



### Expedited Approval for NPS-Sponsored Public Surveys

1. **Project Title | Submission Date:** Visitor management and transportation system use at Cumberland Island National Seashore – Phase II 1/11/2011

2. **Abstract:** The purpose of this study is to gather information that will help support visitor management, carrying capacity, and transportation system decisions at Cumberland Island National Seashore. A quantitative survey of both general visitors and wilderness visitors will be conducted to 1) assess visitor opinions regarding their experiences and a range of related potential management alternatives at this site, 2) assess visitor opinions regarding the design of planned transportation services, and 3) gather data to help formulate standards of quality for the visitor experience. The survey will be conducted onsite with visitors who do not receive a wilderness permit, and as a mail survey with visitors who do receive a wilderness permit. Approximately 500 surveys will be conducted. This survey is the second phase of a two-phase project; the survey content is informed by results from a Phase I survey approved as OMB Number: 1024-0224 (NPS # 09-009)

(not to exceed 150 words)

### 3. Principal Investigator Contact Information

**First Name:** Jeffrey **Last Name:** Hallo  
**Title:** Assistant Professor  
**Affiliation:** Clemson University  
**Street Address:** 280B Lehotsky Hall, Clemson University  
**City:** Clemson **State:** SC **Zip code:** 29634  
**Phone:** (864) 656-3237 **Fax:** (864) 656-2226  
**Email:** jhallo@clemson.edu

### 4. Park or Program Liaison Contact Information

**First Name:** John **Last Name:** Fry  
**Title:** Chief, Resource Management  
**Park:** Cumberland Island National Seashore  
**Park Office/Division:** Resource Management  
**Street Address:** 107 St Mary's Road  
**City:** St. Mary's **State:** GA **Zip code:** 31558

Phone:  Fax:

Email:

### Project Information

5. **Park(s) Where Research is to be Conducted:**

6. **Survey Dates:**  (mm/dd/yyyy) to  (mm/dd/yyyy)

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

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

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, 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, operations, management, education, and interpretive activities.

Management Justification: Recent legislation requires the development of a public transportation system within Cumberland Island National Seashore (P.L. 108-447, Sect. 145). The information collected in this study will enhance current park planning and management efforts by determining visitor preferences and use levels for the planned transportation system. Also, little empirical information exists regarding the trip characteristics, needs, and attitudes of visitors to CUIS. This research will provide such information and help guide planning efforts to design and operate a transportation system in a manner that protects the quality of the visitor experience while providing visitors greater access to Cumberland Island.

Previous studies conducted on visitor use (or social science-related studies in general) at CUIS are limited. The following studies have been published:

- (1) Brooks, J., R. Warren, M. Nelms, and M. Tarrant. (1999). Visitor attitudes toward and knowledge of restored bobcats on Cumberland Island National Seashore, Georgia. *Wildlife Society Bulliten*, vol. 27, no. 4
- (2) Littlejohn, M. (1999) *Cumberland Island National Seashore Visitor Study, Spring 1998, Report 103*. Cooperative Park Studies Unit, University of Idaho.

These studies were not intended or designed to collect information on visitor experiences and attitudes toward management alternatives, standards of quality, or the design of soon-to-be-implemented transportation system. No information exists from previous research on these topics. The proposed study will attempt to fill these information gaps.

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

**(a) Respondent universe:**

The sample universe will be all visitors who are (1) visiting Cumberland Island National Park (2) age 18 or older, and (3) are at the park between February 28, 2011 and December 31, 2012.

**(b) Sampling plan/procedures:**

**On-site Survey**

Approximately 250 self-administered surveys will be conducted on-site with visitors. A random systematic sampling protocol (e.g., after a random start, asking every  $n^{\text{th}}$  visitor group departing at the CUIS ferry dock) will be used to select respondents. Visitors will be intercepted as they depart at the ferry dock on Cumberland Island. The survey will be self-administered, although the researcher will be available to assist respondents if needed. One individual will be selected from each group to complete the survey. This individual will be chosen from the group by selecting the person with the most recent birthday. If the individual chosen or the group refuses to participate in the survey, then the next eligible group to arrive at the ferry dock or to board the ferry will be asked to participate. Sampling will occur on approximately 14 days during this time period, in 7 day segments. These two segments will occur in the Spring, (March/April) and Summer (July/August). The proportion of the surveys collected during each period to the total 250 survey collected will be equal to the proportion of visitor use during that timeframe to total CUIS visitation. All contacts with visitors will be made by research staff from Clemson University and the University of Vermont.

**Mail Survey**

An almost identical survey will be conducted by mail with 250 Cumberland Island visitors who received a wilderness/backcountry camping permit. A list of wilderness/backcountry camping permit holders (and their contact information) will be provided by CUIS staff. Research staff from Clemson University and the University of Vermont will then send surveys to all of these past permit holders (approximately 500). The wilderness survey will be mailed to past permit holders in Spring 2011. Wilderness survey participants will be asked to return the survey by mail in a self-addressed stamped envelope. A follow-up postcard and reminder letter will be sent to those who received a wilderness survey. The survey administration for this mail-back survey is based upon Dillman's Tailored Design Method (TDM). The TDM has been shown to increase response rates, improve accuracy, and reduce cost and burden hours. The TDM has been successfully used in over 200 previous NPS studies. A mail format for the wilderness survey is necessary because wilderness use levels are relatively low and intercepting an adequate sample of wilderness visitors on-site is impractical.

**(c) Instrument administration:**

For the on-site survey, park visitors will be approached by university research staff and asked to participate in the study. University research staff will be on-site during each of the three, week-long sampling segments.

The following script will guide the introduction:

*Hi, my name is \_\_\_\_\_. I'm from Clemson University. We're helping the National Park Service gather information to guide visitor use management and development of a transportation system at Cumberland Island National Seashore. Would you be willing to fill out a questionnaire about your experience at Cumberland Island National Seashore? Participation is voluntary and your responses will be anonymous. The questionnaire will take about twenty minutes.*

*If No: OK. Thank you for your time. Have a good day.*

*If "yes": OK. Thank you for agreeing to participate. Here is the survey for you to*

*fill out. Please return it to me when you've completed it.*

The wilderness survey will be distributed by mail. University research staff will distribute and collect all wilderness surveys. An initial mailing will be sent to ask for participation in the study by completing and returning an enclosed questionnaire. This will be followed 7 days later by a post-card reminder, a second mailing with replacement questionnaire in another 2-3 weeks, and a final mailing with a replacement questionnaire in another 2-3 weeks. This process follows the TDM described above. The text of each mailing is included in a separate file.

**(d) Expected response rate/confidence levels:**

The sample size for the on-site visitor survey will be 250. Based on previous experience in conducting similar data gathering, it is expected that 90% of individuals approached will be willing to participate in the survey. [The first phase visitor survey at CUIS - OMB Number: 1024-0224 (NPS # 09-009) – had a response rate of 94.8%]. This suggests that 278 visitors need to be approached and asked to participate in the visitor survey.

The sample size for the wilderness mail survey will be 250. Based on previous experience in conducting similar data gathering, it is expected that 60% of individuals contacted by mail will be willing to participate in the survey. [The first phase wilderness visitor survey at CUIS - OMB Number: 1024-0224 (NPS # 09-009) – had a response rate of 67.3%]. This suggests that 417 wilderness/backcountry permit holders will need to be contacted by mail and asked to participate in the study.

Study findings for each survey are estimated to be accurate within 6.2 percentage points, based on a sample size of approximately 250 surveys and using a 95% confidence level.

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

The number, date, and time of refusals will be recorded and reported on a survey log. Non-response bias will be examined by comparing selected observable characteristics of the sample population with characteristics observed and recorded in every group contacted (e.g., group type, group size, presence or absence of children). If given, the reasons for refusals (e.g., lack of time, not interested, language, etc.) will also be noted. The results of the check for non-response bias will be reported, and implications for interpretation of the results (if any) will be discussed.

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

The questions included in these surveys have been designed and reviewed by the principal investigator, research staff, graduate students, and park and regional staff. Many questions are similar to those used in surveys and interviews at other national park areas. Findings from these types of questions have been used by park managers and have been published in the peer-reviewed scientific literature.

10. Total Number of Initial Contacts	Onsite	Mail	11. Estimated Time to Complete Initial Contact	Onsite	Mail	12. Burden Hours	Initial 88
	278	417		1	5		Expected 118
Expected Respondents:	250	250	Estimated Time to Complete Instrument (mins.):	20	20	<b>Total:</b>	206

13.

**Reporting Plan:**

The results of this information collection activity will be presented in an internal agency report and will be available upon request. Response frequencies, distributions, measure of central tendency (e.g., mean and median), and measures of variance (e.g., standard deviation) will be used to characterize and report survey findings. Where appropriate, t-tests and ANOVA will be used to examine difference in mean survey responses. Such differences will be examined between wilderness and non-wilderness users. A copy of the technical study report will be archived with the Social Science Program of the National Park Service for inclusion in the Social Science Studies Collection.