



## 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: 10-26-2020**

**PROJECT TITLE:** Visitor Survey to Inform Park Planning at Zion National Park

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

Zion managers have identified visitor use management and commercial services as primary planning needs in the park. The purpose of this study is to inform core issues of visitor use management, management solutions, and to develop a current and deeper understanding of who visits Zion National Park, what they do during their visit, and their spending profile. The study adopts a two-phased data collection methodology: 1) an on-site survey and 2) follow-up mail back survey. This collection is intended to provide data to allow in-season adjustments to management strategies that will offer insights into visitor experiences, trip characteristics, and spending for long term management.

### **PRINCIPAL INVESTIGATOR CONTACT INFORMATION:**

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## PROJECT INFORMATION:

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

**Sampling Period Start Date:** 1/30/2021

**Sampling Period End Date:** 6/27/2021

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

Mail-Back Questionnaire  
Face-to-Face Interview

On-Site Questionnaire  
Focus Groups

Telephone Survey  
Other (List)

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

## 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. Concerns about high levels of visitor use and its impact to the park resources were first addressed in the late 1970s with a Master Plan that introduced the eventual shuttle system. ZION reached one million recreation visits for the first time in 1975. By 1990 visitation doubled, and in 2014, ZION recorded three million visits. As visitation increased to more than 4.32 million visits in 2018, park managers are concerned that the continued increase of visitor use will cause long-term impacts on the resources in the park. While the park's shuttle system has successfully addressed many of the vehicular congestion issues in the park, it has also led to shifting impacts in Zion Canyon. The shuttle system enables an increase in the number of people who can access the main canyon at one time, leading to increased social and resource impacts in the canyon and on popular trails. The timing and dispersal of people in Zion Canyon is problematic, leading to concentrated visitor use on certain trails (Zion Foundation Document, 2013).

Zion managers have identified visitor use management and commercial services as the primary planning needs in the park. An established visitor use management plan will require data to sustain desired resources conditions and visitor experiences. A commercial services plan will aid in determining which commercial services are necessary and appropriate in the developed areas of the park.

Given the above planning needs, ZION managers require this information collection in order to determine current utilization and perception of park resources, operations, and issues that may exist due to increased visitation. Further, the information is needed to facilitate communication and decision processes within the park and between the park and its local partners and stakeholders. A visitor survey will be used to evaluate the following:

1. Visitor spending profiles - These profiles enable a better understanding of how and where visitors spend their travelling dollars; thus, generating information useful to the park and local officials about the impact of potential management decisions that may alter visitor experiences;
2. Trip Characteristics - Enables understanding of travel demand for the park and its relationship to the region;

3. Visitor Perceptions – Identifies visitor perceived conditions on the ground allowing the park to consider implications of potential management decisions.

This comprehensive approach provides ZION managers immediate feedback – within two weeks from the intercept survey - with information to make potential management decisions.

## SURVEY METHODOLOGY

### (A) Respondent Universe:

Based on the 2019 NPS Visitor Use Statistics Report, ZION recorded approximate 4,488,268 visitors. The respondent universe for the on-site and follow-up surveys will be all adult visitors (18 years old and older) in the park during the two sampling periods (January 30 – February 7, 2021 and June 19-27, 2021).

### (B) Sampling Plan / Procedures:

This collection will use an on-site intercept survey and a follow-up mail-back survey to capture a representative sample of visitor information, characteristics, and behavior. The framework for this study lies in a two-phase survey instrument that will provide both a rapid data response, as well as an in-depth record of trip details.

#### On-site Intercept Survey

A random sampling of visitors will be intercepted while visiting ZION across four designated locations: 1) South Entrance; 2) East Entrance; 3) Kolob Terrace Road; and 4) Kolob Canyon Road (Table 1). Intercept effort and the number of target intercepts by site will be in proportion to historic traffic/visitor volume at each location. This will be seasonally adjusted where warranted (e.g., Kolob Terrace survey will be summer only). Visitors will be intercepted at roadways while driving and in attraction areas while out of their vehicles; visitors will also be intercepted as they end of an experience.

**Table 1. General Sample Locations and Intra-Area Intercept Sites.**

Sample Location	Roadway Sites (In Vehicles Intercepts)	Attraction Areas (On Foot Intercepts)
South Entrance	exiting direction	Zion Canyon Visitor Center, Zion Lodge, The Grotto, Weeping Rock, Temple of Sinawava
East Entrance	eastbound direction	Canyon Overlook trail/the Tunnel, Many Pools Trailhead
Kolob Terrace Road (Summer only)	both directions	Wildcat Canyon Trailhead, Grapevine Trailhead, Left Fork Trailhead
Kolob Canyon Road	exiting direction	Visitor Center, Kolob Viewpoint

#### Intercepting Visitors in Vehicles

Locations where surveying requires intercepting vehicles (Table 1), a random sample of visitors traveling past the intercept locations will be safely flagged into a designated survey area. Surveyors will be instructed to attempt to intercept every *N*th vehicle passing. *N* will be determined based on anticipated volume and number of intercepts required at each location.

### Intercepting Visitors on Foot

In locations where surveying requires intercepting individuals on foot or otherwise outside of their vehicles (Table 1) (e.g., shuttle line, trail heads, visitor centers, etc.), visitors will be randomly approached. Surveyors will be instructed to attempt to intercept every Nth group passing. N will be determined based on anticipated volume and number of intercepts required at each location.

**Table 2. Example Schedule During a Typical Sampling Period.**

Survey Locations	Winter			Summer		
	Sampling Days per period	Number of visitors contacted	Completed On-site Surveys	Sampling Days per period	Number of visitors contacted	Completed On-site Surveys
South Entrance	9	1,224	1,102	9	1,017	916
East Entrance	9	331	298	9	465	418
Kolob Canyon Road	4	112	100	4	75	67
Kolob Terrace Road				4	110	99
<b>Total</b>		<b>1,667</b>	<b>1,500</b>		<b>0</b>	<b>0</b>

Three dedicated surveyors plus two social scientists will be on site collecting surveys. Each member of this survey team will work eight of the nine days within each of the sampling periods. Days off will be staggered such that at least four members will be working on any given day. One surveyor and one social scientist will be stationed in each of the four sample locations (Table 1).

### Mail-Back Survey

All respondents completing the on-site survey will be asked to complete and return a mail-back survey after completing their trip to ZION. A survey and postage-paid envelope will have a corresponding survey ID to match their on-site survey that will be used to identify non-respondents. Respondents who complete the tablet survey but refuse to take a mail-back will be considered non-respondents for the mail-back. These refusals are accounted for in non-response estimates for the mail-back.

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### (C) Instrument Administration:

The on-site collection will be interview -style using a tablet-based questionnaire to collect responses. This method will allow responses to be made available within two weeks of data collection. The follow-up survey will be delivered to any participating respondents who were intercepted in the on-site survey portion.

### On-site Intercept Survey

The on-site survey will be administered to visitors at the end of their visit at designated intercept locations. Surveyors will contact potential respondents on roadway segments in the park exiting direction and in attraction areas where visitors are leaving the site. If the visitor agrees to participate in the study, the surveyor will verbally administer the survey questions and will record the responses via an Android Tablet. If the visitor does not agree, surveyors will thank them for their time, ask if they would be willing to answer the three non-response bias questions.

Following a brief introduction of the purpose of the survey, the potential respondent (adult group member with the most recent birth date) will be asked if they are willing to take part in the 5-minute survey administered by the surveyor.

**Sample Script for On-site Survey:**

*“Hello, I am working with Zion National Park conducting a 5-minute survey to improve visitor experiences in the park. May I ask you several questions about your Zion experience?”*

→If **NO** – The surveyor will thank the visitor and ask them to answer the three questions that will serve as a non-response bias check (in Section E below)

→If **YES** – The surveyor will begin the on-site visitor survey with the recruited individual after reading the Paperwork Reduction and Privacy Act below. The surveyor will verbally administer the survey and record responses on an Android Tablet. Upon completion of the on-site survey, the respondent will be thanked for their time.

*Before we begin, I would like to let you know that this survey has been approved by the Office of Management and Budget. It is important to note that a Federal agency may not conduct or sponsor, and you are not required to respond to, a collection of information unless it has a valid OMB control number. The control number for this collection is XXX and this number is valid through XXX. Secondly, your participation is voluntary and your name will never be connected with your individual responses. This survey will only take about five minutes of your time today.*

The Intercept survey includes questions used in the non-response bias check (e.g., residency, permanent or seasonal residency in the local area around ZION, and whether or not the respondent spent a night away from their permanent residency on this trip).

Four potential outcomes are expected following the request to participate:

1. Complete refusal;
2. Partial refusal, answering non-response questions but nothing further;
3. Complete on-site survey, but refuse to take mail-back;
4. Complete on-site and take mail-back.

As part of the intercept protocol, surveyors will input a unique identifier into the tablet for future connection to the mail-back survey. The final question on the survey will provide the respondent an opportunity to input their address and/or email that will be used solely for the purpose of the follow-up protocol using the “Tailored Design Method.” Personal information collected will be stored separately from the survey responses.

**Mail-Back Survey**

Following completion of the on-site survey, all respondents will be asked to take a mail back survey that asks additional questions pertaining to their trip. Those agreeing to take a mail-back survey will be provided a numbered survey, and postage-paid envelope corresponding to their on-site survey ID. Respondents will be asked to complete and return the survey after completing their trip to ZION. Surveys may be mailed back from any US mailbox. International travelers will

be encouraged to mail the survey back prior to leaving the US. Respondents will also be provided an online link to use the option of completing the survey.

In addition to receiving the mail-back survey, respondents will be asked for their home address and/or email address. A follow-up thank you and reminder postcard or email to be sent to all contacts at the end of each data collection period. This postcard or email will: (1) thank them for their original participation, (2) encourage them to complete the mail-back, and (3) provide an online link to complete the on-line survey if they have not already completed and returned the survey.

Three weeks after the postcard mailing, a second survey packet (with the same unique IDs) will be delivered to all non-respondent addresses/emails. The survey packet will include a survey, appropriate postage paid, self-addressed return envelopes. Postage will depend on whether the address is international or domestic. A final contact will be sent to all remaining non-respondents two to four weeks after the first mail-back replacement survey was sent. This final contact will be via an alternate mode than US Mail used in the previous contacts. This different mode may be via UPS or FedEx.

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

**On-site Survey**

Based on previous research experience with this method and as indicated above, we estimate that at least 90% (n=1,500) of visitors contacted during each sampling period will agree to participate in the on-site survey. We expect 90% of those who do not agree to participate in the on-site survey to answer the non-response bias questions (n=300) with roughly 34 visitors completely refusing to participate in any part of the collection. The completed on-site surveys yield a confidence level of 95% with a margin of error within each period of +/-2.53% and an overall margin of +/- 1.79%.

**Table 3. Anticipated Onsite Survey Response Rates**

Sampling Period	Total Number of Visitor Contacts	Completed Onsite Surveys 90%	Refusals 10%	Completed Non-Response Surveys (90% of soft refusals)	Hard Refusals (10% of soft refusals)	Margin of Error*
Winter	1,667	1,500	167	150	17	+/-2.53%
Summer	1,667	1,500	167	150	17	+/-2.53%
<b>TOTAL</b>	<b>3,334</b>	<b>3,000</b>	<b>334</b>	<b>300</b>	<b>34</b>	<b>+/-1.79%</b>

\*Note: RRC Associates and ITRR conducts frequent on-site surveys across the U.S. and these percentages are based upon the average refusals obtained.

**Mail-Back Survey**

For the Mail-Back survey, we estimate that 40% (n=600) of the respondents who completed the on-site survey will complete the mail-back survey. This response rate estimate includes those that refuse to take the mail-back following the intercept. Based on previous experience by the research team with tablet based intercept surveys followed by a request to take a mail-back survey, approximately 95% of respondents take the mail-back. Table 5 provides information related to response rates for both the winter and summer surveying periods. The initial contacts represent the number of respondents who are asked to take the mail-back following the intercept. No additional non-response questions will be posed to non-respondents. Front-end questions will be utilized for dealing with potential non-response bias. The completed mail-back surveys yield a confidence level of 95% with a margin of error within each period of +/-4.00% and an overall margin of +/- 2.83%.

**Table 5. Anticipated Response Rates (Mail-back Survey)**

Respondents	Initial Contacts	Acceptance of Mail-back 95%	Hard Refusals 5%	Completed Mail-back survey 40%	Non-respondents 60%	Margin of Error*
Winter	1,500	1,425	75	600	900	+/-4.00%
Summer	1,500	1,425	75	600	900	+/-4.00%

\*Note: RRC Associates and ITRR conducts frequent on-site surveys across the U.S. and these percentages are based upon the average refusals obtained.

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

To account for potential on-site non-response bias, surveyors will attempt to ask non-responding visitors the following questions:

- “Are you a permanent resident of the United States?”
- “Are you a permanent or seasonal resident of the local area around Zion National Park?”
- “On this trip, did you [and your personal group] stay overnight away from your permanent residence either inside Zion National Park or within the local area”?

These questions will be compared to those who complete the on-site survey to identify if any non-response bias exists and strategies to correct for it. Where necessary, adjustments to minimize non-response will be made in the summer survey period based on lessons learned in the winter. Where significant differences are identified, weighting will be applied to the on-site survey results.

A second non-response bias check will be necessary to account for any differences between those who return the mail back survey and those that do not. Each mail back survey will have a unique identifier that links the on-site and mail back surveys. As such, the research team will have access to the full suite of on-site questions answered. Following completion of data collection of the mail back surveys, the research team will use the same three non-bias check questions to compare the results between those return the mail back portion with the respondents completing the on-site survey but did not return the mail-back survey. This second comparison will be used to identify any necessary weighting of the mail back data.

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

The questions in both surveys come from the NPS Pool of Known (OMB Control Number 1024-0224). The on-site and mail-back survey instruments were pre-tested in the format in which they are to be delivered (i.e., tablet or online) to determine question understanding and length. The pre-tests were conducted by Social Scientists working on the project at the University of Montana. These Social Scientists identified students, faculty, and staff (9 in total) who had been to ZION in recent years and felt they could readily recall their experiences. Based upon the pretest we were able to assess and correct skip patterns within the survey and gauge readability of the posed questions. For the on-site survey, we have estimated from these pre-tests that it will take at least one minute to introduce the survey and an additional 5 minutes to complete the on-site survey. For the visitors refusing to complete the on-site survey it will take no more than one minute to ask nonresponse questions if the respondent does not want to participate in the full survey. The mail-back survey should take approximately 15 minutes to complete.

These estimates conform to averages from the project team’s combined ongoing field studies across the Western U.S. All concepts for the questionnaire and methods have been shown to be valid and reliable through peer-reviewed academic studies and other NPS projects. With few exceptions, the questions covered in the survey are drawn from the previously piloted SEM study in 14 parks within the NPS system. A project Social Scientist or Economist will train and supervise the data entry and check entries for accuracy and quality control.

## BURDEN ESTIMATES

The combined estimated totals for the two collection periods for the intercept survey in this study are as followed: Number of Responses for Intercept Survey: 3,000 and Respondent Burden Hours for Intercept Survey: 300 (see Table 6). These are split evenly across summer and winter periods. We expect that contact time will include at least 1 minute per person to establish participation and to answer any questions the respondent may have and then an additional five minutes to complete the on-site survey (3,000 respondents x 6 minutes = 300 hours). We expect that in addition to the one-minute initial contact, it will take an additional minute to conduct the non-response bias check for visitors who do not agree to participate in the on-site survey (300 respondents x 2 minutes = 10 hours). The burden for the remaining visitors completely refusing to participate in the collection will not be estimated due to the de minimis nature of their participation. Respondents who agree to participate will answer the non-response bias questions as part of their on-site survey and will have no extra time added to their burden. Therefore, the total burden for the on-site survey will be 310 hours.

**Table 6. Burden Estimates**

	Completed Responses	Completion Time (minutes)	Burden Hours (rounded up)
On-site Survey*			
Winter	1,500	6	150
Summer	1,500	6	150
<i>Subtotal</i>	<b>3,000</b>		<b>300</b>
On-site non-response survey*			
Winter	150	2	5
Summer	150	2	5
<i>Subtotal</i>	300		10
Mail-Back Survey**	1,200	16	320
<b>Total burden requested under this ICR:</b>	<b>4,500</b>		<b>630</b>

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

\*\* Includes the time to connect to the on-line survey and read the instructions

The combined estimated totals for the mail-back survey in this study are as followed: Number of Responses for Mail-Back Survey: 1,200 and Respondent Burden Hours: 320 (see Table 5). Since the respondents participating in the mail-back survey will have already participated in the on-site survey their initial participation time is not included in this calculation. We expect that it will take respondents a maximum of 15 minutes to complete the mail-back survey, plus an additional minute to read the directions and/or connect to the online platform (1,200 x 16 minutes = 320 hours).



For respondents who participated in both the on-site and mail-back survey, the total estimated burden time is 22 minutes (6-minute on-site survey + 16-minute mail-back survey = 22-minute completion time). Therefore, the overall burden hours required from both the intercept and mail-back survey total of 630 burden hours.

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**REPORTING PLAN:**

The study results will be presented in a comprehensive report that will be shared with NPS staff at Zion National Park, the Denver Service Center, and the Social Science Program. Questionnaire results will be presented in tables or figures with descriptive text. Results will include frequencies, measures of central tendency (e.g. mean, median, and standard deviation), cross-tabulations from chi-square tests and ANOVAs will be conducted where appropriate. Zion National Park will also be provided with an interactive dashboard to review intercept survey data collected within three weeks of the sampling period. The reports will be archived with the NPS Social Science Program for inclusion in the Social Science Studies Collection as required by the NPS Programmatic Approval Process. Hard copies and electronic copies of the final report will be submitted to the park. Finally, results will be presented to NPS staff at three periods: 1) a post sampling reporting period within three weeks of each on-site data collection and 2) final reporting period. In addition to a report and data delivery, a 2-hour WebEx based presentation will be delivered to park staff.

## 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.