



Expedited Approval for NPS- Sponsored Public Surveys

1. Project Title | Submission Date:

2. Abstract:
(not to exceed 150 words)

3. Principal Investigator Contact Information

First Name: Last Name:

Title:

Affiliation:

Street Address:

City: State: Zip code:

Phone: Fax:

Email:

4. Park or Program Liaison Contact Information

First Name: Last Name:

Title:

Park:

Park Office/Division:

Street Address:

City: State: Zip code:

Phone: Fax:

Email:

Project Information

5. Park(s) For Which 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.
- A BioBlitz (or All Taxa Biodiversity Inventory) is a special type of field study in which teams of scientists work with students, teachers, and other groups visiting parks to find and identify as many species of plants, animals, microbes, fungi, and other organisms as possible. In recent years, National Geographic has partnered with the NPS to organize and promote BioBlitzes in national parks across the country. In 2008, a BioBlitz at Santa Monica Mountains National Recreation Area near Los Angeles attracted approximately 4,000 volunteers from among visitors, school groups, and residents of nearby communities. A 2007 BioBlitz at Rock Creek Park in Washington, DC attracted over 2,000 participants. NPS staff at Biscayne NP project participation at around 1,500. National Geographic has established a website for the Biscayne BioBlitz to help promote the program. In addition, the park will release a public announcement through local media outlets in the lead-up to the event.
- Literature Review. Although BioBlitzes have been conducted in national parks for over a decade, little is known about the reasons why park visitors participate in such activities. Nor has much research been conducted of the outcomes of this engagement for participants. This investigation is the first systematic study of its kind, and its findings will provide the NPS with valuable information on how to conduct BioBlitz programs in the future to benefit parks, visitors, and residents of nearby communities who participate. Besides the collection of taxonomic data, there appear to be important secondary benefits that accrue to visitors who take part in BioBlitzes. Data collected through university-funded in-depth interviews of a small sample of BioBlitz participants in Texas uncovered several outcomes, including a more intimate tie to the host park, to the species of interest, and to other program participants (Kyle & Eccles, 2009). Another outcome reported in the interviews was an increased sense of stewardship for natural resources in general. These qualitative findings have been used in guiding the construction of this survey.
9. Survey Methodology: (Use as much space as needed; if necessary include
- (a) Respondent universe:
Participants in the April 2010 Biscayne NP BioBlitz in Florida who are 18 years of age or older

additional explanation on a separate page.)

Sampling plan/procedures:

A face-to-face interview will be conducted with park visitors on board an NPS shuttle that will transport those who are participating in the BioBlitz from a dedicated parking lot to the park. A team of five researchers will select every second individual/group boarding the shuttle and invite them to participate in the interview. For groups, the person with the next birthday and who is 18 years of age or older will be invited to participate. The interviews are designed to last no longer than 5 minutes.

(b) Instrument administration:

Face-to-face interviews: The face-to-face interviews will be conducted by trained interviewers from Texas A&M University on board the shuttle bus. A log will be maintained by interviewers recording the disposition of each contact.

Mailback survey & online survey: At the conclusion of the face-to-face interview, respondents will be asked to participate in a more extensive survey examining their BioBlitz experience. Those who agree will be given the option to receive a hard copy of the questionnaire via mail or online. If they ask for a hard copy, their names and addresses will be recorded. If they prefer to take the survey online, they will be asked their email address and will be sent a link that will take them to the online survey.

The mailback survey will be sent out one week following the onsite contact. It will take about 30 minutes to complete. Protocols outlined by Dillman (2009a) will be followed. The survey packet will include a self-addressed, postage-paid return envelope. A week following the initial mailing, a reminder/thank you postcard will be sent to all respondents. Finally, a replacement survey packet will be sent to non-respondents two weeks following the initial mailing.

For those taking the survey online, an email with the web link will be sent to respondents one week following the onsite contact. Protocols outlined by Dillman (2009a) for Internet surveys will be followed. Reminder emails with the web link will be sent each week for three weeks following the initial face-to-face interview.

(c) Expected response rate/confidence levels:

Face-to-face interviews: We expect response rates for the face-to-face interviews to be 90%. This is due to the brevity of the initial onsite contact and the fact that all interviews will be conducted on board buses transporting BioBlitz participants to Biscayne NP. Approximately 500 groups or individuals on board buses will be contacted, with an estimated 450 completing the initial onsite interview.

Mailback/online surveys: Based on previous work, the expected response rate for the mailback and online surveys is approximately 67% (Kyle et al., 2003; Kyle et al., 2004; Tseng et al., 2009). This will yield a final sample of 285 interviews. This is a conservative estimate, as there is some evidence to indicate that mixed-mode designs, such as those implemented here, increase response rates (Dillman et al., 2009b; Dillman et al., 2009a; Kaplowitz et al., 2004). Assuming 285 completed interviews and a finite population of 1,500 participants, the 95% confidence interval for means and proportions will be +/-5.2%.

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

Detection of non-response bias will utilize the following protocols. For face-to-face interviews, observable information (e.g., gender of respondent, size of group) of every party contacted will be recorded by the interviewers on the survey log. In addition, interviewers will attempt to ask one question from the onsite interview to all those who initially refuse to participate. This is, "Have you participated in

Bioblitzes/ATBI programs at other national parks?" Comparisons between those agreeing and refusing to respond to the full onsite interview will be made.

For visitors choosing to participate in the face-to-face interviews, but who do not return a completed mailback/online survey, comparisons will be made between respondents and non-respondents using all data collected onsite through the face-to-face interviews. Non-response bias (if any) will be reported and implications for interpretation of results will be discussed.

Description of any pre-testing and peer review of the methods and/or instrument (recommended): The measures used in the survey instrument were developed from:

1. Work published in peer-reviewed outlets:
 - a. Place attachment - Kyle et al., 2005;
 - b. Enduring involvement - Kyle et al., 2007;
 - c. Motivation – Manfredo et al., 1996; and
 - d. Environmental values – Dunlap et al., 2000
2. In-depth interviews with participants in previous BioBlitzes – Kyle & Eccles, 2009.
3. Peer review of the survey design and content was provided by the following – Staff from Biscayne NP; the NPS Human Dimensions of Biological Resources Program in Fort Collins, CO; the Resources and Science Division at Yosemite National Park; and faculty at Texas A&M University. Their critiques and suggestions have been integrated into the current draft of the instrument and study design.

10.	Total Number of Initial Contacts Expected Respondents:	500	285	II.	Estimated Time to Complete Initial Contact Instrument (mins.):	5	30	12.	Total Burden Hours:	184
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13.	Reporting Plan:	<p>The final technical report delivered to the park will contain a description of the study purpose and key findings. Frequencies and/or means and proportions will be presented for each question. A comparison of those responding online vs. by mail also will be reported. A final copy of the report will be transmitted to the NPS Social Science Division for archiving in the Social Science Studies Collection.</p>
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REFERENCES CITED

Dillman, D. A., Smyth, J. D., & Christian, L. M. (2009a). *Internet, mail, and mixed mode surveys: The tailored design method*. Wiley & Sons: New York.

Dillman, D. A., Phelps, G., Swift, K., Kohrell, J., Berek, J., & Messer, B. J. (2009b). Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (VCR) and the internet *Social Science Research*, 38, 1-18.

Dunlap, R. E., Van Liere, K. D., Mertig, A. G., Jones, R. E. (2000). Measuring endorsement of the New Ecological Paradigm: A revised NE scale. *Journal of Social Issues*, 56, 425–442.

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- Kyle, G. T., Absher, J., & Graefe, A. (2003). The moderating role of place attachment on the relationship between attitudes toward fees and spending preferences. *Leisure Sciences, 25*, 1-18.
- Manfredo, M. J., Driver, B. L., & Tarrant, M. A. (1996). Measuring leisure motivation" A meta-analysis of the Recreation Experience Preference scales. *Journal of Leisure Research, 28*, 188-213.
- Tseng, Y., Kyle, G. T., Shafer, C. S., Graefe, G. R., Bradle, T., & Schuett, M. (2009). Exploring the crowding-satisfaction relationship in recreational boating. *Environmental Management, 43*, 496-507.

Biscayne NP BioBlitz Survey Letters/Emails

Cover letter sent with hardcopy and online questionnaire

[Date]

Dear Biscayne BioBlitz Participant:

Thank you for participating in this important study. Our goal is to learn why people participated in the Biscayne National Park BioBlitz and All Taxa Biodiversity Inventory. This information will assist us in planning future BioBlitzes in Biscayne and other national parks.

This questionnaire is only being given to a select number of BioBlitz participants, so your answers are very important! It should take about 30 minutes to complete this questionnaire.

If you have any questions, please contact Dr. Gerard Kyle, Texas A&M University, 2261 TAMU, College Station, TX 77843-2261, phone: 979-862-3794, email: gtkyle@tamu.edu

We appreciate your help.

Sincerely,

Dr. Gerard Kyle
Project Director
Texas A&M University

Follow-up postcard sent to all participants receiving the hardcopy questionnaire one week after the BioBlitz.

Dear Biscayne BioBlitz Participant:

Thank you for participating in the survey about the Biscayne National Park BioBlitz and All Taxa Biodiversity Inventory. We look forward to hearing from you.

A select number of people were contacted for this study, so your opinions are very important!

If you have already returned your questionnaire, thank you. If not, please mail it today.

We appreciate your help.

(Insert signature)

Dr. Gerard Kyle
Project Director
Texas A&M University

Follow-up e-mail sent to all participants receiving the online questionnaire one week after the BioBlitz.

Dear Biscayne BioBlitz Participant:

Thank you for participating in the survey about the Biscayne National Park BioBlitz and All Taxa Biodiversity Inventory. We look forward to hearing from you.

A select number of people were contacted for this study, so your opinions are very important!

If you have already completed your questionnaire online, thank you. If not, please go to [insert web link] and complete it today.

We appreciate your help.

Dr. Gerard Kyle
Project Director
Texas A&M University

2nd follow-up letter with replacement questionnaire sent to non-respondents requesting the hardcopy questionnaire one week after the post card reminder

[DATE]

Dear Biscayne BioBlitz Participant:

I am writing about the survey of BioBlitz participants at Biscayne National Park in which you agreed to participate. The waiting period for incoming questionnaires is almost over, and we have not yet received yours. I would appreciate you completing another one unless you mailed it within the past few days.

The staff of Biscayne National Park is anxiously awaiting the survey results. They want to use your ideas and opinions in making decisions about future BioBlitzes.

I urge you to complete the enclosed questionnaire and return it by (Month Day). Your contribution to the success of this study is greatly appreciated.

Should you have questions regarding your questionnaire, please contact me by phone 979-862-3794 or by email: gkyle@tamu.edu

[insert electronic signature]

Dr. Gerard Kyle
Project Director

2nd email reminder sent to online nonrespondents one week following the first reminder

[DATE]

Dear Biscayne BioBlitz Participant:

About two weeks ago, we emailed you a link to a questionnaire about your participation in the Biscayne National Park BioBlitz and All Taxa Biodiversity Inventory. If you have completed the online questionnaire, please accept our sincere thanks. If you have not, please do so today. We sincerely appreciate your help because it is only by asking participants like yourself to share their viewpoints that we will develop a better understanding of why park visitors participate in BioBlitzes

If you have any questions please e-mail me at gkyle@tamu.edu or call me at 979-862-3794.

3rd email reminder sent to online nonrespondents one week following the second reminder

[DATE]

Dear Biscayne BioBlitz Participant:

About three weeks ago, we emailed you a link to a questionnaire about your participation in the Biscayne National Park BioBlitz and All Taxa Biodiversity Inventory. The waiting period for incoming questionnaires is almost over, and we have not yet received yours. I would appreciate you completing another one online unless you did so within the past few days. The link to the questionnaire is [insert web link]

We sincerely appreciate your help.

If you have any questions please e-mail me at gtkyle@tamu.edu or call me at 979-862-3794.