



## 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:** 2-7-2017

**Project Title:** Hot Springs National Park Visitor Use Study (HOSP)

### **Abstract** (not to exceed 150 words)

The purpose of this project is to provide data that will be used to refine the NPS public use statistics counting procedures at Hot Springs National Park (HOSP). An onsite survey will be used to collect information about visitor use within the park.

### **Principal Investigator Contact Information**

**Name:** Steve Lawson, PhD  
**Title:** Senior Director, Public Lands Planning and Management  
**Affiliation:** Resource Systems Group, Inc.  
**Address:** 55 Rail Road Row  
White River Junction, VT 05001  
**Phone:** 802-295-4999  
**Email:** [Steve.lawson@rsginc.com](mailto:Steve.lawson@rsginc.com)

### **Park or Program Liaison Contact Information**

**Name:** Patricia Horn  
**Title:** Management Specialist  
**Park:** Hot Springs National Park  
**Address:** 101 Reserve Street  
Hot Springs, AR 719001

Phone: 501-620-6730  
Email: Tricia\_horn@nps.gov

**Project Information**

Where will the collection take place? (Name of NPS Site) Hot Springs National Park (HOSP)

Sampling Period Start Date: July 1, 2017 End Date: August 31, 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 (list)

**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.*

All units of the National Park Service (NPS) are required to collect and report public use data to the Public Use Statistics Office (PUSO) on a monthly basis. This information is archived, analyzed, and made public by PUSO. It is used for internal planning and management, and external communication with the public and park stakeholders.

The last revision of public use statistics data collection procedures for Hot Springs National Park (HOSP) was in 2008. Since then, a number of changes have occurred within the park including changes in visitor use levels and patterns, leasing of previously unoccupied buildings, new visitor services, and redevelopment of camping facilities. In 2015 HOSP commissioned an evaluation of the park's public use statistics data collection procedures, which found them lacking and in need of substantial improvement (RSG, 2016). The evaluation concluded that current public use statistics do not satisfy HOSP and NPS needs for public use statistics because data collection procedures do not reflect current visitor use.

The evaluation recommended a strategy, which HOSP is pursuing, to refine and improve public use statistics data collection procedures and satisfy the accuracy needs of HOSP and NPS. The recommended strategy is largely based on the survey proposed in this information collection request. The data collected by this survey will provide information on visitor characteristics, travel patterns, and visit durations in HOSP. This

information, which will be collected within six park locations and at special use permitted events, will be integrated with visitor use counts collected by automated counters (e.g., trail counters, doorway counters, road counters, jug fountain flow meters) in a visitation estimation model. The visitation estimation model will use the visitor characteristics, travel patterns, and visit duration from the survey to adjust the visitor use counts. Adjusted visitor use counts will provide PUSO with inputs for public use statistics. With the information collected by this survey, visitor use counts can be adjusted to provide a better representation of visitor behaviors.

## Survey Methodology

### (a) Respondent Universe:

Based upon NPS Visitor Use Statistics there were more than 805,000 HOSP<sup>1</sup> visitors to HOSP during July and August, 2016. The respondent universe will be all visitors, age 18 and older, contacted at designated intercept locations while visiting the following locations or attending a special use permitted event in HOSP during the sampling period:

- Downtown District
- Gulpha Gorge District
- Hot Springs Mountain District
- West Mountain District
- Whittington Park District
- Jug fountains within HOSP

<sup>1</sup>see <https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Monthly%20Public%20Use>

### (b) Sampling Plan/Procedures:

Visitor groups will be approached to participate in the survey as they visit HOSP during a 16-day sampling period. A “first-after-last completed” sampling approach will be used to generate a representative sample. At the beginning of each sampling day, the very first visitor group to exit the sampling location will be contacted and asked to participate in the study. Upon completion of the contact (whether the contacted visitor group agrees to participate or not), the very next visitor group exiting the sampling location will be contacted and asked to participate. The “first after last completed” process will continue until the sampling day concludes. The survey interviewer will be trained on every aspect of on-site surveying, including: administering the questionnaires, avoiding sampling bias, and handling all types of interviewing situations, especially 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.

Sampling will occur at six locations and at special use permitted events that are representative of the range of visitors and visitor uses within HOSP. The sampling locations and special event include:

- The Downtown District: Bathhouse Row, the sidewalk in front of Bathhouse Row, Arlington Lawn,

and the Grand Promenade.

- The Gulpha Gorge District: the Gulpha Gorge Campground and picnic area, the Stonebridge road area, and the Sunset Trail east of Cedar Glades Road.
- The Hot Springs Mountain District: the roads, trails, and picnic areas on Hot Springs Mountain, as well as the Hot Springs Mountain Tower.
- The West Mountain District: the roads, trails, and picnic areas on West Mountain, as well as the Sunset Trail west of Cedar Glades Road.
- The Whittington Park District: the paths and facilities in Whittington Park.
- The jug fountains within HOSP include the cold-water fountains at Whittington Park and Happy Hollow Spring; and the hot-water fountains at Libbey Memorial Physical Medicine Center and the Hot Springs NP headquarters building.
- Special events will include events and activities occurring anywhere in HOSP that require and receive a special use permit (e.g., concerts, parades, large-group activities).

There are 16 days proposed for the sampling period for this collection. Below is an example sampling plan for the sampling period. Sampling will occur on two weekdays and one weekend day at each sampling location. For “special events,” sampling will occur at events that have been issued a special use permit by HOSP. These events will be sampled when they occur, however sampling will be limited to not more than one weekend day and two weekdays. On each sampling day, sampling will be conducted 8 hours per day, spanning the primary visitor use hours of the day at HOSP.

Table 1 - Locations and estimation number of the visitor contact

Location	Visitors Contacted																Total
	Weekend 1		Week 1					Weekend 2		Week 2					Weekend 3		
	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	
Downtown District	228		143										143				514
Gulpha Gorge District		228		143										143			514
Hot Springs Mountain District					143			228		143							514
West Mountain District						143			228		143						514
Whittington Park District							143					143			228		514
Jug Fountain District			143									143				228	514
Special Events					143			228					143				514
<b>TOTAL</b>																	<b>3,598</b>

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**(c) Instrument Administration:**

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This on-site survey is designed to take no more than 8 minutes to complete and will be administered to visitors before they leave the sampling area. This collection is completely voluntary and no personally identifiable information will be collected at any time during the process. All visitors will be approached in the following manner:

1. The initial contact will be used to determine if the visitor has been asked to complete another version of the survey anytime during their visit at HOSP, explain the study and determine if the contacted visitor (or group) is interested in participating. Visitors will be deemed ineligible if they have been previously asked to participate in the HOSP visitor survey during the sampling period.
2. For individual visitors and groups, the adult member, 18 years older or older will be asked to participate using the closest birthday method. Once the agreement is established, the interviewer will ask the non-response bias questions listed in Item E below. The respondent will be handed a hard copy of the survey instrument, provided instructions, and asked to return the completed survey to the interviewer when they are done.
3. If the adult(s) refuses to participate in the survey, the survey interviewer will ask them to respond to the non-response bias questions listed in Item E below. If they refuse to answer the non-response bias questions, they will be thanked for their consideration and the contact will end. However, if they agree to answer the non-response bias questions, the surveyor will record their responses and then thank them for their time. The number of refusals will be recorded and used to calculate the overall response rate for the collection at the park.

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**(d) Expected Response Rate/Confidence Levels:**

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Approximately 3,598-visitors will be contacted to participate in the study, 514 at each of the sampling locations and at special events. Based on the results on-site, self-administered questionnaires using similar recruitment procedures and sampling methods, but conducted in a diverse range of settings (see: Lawson, and Kiser, 2013 - response rate 50% - 80%; Moldovanyi, et al., 2006 - response rate 71%; in Taff, et al., 2013 - response rate 73%) we anticipate that 2,520 (70%) of visitors contacted will agree to participate in the study. An experienced on-site field supervisor will track survey response rates on a daily basis and provided additional training and support at locations or for survey interviewers with response rates lower than the 70% anticipated. The number of refusals will be recorded and reported, and will be used in calculating the response rate.

Therefore, for the total study we anticipate 2,520 completed questionnaires, 360 for each of the sampling locations and special events, and 1,078 refusals, 154 for each sampling location and special events. Based on the expected number of responses (2,520), there will be 95% confidence that the survey findings will be accurate to approximately 2 percentage points for the park as a whole, and approximately 5 percentage points for each sampling location (Fowler, 1993).

Table 2: Estimated Response Rates

Location	Response rates based upon total estimated number of all visitor contacted				
	Initial Contacts	Acceptance 70%	All Non-respondents 30% <sup>1</sup>	Non-response survey 90% <sup>1</sup>	Hard Refusals 10% <sup>1</sup>
Downtown District	514	360	154	139	15
Gulpha Gorge District	514	360	154	139	15
Hot Springs Mountain District	514	360	154	139	15
West Mountain District	514	360	154	139	15
Whittington Park District	514	360	154	139	15
Jug Fountain District	514	360	154	139	15
Special Events <sup>2</sup>	514	360	154	139	15
<b>TOTAL</b>	<b>3,598</b>	<b>0</b>	<b>0</b>	<b>973</b>	<b>105</b>
				% of all non-respondents	

1. Column total differs from percentages due to rounding.

2. Visitors will only be sampled at special events occurring during the sampling period. This table presents the maximum anticipated sampling effort.

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

During the initial contact, the interviewer will ask all contacted visitors the following five questions that will be used in a non-response bias analysis. Responses to these questions will be recorded by the survey interviewer on the survey contact log.

1. *Did or will you visit at least one jug fountain within Hot Spring NP today?*  
 Yes       No
  
2. *Including yourself, how many people are in your personal group on this visit to Hot Springs NP*  
*Children*  
 ----- (<18)      ----- Adults (≥18)
  
3. *On this visit to Hot Springs NP, what type of group are you with?*  
 Alone       Family       Friends       Friends & Family       Other (specify)
  
4. *On this visit, how much time do you plan to spend within Hot Springs NP?*      ----- Hours
  
5. *What is your state or country of residence (if not US)?* -----

Responses to the non-response bias questions will be recorded for every contact, except “hard refusals”

(those who refuse to participate in the study and refuse to answer the non-response bias questions) to ensure that complete and directly comparable responses to non-response bias question are available for both respondents and non-respondents. Results of the non-response bias check will be reported and any implications for applicability of survey results to generalizations about the study population will be discussed.

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

Survey questions are taken from the currently approved questions in the 2016 NPS Pool of Known Questions (<https://www.nps.gov/subjects/socialscience/upload/NPS-Pool-of-Known-Questions-508.pdf>). Variation of these questions have been reviewed by NPS managers and PhD-level and MS-level NPS survey research consultants at RSG, and approved by the NPS Information Review Coordinator. Questions included in the questionnaire are limited to only those necessary to accomplish the study’s objective of refining public use statistics data collection procedures. Survey burden estimates were generated from survey pretesting by RSG staff not associated with questionnaire design and are based on the maximum anticipated response time.

**Burden Estimates**

Overall, we are expecting approximately 3,598 individuals will be contacted during the 16-day sampling period and that 70% (n=2,520) of those individuals will verbally agree to participate in the survey.

An initial contact time of one minute is estimated for all visitors contacted (n=3,598). This time will be used for the introduction and to determine participation. An additional two minutes will be used to ask the non-response bias check questions to all visitors refusing to take the full survey but agree to answer the non-response bias questions. It is expected that 30% (n=1,078) all visitors contacted will refuse to participate, However 90% (n=973) of those will agree to answer the non-response questions. For the remaining individuals (n=105) the surveyor will record their reason for refusal, if given

Based upon the estimate response rate for this collection we expect to receive 2,520 completed surveys. The estimated burden includes the response to non-response bias questions, time to provide instructions and to complete the survey is expected to take no more than 8 minutes to complete, The burden to complete and return the survey is anticipated to be 336 hours.

The total burden for this collection is estimated to be 385 hours.

Estimated Total Number	
Initial Contacts	3,598
Nonresponse Survey	973

Estimation of Time (minutes)	
Initial Contacts	1
Nonresponse Survey	2

Estimation of Burden (hours)	
Initial Contacts	60
Nonresponse Survey	32

Completed Responses	2,520

To complete response	8

To complete response	336
<b>Total</b>	<b>0</b>

### 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.

#### Literature cited:

Fowler, F.J. (1993). *Survey Research Methods, 2nd Edition*, Newbury Park, CA: SAGE Publications.

Lawson, S., and Kiser B. (2013). *Visitor Survey Report to Support Development of Visitor Facilities Zone Indicators and Standards*. National Park Service, Natural Resource Technical Report NPS/NRTR—2013/01.

Moldovanyi, A., Kiser, B., and Lawson, S. (2006). *Comparing Internet and On-site Survey Modes for a Visitor Use Study at Prince William Forest Park, Virginia*. 28th Annual Southeastern Recreation Research (SERR) Conference Book of Abstracts: February 26-28, 2006, Wilmington, North Carolina. Department of Parks, Recreation and Tourism Management, North Carolina State University, 2006.

RSG Inc. (2016). *Hot Springs National Park Visitor Use Estimation Study Strategy*. Resources Systems Group, Inc. technical report prepared for Hot Springs National Park under contract P14PC00630 - P15PD02284.

Taff, D., Newman, P., Pettebone, D., White, D. D., Lawson, S. R., Monz, C., & Vagias, W. M. (2013). Dimensions of alternative transportation experience in Yosemite and Rocky Mountain National Parks. *Journal of Transport Geography*, 30, 37-46.