



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

OMB Control Number 1024-0224
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Programmatic Approval for NPS-Sponsored Public Surveys

Submission Date 6/4/2014

1. **Project Title:** One Health Messaging about Bats and Rabies

2. **Abstract:** This study will investigate One Health messages in the context of bats and rabies. Using a questionnaire with a sample of visitors in national parks, we will explore how (a) acknowledgment of the benefits from bats, (b) the timing of the presence of bat-related disease risk (i.e., rabies), and (c) attribution of blame for the spread of rabies influence pro-environmental attitudinal and behavioral outcomes.

(not to exceed 150 words)

3. **Principal Investigator Contact Information**

First Name: Katherine **Last Name:** McComas
Title: Professor
Affiliation: Department of Communication, Cornell University
Street Address: 339 Kennedy Hall
City: Ithaca **State:** NY **Zip code:** 14853
Phone: 607-255-7737 **Fax:** 607-254-1322
Email: kam19@cornell.edu

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

First Name: Danielle **Last Name:** Buttke
Title: One Health Coordinator
Park: Biological Resource Management Division/Wildlife Health Branch and Office of
Office/Division: Public Health
Street Address: 1201 Oakridge Dr., Suite 200
City: Fort Collins **State:** CO **Zip code:** 80525
Phone: 970-267-2118 **Fax:**
Email: Danielle_Buttke@nps.gov

Additional Program Liaison Contact Information

First Name: Anna **Last Name:** Helms
Affiliation: Graduate Program in Public Health, Colorado State University
City: Fort Collins **State:** CO **Zip code:** 80523
Phone: 919-605-5727 **Fax:**
Email: Anna.Helms@colostate.edu

Project Information

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|--|--|-------------------------------|-------------------------|---------------------|--|--|
| 5. Park(s) For Which Research is to be Conducted: | We will collect data in four parks (to be determined). Possible candidate parks include: <table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> •Carlsbad Caverns (CAVE) •Cedar Breaks (CEBR) •Canyonlands (CANY) •Mammoth Cave (MACA) •Casa Grande (CAGR) •Rocky Mountain (ROMO) </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> •Arches (ARCH) •Badlands (BADL) •Zion (ZION) •Great Smoky Mountains (GRSM) •Mesa Verde (MEVE) •El Mapais (ELMA) </td> </tr> </table> | | | | <ul style="list-style-type: none"> •Carlsbad Caverns (CAVE) •Cedar Breaks (CEBR) •Canyonlands (CANY) •Mammoth Cave (MACA) •Casa Grande (CAGR) •Rocky Mountain (ROMO) | <ul style="list-style-type: none"> •Arches (ARCH) •Badlands (BADL) •Zion (ZION) •Great Smoky Mountains (GRSM) •Mesa Verde (MEVE) •El Mapais (ELMA) |
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| 6. Survey Dates: | 07/01/2014 | TO | 12/31/2014 | | | |
| 7. Type of Information Collection Instrument (Check ALL that Apply) | | | | | | |
| Mail-Back Questionnaire Other (explain) | <input checked="" type="checkbox"/> On-Site Questionnaire | Face-to-Face Interview | Telephone Survey | Focus Groups | | |
| 8. Survey Justification: (Use as much space as needed; if necessary include additional explanation on a separate page.) | <p><u>Legal Justification</u></p> <p><i>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, development.</i></p> <p>This NPS One Health Program has requested information to provide guidance on ways to communicate about rabies and bats. There is concern that the misguided communication efforts will lead to unintended, negative consequences, such as unnecessary alarm about bats, decreased support for bat conservation, or decreased intentions to visit parks. Information is needed to understand how park visitors respond to prepared messages to provide effective interpretive and educational resource information and programs.</p> <p>The information from this study will not be used to generalize all park visitors. The purpose of this study is to test the social behaviors related to certain messages concerning bat management at selected parks to inform communication efforts managed by the NPS One Health Program.</p> | | | | | |
| 9. Survey Methodology: (Use as much space as needed; if necessary include additional explanation on a | <p>(a) Respondent Universe:</p> <p>The respondent universe for this collection will be all recreational visitors, age 16 and older, who visit one of the four selected parks during the study period. A systematic sample of visitors will be contacted by trained surveyors at various locations.</p> <hr/> <p>(b) Sampling Plan/Procedures:</p> <p>Park visitors will be randomly selected to participate as they visit selected park</p> | | | | | |

separate page.) locations during the survey sampling periods between July 1 and December 31, 2014.

A systematic sampling procedure based on the park's visitation statistics from the previous year will be used to stratify the sample at each site. During the designated sampling period a surveyor will ask every *n*th visitor to participate in the study. The surveyor will be trained on every aspect of on-site surveying including: using sampling intervals, avoiding sampling bias, and how to handle all types of interviewing situations, especially safety of the visitors and the surveyors. Quality control will be ensured by monitoring surveyors in the field, and by checking their paperwork at the end of each survey day.

The criteria for selection of parks will include: 1) proximity of visitors to bat populations, (2) history of bat-related public health issues, such as visitor-bat contact, in the park and 3) congruence with our messages. Visitor-intercept locations within parks will be determined based upon their proximity to areas that have natural bat populations.

(c) Instrument Administration:

The initial contact with visitors will be used to explain the purpose of the study and to determine the visitors' interest in participating. This should take approximately 1 minute. If a group is encountered, the surveyor will ask the individual within the group who has the next birthday to serve as the respondent. At this point, all individuals will be read the following script:

"Hello, I am _____ and I am conducting a survey for the National Parks Service. This survey will help us to better understand how to communicate with visitors about bats. Your participation in the study is voluntary, and all your responses will be kept anonymous. This study has been approved by the Office of Management and Budget as well as our University's Institutional Review Board. It will take about 15 minutes to complete. You will not be asked to provide your name or address. Your responses are voluntary will remain anonymous. Would you be willing to complete the questionnaire using this iPad? If not, we have a paper version with the same question for your convenience.

Before we start, are you at least 18 years old?

The interviewer will check the boxes below to indicate that the respondent is at least 18 years old or older and understands the Paperwork Reduction Act Statement below.

- The respondent is at least 18 years old or older*
- The respondent understands the Paperwork Reduction Act Statement*

The interviewer will ask: *"Has any member of your group been asked to participate in this survey before today?"*

→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 but agreed to take the survey) the interviewer will say “Please feel free to ask me any questions you may have, once you are done you can return the complete survey instrument to me. Thanks”.

If the visitor refuses to complete the survey- (soft refusal) - The surveyor will ask if they would be willing to answer the two non-response bias questions (listed below) and then thank them for their time. [The surveyor will record responses on a 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, the surveyor will bring the visitor to a designated location, providing an iPad to the visitor (or a paper alternative will be offered, upon request).

The survey will be self-administered, and the surveyor will be available to answer any questions. Once they agree to participate, visitors will proceed to the first question in the survey. The survey software (or surveyor if a paper copy is requested) will randomly assign one of nine messages about bats for each respondent. Messages 1-8 will consist of a short statement before proceeding to answer questions, and message 9 will be the control condition or “no message” scenario in which the respondent will not receive any message but proceed directly to the questions. The survey is expected to take approximately 15 minutes to complete.

All visitors who refuse to participate will be asked if they would be willing to respond to two non-response bias questions (see 9e below). The number of refusals will be recorded and used to calculate the overall response rate for the collection.

(d) Expected Response Rate/Confidence Levels:

We expect to contact up to 3,600 visitors during the sampling periods. To properly power our analysis, we will need approximately 450 responses at each of the 4 parks. We will stop recruiting once we have reached that number of responses

This study does not aim to provide representative point estimates or generalize the results to all visitors; we will not estimate confidence levels of the survey respondents.

| Sampling site (TBD) | Number of Initial Contacts | Expected Response Rate | Number of Responses |
|---------------------|----------------------------|------------------------|---------------------|
| Site 1 | 900 | 50% | 450 |
| Site 2 | 900 | 50% | 450 |
| Site 3 | 900 | 50% | 450 |
| Site 4 | 900 | 50% | 450 |
| TOTAL | 3,600 | 50% | 0 |

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

During the initial contact, the surveyor will ask all of the visitors that refuse to participate to answer two questions taken from the survey. These questions will be used in a non-response bias analysis.

- 1) Have you visited an NPS site before today?
- 2) Who are you traveling with today?

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

(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 appeared in similar surveys used by the Department of Communication at Cornell University. Many of the questions are from the currently approved version of the NPS Pool of Known Questions (OMB Control Number 1024-0224) and adapted from a previously approved survey on bats (OMB Control Number 1028-0081). In addition, the questions included in this survey were peer reviewed by the following wildlife experts: Kevin Castle, Kirsten Leong, and Margaret Wild (NPS Biological Resource Management Division).

11. **Burden Estimates:** We plan to approach up to 900 individuals per park (n=3,600 total visitors). The initial contact time will be at least one minute per person (3,600 x 1 minute = 60 hours). We expect that 1,800 (50%) visitors will refuse to participate during the initial contact. We will ask those visitors to answer the non-response bias questions which will take less than one additional minute (1,800 x 1 minute = 30 hours).

We expect that 1,800 will agree to complete the on-site survey and that 15 minutes will be required to complete and return the survey (1,800 x 15 minutes = 450 hours). The total burden for this collection is estimated to be 540 hours.

| Estimated Number of Contacts | | Estimation of Time (mins) | | Estimation of Respondent Burden | |
|----------------------------------|-------|--|----|---------------------------------|------------|
| Total Number of Initial Contacts | 3,600 | Estimated Time to Complete Initial Contact | 1 | Estimated Burden Hours | 60 |
| Estimated number of refusals | 1,800 | Refusal/ nonresponse | 1 | Estimated Burden Hours | 30 |
| Total Number of Responses | 1,800 | Time to complete and return surveys | 15 | Estimated Burden Hours | 450 |
| | | | | Total Burden | 540 |

12. **Reporting Plan:** The results of the study will be presented in internal agency reports for NPS managers as well as possible webinars to interested groups within NPS. Response frequencies will be tabulated and measures of central tendency computed (e.g., mean, median, mode, as appropriate). The reports will be archived with the NPS Social Science Program for inclusion in the Social Science Studies Collection. Hard copies will be available upon request.

We also intend to publish our results in academic journals and present the findings at professional conferences.
