



National Park Service
U.S. Department of the Interior
Social Science Program

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Programmatic Approval for NPS-Sponsored Public Surveys

Submission Date 6-13-2013

1. **Project Title:** Visitor experience and ticketing system surveys at Timpanogos Cave National Monument (TICA)

2. **Abstract:** *The results of a recent ecological survey at Timpanogos Cave National Monument (TICA) show that the park needs to modify its current cave tour program to reduce visitor impacts. Several options are being considered to improve visitor experience including changes in cave tour size, frequency and the current ticketing system. The park manager requested a visitor survey to inform decisions about these options. An on-site survey and a focus group will be used to gather visitor opinions about the potential changes in the park operation.*

(not to exceed 150 words)

3. **Principal Investigator Contact Information**

First Name: Lena **Last Name:** Le
Title: NPS Visitor Services Project (VSP), Director
Affiliation: NPS Visitor Services Project, PSU, College of Natural Resources, University of Idaho
Street Address: 875 Perimeter Drive MS 1139
City: Moscow **State:** ID **Zip code:** 83844-1139
Phone: 208-885-2585 **Fax:** 208-885-4261
Email: lenale@uidaho.edu

4. **Park or Program Liaison Contact Information**

First Name: Jim **Last Name:** Ireland
Title: Superintendent
Park: Timpanogos Cave National Monument
Street Address: RR 3, Box 200
City: American Fork **State:** UT **Zip Code** 84003
Phone: 801-756-5239 x 101 **Fax:**
Email: Jim_ireland@nps.gov

Project Information

5. **Park(s) For Which Research is to be Conducted:** Timpanogos Cave National Monument

6. Survey Dates:	Start Date		End Date
	07/08/2013	to	07/17/2013

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

<input type="checkbox"/> Mail-Back Questionnaire Other (explain)	<input checked="" type="checkbox"/> On-Site Questionnaire	<input type="checkbox"/> Face-to-Face Interview	<input type="checkbox"/> Telephone Survey	<input checked="" type="checkbox"/> Focus Groups
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8. **Survey Justification: (Use as much space as needed; if necessary include additional explanation on a separate page.)** *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, gateway communities and regions, and human interactions with park resources. Information on visitor perceptions about security and safety will also be evaluated. Such studies are needed to provide a scientific basis for park planning, development and concession contract decisions.*

Management Justification:

This information collection is requested by Timpanogos Cave National Monument (TICA) management team to understand visitors' and local communities' needs and expectations concerning their recreation experiences. This information is a necessary component of the park's management action plan, and is required by National Parks Omnibus Management Act of 1998 (16USC§§5931-5937).

TICA is a small park (250 acres) within the Uinta-Wasatch-Cache National Forest just 40 miles south of Salt Lake City, UT. The primary draw of the park is a single cave. To tour the cave, visitors must obtain tickets in advance. Visitors meet rangers at the cave entrance after climbing a steep 1.5-mile trail.

Park managers at TICA requested a survey (of visitors) and a focus group (of local residents) to evaluate alternatives to the current ticketing system, options for increasing visitor safety on the trail to the cave, the effects of cave tour size and frequency on the visitor experience, and visitor opinions to improve the concession service.

The findings from this study will be used to:

- establish baseline profile of current cave tour participants for customer service planning purpose
- provide feedback about visitor experiences regarding cave tour size and frequency
- provide input into planning to improve visitor safety while visiting the park

- provide input into planning to resolve crowding issues at the park
- provide feedback about the current use of the concession services
- obtain data about visitor activities, interests, length of stay, etc.
- obtain data about visitors' preference regarding ticketing system options.
- obtain information about visitor opinions regarding fee options for planning purpose.

9.

Survey Methodology:
(Use as much space as needed; if necessary include additional explanation on a separate page.)

(a) Respondent Universe:

Visitor Experience/Fee and Ticket Survey: The respondent universe for the on-site surveys will be all recreational visitors, age 18 and older, visiting the park during the study period (July 8-17, 2013). According to visitation statistics for July 2012 provided by NPS Public Use Statistics, the sampling frame consists of approximately 31,000 individuals.

Community Focus Group: The respondent universe for this collection will be the local residents who are frequent users of the park age 18 and older. Friends of the Park group and local volunteers will assist in recruiting process. The sample is estimated to include 500 names and address maintained by the Friends of the Park. Focus group sessions will be conducted at a location outside the park in the community.

(b) Sampling Plan/Procedures:

Both surveys will follow the same procedure using on-site questionnaires to collect the following information from visitors:

- Individual characteristics
- Trip/visit characteristics
- Individual activities
- Individual evaluation of park services/facilities
- Individual perceptions of their park experiences, and
- Individual opinions on park management

Park visitors will be randomly selected to participate in one of the survey as they visit the park during the ten-day study period.

To collection information for the Visitor Experience and Fee and Ticketing Surveys we will use on-site interview methods with a systematic sampling procedure. Most of the questions have been used in other VSP questionnaires or have been taken from the current NPS Pool of Questions (OMB Control Number 1024-0224). Interviewers will be used to contact every n^{th} visitor at the trailhead. The interviewers will be trained in every aspect of on-site contact that includes: using sampling intervals, avoiding sampling bias, and how to handle all types of interviewing situations, including safety of the visitor and the interviewer. Quality control will be ensured by monitoring interviewers in the field, and by checking their paperwork at the end of each survey day. To avoid double sampling we will distribute Visitor Experience survey on alternate days with Fee and Ticketing survey.

Focus Groups: Because the goal of focus groups is to generate a range of opinions and will not be generalized outside the park. Friends of the Park and local

volunteer group have agreed to assist us in recruiting local residents who are also frequent users of the park for the focus group session. In order to achieve maximum variation in the range of opinions we will ask the recruiters to invite individuals in the community with a wide range of ages, levels of income, gender, and location of residence. A letter from the superintendent will be sent to invite local residents to participate in focus group sessions. Follow ups will be conducted via telephone and email to confirm time and location with participants.

(c) Instrument Administration:

Visitor Experience and Fee and Ticketing Surveys

The initial contact with visitors will be used to explain the study and determine if visitors are interested in participating. This should take approximately 1 minute. As each group is encountered, the survey interviewer will ask the individual with the next birthday, and is at least 18 years of age, to serve as the respondent for the study. All individuals approached will be asked the non-response bias questions (see item 9e below). The visitors that refuse to participate will be asked if they would be willing to take two minutes to respond to the non-response bias questions listed below. The number of refusals will be recorded and used to calculate the overall response rate for the collection.

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

“Hello, my name is _____. I am conducting a survey for the National Park Service to better understand your opinions about the programs and services here at Timpanogos Cave National Monument. Your participation is voluntary and all responses will be kept anonymous. Would you be willing to take a survey and return it to me or to the drop box at the visitor center when you are done?”

→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 surveyor will ask them to start the process by answering the non-response bias questions (listed below). The responses will be recorded in spaces provided on the tracking sheet. The surveyor will hand them a survey packet including the questionnaire and a clipboard with pen to complete the questionnaire on-site].*

→If **“NO”** - (ask them) - if they would be willing to answer the non-response bias questions (listed below) and then thank them for their time. [The surveyor will record responses in spaces provided on the tracking sheet].

→If **“NO”** - (hard refusal) - *end the contact and thank them for their time.*

Once the visitor has agreed to participate in the study, they will be asked to complete the questionnaire on-site. The interviewer will come back to collect the completed survey or the participant can return the survey to a lock-box at the visitor center. Since this is an on-site survey, follow up methods will not be used.

Community Focus Group

Focus groups will be administered and moderated by VSP personnel. Each session will take approximately 60 minutes to complete. The sessions will be voice-recorded and transcribed for analysis. Contact information and full transcripts will be kept in a locked cabinet. The responses will be coded and participants will be assigned different code names in all analyses and publications to protect participants' privacy.

(d) Expected Response Rate/Confidence Levels:

Visitor Experience and Ticketing/Fee Surveys: The response rate is based on VSP surveys at similar park sites. Based on the survey sample size, there will be 95% confidence that the survey findings will be accurate to within 3.9% (Table 1 below). Thus, the proposed sample sizes will be adequate for bivariate comparisons and will allow for comparisons between study sites and more sophisticated multivariate analysis. Non-response bias will be checked and results will be weighted to counter balance the effects if necessary. 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 (Table 1).

A total of 1,230 visitors will be contacted during the sampling period. We estimated that 65% (800 visitors) will complete the surveys on site. The number of refusals will be recorded and reported in a tracking sheet, and will be used in calculating the response rate. Those who declined to participate in the survey will be asked four questions to calculate non-response bias.

Community Focus Group: TICA has a strong connection with its local communities via TICA Friends of the Park group and park volunteers. We will use this connection to recruit focus group participants. The target audiences are individuals who are at least 18 years old and use the park frequently for recreation purposes. The TICA friends groups and park volunteers will distribute a letter from the superintendent to potential respondents. Individuals who agree to participate will receive confirmation of the focus group time and location via phone. It is expected that each focus group will include approximately 6 to 8 participants. We planned to contact 64 individuals to recruit 32 focus group participants. Because the design is qualitative and uses purposive samples selected from targeted groups, there is no statistical basis for generalizing the findings to all visitors. Therefore, response rates and confidence levels/intervals do not present the same concerns as they do in quantitative studies based on probability samples and employing inferential statistical analysis. The findings will be used to provide TICA park managers with information that can be used in their collaborative planning process with local communities.

Table 1: Expected/Actual Response Rates/Confidence Levels

	Number of Initial Contacts	Expected Response Rate	Expected/ Number of Responses	Margin of Error +/- %
Visitor experience survey	615	65%	400	3.9%
Ticketing and fee survey	615	65%	400	3.9%
Community Focus Group	80	40%	32	n/a
Total	0		832	

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

During the initial on-site 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. Is this your first time visiting Timpanogos Cave National Monument?
2. What is your age?
3. What is your zip code? (or name of country for international visitor)
4. Is Timpanogos Cave the primary destination of your trip?

Responses will be recorded on a tracking sheet for every contact. Gender of the participants will also be observed and recorded on the tracking sheet. Results of the non-response bias check will be described in a report and any implications for park planning and management will be discussed.

Focus Group participants and non-participants will be compared in terms of age, gender, and number of years of residency in the area.

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

The questionnaire format and many of the questions have been used in 254 previous VSP survey instruments. The questions are taken from the currently approved list of questions in NPS Pool of Known Questions (OMB Control Number: 1024-0224; Current Expiration Date: 8-31-2014). The instruments were reviewed by 4 experts in the field. We also conducted a pilot survey using 9 graduate students at the University of Idaho to confirm the clarity of questions and length of time needed to complete the instruments.

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Burden Estimates:

Visitor Experience and Ticketing/Fee Surveys

We plan to approach 1,230 random visitors. In total, the initial contact time is approximately 2 minutes, one minute will be used to explain the purpose of the survey and determine visitors' willingness to participate; and another minute will be used to ask and record information for non-response bias checking (1,230 x 2 minutes=41 hours). For those who agree to participate (n=800) an additional 10 minutes will be required to complete and return the questionnaire (800x 10minutes=134 hours).

Community Focus Group

We will make the initial contact by telephone to confirm participation. We expect that the initial contact time will be 3 minutes per person (80 x 3 minutes=4 hours). We expect that based on the selection process, 32 people will agree to participate. Each focus group session is estimated to take 60 minutes to complete (32x60 minutes=32 hours).

The total burden for this collection will be 211 hours.

Table 2: Estimation of Burden

Estimated Number of Contacts		Estimation of Time (minutes)		Estimation of Respondent Burden (hours)	
Initial contact for survey	1,230	Initial contact for survey	1	Estimated Burden	41
Expected to complete survey	800	Complete survey	10	Estimated Burden	134
Number of initial contact for focus group	80	Initial contact for focus group	3	Estimated Burden	4
Expected number of focus group participants	32	Time to complete focus group session	60	Estimate Burden Hours	32
				Total Burden	211

11. **Reporting** The study results will be presented in an internal agency report for NPS managers.
Plan: Response frequencies will be tabulated and measures of central tendency computed (e.g., mean, median, mode, as appropriate). The report 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; and will also be posted on the Park Studies Unit VSP website at: <http://psu.uidaho.edu/vsp.reports.htm>. Hard copies will be available upon request. The economic data will be used to produce a special report for the NPS covering overall use estimates and local economic impacts.