentage points for both locations (based on the formula where confidence level = $1 \div \sqrt{N}$, where N = target distribution number). Given this target number of completed questionnaires, and an assumed acceptance rate of 80% (See Section D: Expected Response Rate/Confidence Interval for more detail), the total number of visitor contacts will be 1,200 visitors, 600 visitors per location (Table 2).

Table 2. Number of Visitors Contacted Per Site, On-site Visitor Questionnaire

Visitor Survey	June		July		TOTAL
	Week day	Week end	Week day	Week end	
Angels Landing Trailhead	240	120	60	180	600
The Narrows - Riverside Walk Trail	240	120	60	180	600
TOTAL	480	240	120	360	1,200

On-site Route Card Survey

A location-specific route card survey will be administered to visitor groups in two target areas of ZION: 1) the Angels Landing Trail, and 2) the Narrows. For each target area, route cards will be administered to entering visitor groups at the following locations:

Angels Landing

- 1) the West Rim Trailhead in Zion Canyon
- 2) Scout’s Lookout (Angels Landing Trail);

The Narrows

- 1) the end of the Riverside Walk Trail,
- 2) Orderville Canyon

The location-specific route card survey will be administered for a total of 10 days in each of the two target areas (Angels Landing Trail and the Narrows). Throughout the duration of the study period, the sampling days will be stratified across weekdays and weekend days such that each site will be sampled for five weekdays and five weekend days and/or holidays (Table 2). Sampling will be conducted over an 8-hour period on each sampling day at each sampling location, starting between 7:00 am and 10:00 am and concluding between 3:00 pm and 6:00 pm on each sampling day, to coincide with peak periods of visitor use. Sampling locations will be staffed with the appropriate number of survey administrators to ensure daily targets are met on weekends and weekdays.

Table 3. Sampling Days Per Site - On-site Route Card Survey

	June		July		TOTAL
	Week day	Week end	Week day	Weekend/Holiday*	
Angels Landing Trail**					
West Rim Trailhead in Zion Canyon	3	2	2	3	10
Scout’s Lookout	3	2	2	3	10
Angels Landing Total	3	2	2	3	10
The Narrows**					
End of Riverside Walk Trail	3	2	2	3	10
Orderville Canyon	3	2	2	3	10
Narrows Total	3	2	2	3	10
TOTAL	6	4	4	6	20

*Note: Includes Monday, July 3rd, and Tuesday, July 4th

**Note: Sampling days within target location occur concurrently.

On each sampling day at each location (i.e., Angels Landing Trail or the Narrows), route card survey administrators will be stationed at the interception locations listed in Table 3. At each route card survey intercept location, a “first-after-last completed” sampling approach will be used to select random visitor groups for participation in the study. At the start of the sampling period, the route card survey administrator stationed at each intercept location will contact the first arriving group to their location and ask them if they would be willing to participate in the route card survey. If a visitor group agrees to participate, they will be asked which member of the group (at least 18 years old) has the next birthday; the individual with the next birthday will be asked to carry the route card for the group. This will be done to randomize the selection of the individual within the group to carry the route card. For each visitor group agreeing to participate, the route card survey administrator at the corresponding intercept location will record on a route card the size of the visitor group, the date, and the current time. The route card survey administrator will then hand the visitor group the route card and instruct them to carry the card during their hike and to hand the card to each route card survey administrator they encounter during their hike. The route card

survey administrator will then approach the next arriving visitor group and repeat the above specified intercept process. If an approached visitor group refuses to participate in the route card survey, the route card survey administrator will record the group as a refusal, thank them for their time, and will approach the next arriving visitor group.

After being contacted to participate in the route card survey, an interview, lasting approximately two minutes, will be conducted with all approached visitor groups, regardless of whether or not they agreed to participate in the study. The answers to these pre-selected interview questions will be used to perform a non-response bias analysis in which responses from participants are compared to responses from visitors refusing to participate in the study.

The target number of completed route card surveys, per target location, is 1,080 route cards, for a total of 2,160 route cards. This target number is intended to ensure that an adequate sample will be generated. It is expected that the route card survey findings will be accurate to approximately 3 percentage points for both locations (based on the formula where confidence level = $1 \div \sqrt{N}$, where N = target distribution number). Given this target number of collected routes, and an assumed acceptance rate of 90% (See Section D: Expected Response Rate/Confidence Interval for more detail), the total visitor contacts will be 2,400 visitors, 1,200 at each target location (Table 4). Based on current patterns of visitor use on the Angels Landing Trail, the majority of visitors are expected to be contacted to participate in the route card survey at the West Rim Trailhead in Zion Canyon (n=1,176) and a very small number of visitors at Scout’s Lookout (n = 24). Based on current patterns of visitor use at the Narrows, the majority of visitors are expected to be contacted to participate in the route card survey at the end of the Riverside Walk Trail (n=1,140) and a very small number of visitors at Orderville Canyon (n = 60).

Table 4. Number of Visitors Contacted Per Site - Route Card Survey

Visitors Contacted Per Site	June		July		TOTAL
	Week day	Week end	Week day	Week end	
Route Card					
Location: Angels Landing Trail					
West Rim Trailhead in Zion Canyon	353	235	235	353	1176
Scout’s Lookout	7	5	5	7	24
Angels Landing Trail Total	360	240	240	360	1200
Location: The Narrows					
End of Riverside Walk Trail	342	228	228	342	1140
Orderville Canyon	18	12	12	18	60
The Narrows Total	360	240	240	360	1200
TOTAL	720	480	480	720	2400

(C) Instrument Administration:

The initial contact with all visitor groups for both the on-site visitor questionnaire and the on-site route card survey at each administration location will be used to explain the study and determine visitor group interest in participating. When a visitor group is intercepted according to the “first-after-last-contact” protocols (See Section B: Sampling Procedures) and expresses interest in the study, the survey administrator will ask the member of the group that is at least 18 years of age or older (if it is not apparently obvious) with the next birthday to participate in the study. The initial contact is not expected to take more than one minute.

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

- Working with survey administrators to ensure that survey administration protocols are being followed properly,
- Recommending the adjustment of the specific bounds of the survey administration area to capture the flow of visitors.

On-site Visitor Questionnaire

The identified respondent will be given a questionnaire, provided instructions, and will be informed that the questionnaire is designed to take no more than 12 minutes to complete and that no personally identifiable information will be collected. The respondents will be asked to complete and return the questionnaire to the survey administrators before leaving the sampling area. The on-site intercept script for the visitor questionnaire is as follows:

“Hello, my name is _____. I am conducting a survey for Zion National Park to help managers understand your experience on the trail today. Your participation is voluntary, and all responses will be kept anonymous. Would you be willing to complete a survey questionnaire about your experience on the trail today?”

➔ If YES – then ask (if not obvious), “Is there at least one adult group member at least 18 years of age or older?”

→ If NO (no adult group members) – then say, “Ok. Thank you for your time and have a great day.”

→ If YES – then ask, “Has any member of your group already participated in the survey?”

If YES (previously agreed to participate) then, “Thank you for participating in this study. Have a great day.”

If NO (have not previously participated) then, “Thank you for agreeing to participate. Has your visit to (Angels Landing or the Narrows) concluded for the day?”

→ If NO (visit is not complete) – then say, “Ok. Thank you for your time and have a great day.”

→ If YES (visit is complete) – then say, “Ok. Thank you for your time and have a great day.”

“Great. The questionnaire should not take more than 12 minutes to complete. Of the adults in your group, whose birthday is next?” (Identify visitor and direct next portion of contact to this visitor.) “Great, I’d like to ask you to complete this questionnaire (hand the questionnaire and writing utensil to the participant). Most of our questions are in the questionnaire booklet itself, but I do have a few questions I need to ask you now.”

[The survey administrator will ask them to start the process by answering the non-response bias questions. The responses will be recorded by the survey administrator in spaces provided on the survey log and non-response bias form. After completing the non-response bias question interview, the survey administrator will direct the respondent to a location where they may take the survey.]

→ If NO – (soft refusal) then, “That’s fine. We won’t bother you with a questionnaire today. But would you be willing to take just one more minute and answer a couple of questions for me now, to help us be sure our sample is reliable?”

[The survey administrator will ask them to start the process by answering the non-response bias questions. The responses will be recorded by the survey administrator in spaces provided on the survey log and non-response bias form.]

→ If NO – (hard refusal) then, “Thank you for your time. Have a great day.”

Photo Elicitation Component of On-site Visitor Questionnaire

Approximately one-third of the way through the survey, each respondent will be asked to review a series of six photographs used to depict various levels of crowding on the top of Angels Landing or in the Narrows, depending on the sampling location. Each of the six photographs will be presented individually, and the respondent will be asked

to view each photo and indicate (yes or no) if they would feel crowded with the number of people in the area photographed. The order of the photographs will be predetermined, such that each respondent viewing the set of photographs views them in the same order. Additionally, eight sets of six photographs will be prepared for use in this portion of the on-site visitor questionnaire. Each set of the photographs will be administered on a rotating basis (e.g., the first respondent, ninth respondent, eighteenth respondent, will evaluate photo set #1; the second respondent, tenth respondent, nineteenth respondent, etc., photo set #2). Respondents will use the photos to provide responses in this section about preferences for experience conditions. At the end of the photo evaluation section, the survey administrator will leave the respondent to complete the remainder of the survey.

Route Cards

The route card survey is designed to collect spatial and temporal information about visitor travel patterns along the Angels Landing Trail, the Riverside Walk Trail, and the Narrows throughout the duration of visitors' trips at these locations. Specifically, the route card survey will provide information on visitor travel times between key points of interest at each sample location (Angels Landing or the Narrows). The route card survey will also provide information on the pattern of travel between key points of interest. Because the route card survey will be administered at the beginning of a visitor's trip, it will collect spatial and temporal information in real-time as the trip is occurring, rather than rely on visitors' recollections of spatial and temporal information at the completion of their trip. In this way, the route card survey allows for the collection of more robust and precise spatial and temporal travel pattern data than can be collected via the on-site visitor questionnaire (administered at the end of a visitor's trip in this study). The route card survey data will be paired with other measures of visitor use volumes to generate estimates of visitor densities at key locations along the Angels Landing Trail, Riverside Walk Trail, and the Narrows.

At least five waypoints will be established at key nodes and/or destinations along the trail or route of travel for the Angels Landing Trail and the Narrows. At each waypoint, there will be a survey administrator that will collect the route card from passing participants, record the location and time on the card, and hand the route card back to the respondent. Additionally, survey administrators will be stationed to collect route cards from visitors exiting the sampling areas. Before turning in their route cards, each participant will be asked to answer up to three survey question(s) about their experience included on the back of the route card, after which the completed route card will be collected by survey administrator.

Identified respondents will be given a route card, provided instructions for the route card. The respondents will be told that they are expected to return the route card to a study administrator at the end of their visit, before leaving the sampling area. The on-site intercept script for the route card survey is as follows:

"Hello, my name is _____. I am conducting a survey for Zion National Park to help managers understand your travel patterns on the trail today. Your participation is voluntary, and all responses will be kept anonymous. Would you be willing to participate in a route card study to document your travel patterns on the trail today?"

→ If YES - then ask (if not obvious), "Is there at least one adult group member at least 18 years of age or older?"

→ If NO (no adult group members) - then say, "Ok. Thank you for your time and have a great day."

→ If YES - then ask, "Has any member of your group already participated in this route card survey?"

If YES (previously agreed to participate) then, "Thank you for participating in this study already. Have a great day."

If NO (have not previously participated) then, "Thank you for agreeing to participate. Participation should not take more than 6 minutes total spread across the duration of your hike. Of the adults in your group, whose birthday is next?" (Identify visitor and direct next portion of contact to this visitor.)

[Before the route card is administered to the respondent, the survey administrator will note the card ID number, date, their initials, the visitors' group size, the visitors' route, and if they are a day or overnight visitor. The identified respondent will then be provided instructions using the following script.]

"Great, I have a route card for you. The route card allows us to understand patterns of visitation to [Angels Landing/the Narrows]. You will carry the route card for the duration of your hike and return it to a survey administrator at the end of your hike. Along the way, you will periodically encounter other survey administrators who will ask you for your card. They will record the time of day and location on the card, and will then return it to you. Each of these contacts will take less than 30 seconds, with no more than 10 total contacts. At the end of your hike, you will be asked the answer a couple of questions on the back of the card before returning it to the survey administrator.

Before you continue, I do have a few questions I need to ask you now."

[The survey administrator will ask them to start the process by answering the non-response bias questions. The responses will be recorded in spaces provided on the survey log and non-response bias form. After completing the non-response bias

question interview, the survey administrator will thank the group for their time, and the group will proceed with their hike.]

→ If NO - (soft refusal) then, *"That's fine. We won't bother you with the route card survey today. But would you be willing to take just one more minute and answer a couple of questions for me now, to help us be sure our sample is reliable?"*

[The survey administrator will ask them to start the process by answering the non-response bias questions. The responses will be recorded in spaces provided on the survey log and non-response bias form.]

→ If NO - (hard refusal) then, *"Thank you for your time. Have a great day."*

(D) Expected Response Rate / Confidence Level:

On-Site Visitor Questionnaire

Approximately 1,200 visitors will be contacted for the on-site visitor questionnaire component of the study (Angels Landing n=600, the Narrows n=600). Based on similar studies conducted by Resource Systems Group, Inc. (RSG) for the National Park Service, using similar prescribed sampling methods, we propose an on-site acceptance rate of at least 80% for this collection. We anticipate we will receive 960 completed surveys from all visitors contacted at both locations (Angels Landing n=480, the Narrows n=480).

The number of refusals will be recorded and will be used in calculating the response rate. Based on the expected number of responses at each survey location, there will be 95% confidence that the survey findings will be accurate to approximately 5 percentage points for both sampling locations.

An experienced on-site field supervisor will track survey response rates on a daily basis and will provide additional training and support at locations or for survey interviewers with response rates lower than anticipated.

Route Card Survey

Approximately 2,400 visitors will be contacted for the on-site route card survey (Angels Landing n=1,200, the Narrows n=1,200). Based on similar studies conducted by Resource Systems Group, Inc. (RSG) for the National Park Service, using similar prescribed sampling methods, we propose an on-site acceptance rate of at least 90% for this collection. We anticipate we will receive 2,160 completed surveys from all visitors contacted at both locations (Angels Landing n=1,080, the Narrows n=1,080).

The number of refusals will be recorded and will be used in calculating the response rate. Based on the expected number of responses at each location, there will be 95% confidence that the survey findings will be accurate to approximately 3 percentage points for both locations.

An experienced on-site field supervisor will track survey response rates on a daily basis and will provide additional training and support at locations or for survey interviewers with response rates lower than anticipated.

Table 5. Expected Acceptance Rates

	Intercept Location	Initial Contacts	Acceptance 80%	Non-respondents 20%	Non-response survey 80%	Hard Refusals 20%
Visitor Survey	Angels Landing	600	480	120	96	24
	The Narrows	600	480	120	96	24
	Visitor Survey Total	0	0	0	0	0
	Intercept Location	Initial Contacts	Acceptance 90%	Non-respondents 10%	Non-response survey 80%	Hard Refusals 20%
Route Card Survey	West Rim Trailhead in Zion Canyon	1,176	1,058	118	94	24
	Scout's Lookout	24	22	2	2	0
	<i>Angels Landing Total</i>	1,200	1,080	120	96	24
	Riverside Walk Trail	1,140	1,026	114	91	23
	Orderville Canyon	60	54	6	5	1
	<i>Narrows Total</i>	1,200	1,080	120	96	24
	Route Card Total	0	0	240	192	48
Combined Total		3,600	3,120	480	384	96

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

Responses to the non-response bias questions will be recorded for every contact, except “hard refusals” (refuse to participate in the study and refuse to answer the non-response bias questions). 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. For all “hard refusals” observational data (group size, gender, and time of day) will be recorded. The number of refusals will be recorded and used to calculate the overall response rate for the collection at the park.

On-site Visitor Questionnaire

The following four questions will be used in a non-response bias analysis for the on-site questionnaire. These questions will be asked to visitors who refused to participate when initially contacted and did not give a “hard refusal” (refuse to participate in the study and refuse to answer the non-response bias questions), and to respondents in groups who agreed to participate. Responses to these questions will be recorded by the survey administrator on the survey contact log form.

1. *Did you feel crowded on the Angels Landing Trail/in the Narrows as a whole? Yes/No*
2. *Including yourself, how many people were in your personal group on this trip?*
3. *On this visit, what type of group were you with?*
4. *What is your state or country of residence (if not the US)?*

Route Card Survey

Non-response bias protocols for the route cards will be the same as for the on-site questionnaire; however, only the following three questions will be asked:

1. *Including yourself, how many people are in your personal group on this trip?*
2. *On this visit, what type of group are you with?*
3. *What is your state or country of residence (if not the US)?*

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

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

Pretesting of the on-site visitor questionnaire occurred with three administrative staff (e.g., H.R. representatives, accountants) in RSG's White River Junction office, who do not possess experience with or knowledge of survey research or park management. The respondents commented that the wording of the questions was clear, and review of their responses on their questionnaires reflected their understanding. Questionnaire completion times were observed and are incorporated into the burden estimate below.

Due to the nature of the route cards and the terrain of the sampling locations, pretesting will not be conducted before scoping in the field. Based on previous studies, we assume that it will no more than 30 seconds for a visitor to receive a timestamp on their route card, each time they contact a survey administrator (up to 10 times). It is also assumed that each question on the route card will take up to 1 minute for the visitor to complete (up to 3 questions).

BURDEN ESTIMATES:

The combined total burden for this collection is estimated to be 634 hours. For both survey efforts (Visitor Study and Route Card), we have estimated respondent burden as follows:

- ❖ Total Initial contact time – 60 hours.
 - One minute will be used to explain the survey to all visitors contacted and to request participation (n=3,600).
- ❖ Non-response bias check (non-respondents): 16 hours
 - Two minutes will be used to conduct the non-response bias check with all non-respondents (n=480).
- ❖ Visitor Study Survey: 256 hours.

- Two minutes will be used to provide instructions to all visitors that agree to participate (n=960)
- One minute will be used to conduct the non-response bias check with all respondents.
- 12 minutes to complete and return the on-site questionnaire
- ❖ Route Card Survey: 216 Hours
 - 6 minutes to complete and return the completed route card (n=2,160)

It is expected that the remaining 96 visitors (approximately 3% of all visitors contacted) will completely refuse to participate and for those individuals, there will be no calculation of burden. However, the surveyor will record any reason for refusal and the observational data listed above.

Table 6. Combined Burden Estimates

Respondents	Responses	Completion Time * (minutes)	Burden Hours
Total Initial contact time	3,600	1	60
Non-response Survey (non-respondents only)	384	2	13
Instructions/ non-response check/visitor survey	960	15	256
Route Card	2,160	6	216

	Respondents		Burden Hours
Total burden requested under this ICR:	3,120		545

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 hard copy and electronic formats, 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.

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.