Supporting Statement for a New Collection RE: Identifying Capacity for Local Community Participation in Wildlife Management Planning: White-tailed Deer in Northeastern NPS Units

OMB Control Number 1024-new

B. Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When Item 17 on the OMB Form 83-I is checked "Yes", the following documentation should be included in the Supporting Statement to the extent that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

The potential respondent universe is all local community households near one of the study sites, represented by one adult respondent, aged 18 and older. For analysis, each park will be considered one stratum, i.e. 5 strata total.

Because our population of interest is landowners near parks, the names and addresses of a sample of residents will be drawn from the tax rolls of communities near each of the 5 parks that are the focus of the study. We will work with the county tax assessor offices to gather addresses for property owners in the townships that surround each park. We have worked with natural resource managers and GIS staff at each park to determine geographic boundaries for surrounding communities (at the level of local politics, e.g. township) that are likely to be impacted by management decisions. Within the surrounding communities of interest, natural resource managers also identified geographically near neighbors, i.e., residential areas close to the park that are more likely to experience direct impacts from deer that use the park or from management actions related to deer. Because we want to be sure to include respondents with these kinds of direct experiences, we will over-sample households that are geographically near neighbors. We will draw a random sample of 600 addresses for near neighbors and 600 addresses from the rest of the surrounding communities for each study site, for a total of 1200 addresses per study site.

A number of surveys have been conducted by the HDRU in demographically similar areas of the northeast using tax rolls to draw samples. Typical undeliverable rates range from 5-12%, thus, we expect at least 85% of these addresses to be deliverable (i.e., approximately 1,000 per park, or 5,000 for the entire study). Overall, we expect 400 questionnaires to be returned per park, or a total of 2000 for the entire study.

Study Site	Sample Frame (oversample near neighbors within the surrounding communities)	Respondent Universe	Sample Size (Deliverable Addresses)	Response Rate %	Estimated Final Responses	Estimated Final Responses Per Park
Fire Island National Seashore	Near Neighbors	3,595	500	40.00%	200	400
	Surrounding Community	51062	500	40.00%	200	
Valley Forge National Historical Park	Near Neighbors	3707	500	40.00%	200	400
	Surrounding Community	27686	500	40.00%	200	
Morristown National Historical Park	Near Neighbors	1804	500	40.00%	200	400
	Surrounding Community	15964	500	40.00%	200	
Prince William Forest Park	Near Neighbors	1231	500	40.00%	200	400
	Surrounding Community	28270	500	40.00%	200	
Chesapeake & Ohio Canal National Historical Park	Near Neighbors	1849	500	40.00%	200	400
	Surrounding Community	15960	500	40.00%	200	
Study Total						2000

2. Describe the procedures for the collection of information including:
* Statistical methodology for stratification and sample selection,
* Estimation procedure,
* Degree of accuracy needed for the purpose described in the justification,
* Unusual problems requiring specialized sampling procedures, and
* Any use of periodic (less frequent than annual) data collection cycles to reduce burden.

We will contact approximately 1,200 households per study site. Because we are relying on tax rolls to draw our sample, we expect a low percentage (less than 15%, or 200, per study site) of unusable addresses. Any questionnaires returned marked "returned to sender, address unknown" or "forwarding address expired" will be removed from the sample list. A survey of homeowner attitudes about deer in a township that includes state parks and a National Wildlife Refuge reported response rates of 50-60% in 1999 (Siemer et al. 2003). Allowing for a declining trend in response rates to mail surveys, an overall response rate of 40% (approximately 400 responses per study site) or better is expected from questionnaires sent to good addresses. With this number of respondents, we will not be able to detect differences between near neighbors and surrounding communities within a study site. We are considering all households that are within the geographic boundary of surrounding communities (which includes near neighbors) to be part of the same stratum for that park. We are oversampling one portion of that stratum to assure that the attitudes and opinions of near neighbors are represented in the overall sample for that study site. In estimating

combined results for each park, we will use post-weighting to bring the total numbers for each park into line with the actual proportion of households in the near neighbor and surrounding community categories. With a sample of 1,000 households per study site, an expected return rate of 40% is large enough to detect statistical differences between parks and statistically valid inferences can be made to support the conclusions and final assessments of the study. When responses from different parks are compared, the confidence interval at the 95% level is plus/minus five percentage points, based on an estimated proportion of 0.50 for variables with dichotomous responses. We will not be reporting combined results for the sample as a whole (i.e., N=2000).

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

Data will be collected using a standardized survey instrument sent to 1200 households at each study site. To maximize response rate, we will use a multi-phased contact approach (Dillman 2000). The questionnaire will be self-sealing, have a return address printed on it and will include postage for respondents to mail the completed questionnaire to Cornell University for raw data retrieval and analysis. A follow up thank you/reminder letter will be sent out one week after initial mailing; a second letter and questionnaire will be sent out three weeks after initial mailing; and a third letter and questionnaire will be sent out four weeks after the initial mailing.

To address non-response bias, final sample characteristics will be compared with census data from the different areas. In addition, non-response bias will be tested by contacting by telephone 100 non-respondents per study site and asking them a subset of modified questions from the questionnaire (see telephone survey script). Statistical tests (e.g., chi-square and t-tests) will be used to determine if non-respondents differ from those who returned the questionnaire. In addition, respondents who returned a questionnaire after the first mailing will be compared with those who responded after the second and third follow-ups to determine if there are statistically significant differences between them on key demographic and opinion variables. Results will be reported, and the implications of non-response bias (if any) for interpreting the results will be discussed in the report.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

Survey questions were derived through previous discussions with NPS staff and public participation practitioners, as well as through preliminary qualitative interviews with local community residents at three of the five study sites (see OMB Approval #1024-0224, NPS #05-047). In addition, several iterations of the draft survey instrument were reviewed by survey research specialists at Cornell University and NPS collaborators at each NPS unit in the Northeast and National Capital Regions and in the Biological Resources Management Division. Suggestions on question form and content were integrated into the final draft

survey instrument, which was tested for burden estimate and clarity of questions by fewer than 10 potential respondents. Suggestions from these respondents were integrated into the final survey instrument.

5. Provide the name and telephone number of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Nancy Connelly of Human Dimensions Research Unit, Department of Natural Resources, Cornell University, consulted on statistical aspects of the design and will assist in statistical analysis of the information for the agency. Her number is (607) 255-2830.

Kirsten Leong of Human Dimensions Research Unit, Department of Natural Resources, Cornell University, designed the survey implementation schedule and associated sample size and distribution plan. Her number is (607) 255-4136.

References:

National Environmental Policy Act. 42 U.S.C. § 4321 *et seq.*

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