



National Park Service  
Department of the Interior

Social Science Program

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## Programmatic Approval for NPS-Sponsored Public Surveys

Submission Date 3-14-2014

1. **Project Title:** Appalachian National Scenic Trail: Hiker Perspectives Of Power Lines And Development Study

2. **Abstract:** This study is an evaluation of current visitor perceptions and opinions about electric power transmission lines (and related energy or communications related development) crossing the Appalachian Trail (AT). Results will be used to support future General Management Plans/Environmental Impact Statements or Assessments. This evaluation will include a review of previous literature and a new visitor survey conducted at selected trailheads in the mid-Atlantic section of the Appalachian Trail. The survey will address research questions related AT users' broad views on development versus conservation, their sensitivity to the impacts of power transmission lines and related energy infrastructure on their visitor experience, and their perceptions of what can be done to reconcile conflicting interests in development and conservation on the Appalachian Trail.

(not to exceed 150 words)

### 3. Principal Investigator Contact Information

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### 4. Park or Program Liaison Contact Information

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Project Information				
5.	Park(s) For Which Research is to be Conducted:		Appalachian National Scenic Trail (APPA)	
6.	Survey Dates:	June 2014	TO	October 2014
7.	Type of Information Collection Instrument (Check ALL that Apply)			
	Mail-Back Questionnaire	<input checked="" type="checkbox"/> On-Site Questionnaire	<input checked="" type="checkbox"/> Face-to-Face Interview	<input type="checkbox"/> Telephone Survey
	<input type="checkbox"/> Focus Groups			
	Other (explain)			
8.	Survey Justification: (Use as much space as needed; if necessary include additional explanation on a separate page.)	<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>Recent efforts to expand electrical grid capacity in the northeast United States threaten to seriously impact the scenery and related recreational experiences at some of our most scenic natural areas. For example, at least 8 power lines stretching 2,000 miles through 6 states are currently under construction or active consideration. Some of these lines are adjacent to or cross through National Park units or other protected areas, raising concerns about their environmental impacts and potential impacts on users of these areas. This study will examine users of the Appalachian National Scenic Trail in areas near existing and/or planned trail corridor crossings to determine the potential impact of such additional infrastructure on trail users' experience.</p> <p>Representatives of the park approached researchers at Penn State University to discuss the potential study following multiple cases of reviewing permit applications from power companies for new or expanded transmission line crossings. The study will gather information from the public concerning their views about development in this area. This information would not otherwise be available to the managers at APPA. Therefore this information will be used by managers conducting future reviews of proposed infrastructure development on or lands adjacent to National Parks and other protected areas.</p>		
9.	Survey Methodology: (Use as much space as needed; if necessary include additional explanation on a	<p><b>(a) Respondent Universe:</b> The respondent universe for this collection will be all adults (18 years and older) visiting Appalachian Trail June 2014 to October 2014.</p> <hr/> <p><b>(b) Sampling Plan/Procedures:</b> Field sampling will occur at five to six trailheads in the mid-Atlantic section of</p>		

**separate page.)** the Appalachian Trail. In consultation with NPS managers, all sites will be selected that represent various conditions of trail development and power line transmission presence. Planned sampling locations include sites in Pennsylvania (new power line crossing near the Delaware Water Gap National Recreation Area and additional cell phone towers near Pulpit Rock In Berks County), Maryland (Weaverton area), West Virginia (Harpers Ferry area), and Virginia (Linden and Shenandoah areas) At each location, a representative sample will be obtained using a systematic schedule representing various days of the week and times of day.

The sampling design will allow for a total of 90 sampling days distributed across various sites throughout the data collection period. For example, sampling will be conducted on about 15 days at each of 6 sites, allowing for statistically valid results at a site-specific basis and meaningful comparison of different types of areas and segments of trail users. Interviews will be conducted by trained project personnel for 8 hour shifts on each sampling day, resulting in a projected sample size of about 1,350 respondents.

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**(c) Instrument Administration:**

Trained project personnel will conduct on-site interviews with trail users intercepted at trailheads or other selected sites based on the sample location.

Upon initial contact, the interviewer will explain the purpose of study and the protocol for informed consent (voluntary participation, right to refuse answering any questions, etc.). The interviewer will emphasize the value of the study and the importance of their participation in assisting with park management and protection. He/she will thank respondents whether they complete the survey or not.

This questionnaire will be administered by interviewers using computer tablets. Only one questionnaire per group will be collected.

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

We expect to contact a total of 1,350 visitors during the 90 day sampling period (15 visitors per sampling day). It is estimated that 85% (n=1,146) will be willing to participate in this study. These estimates are based on previous and similar studies completed by the principle investigator.

15 sampling days/site	Number of Initial Contacts	Expected Response Rate	Expected Number of Responses	Margin of Error +/- %
Site 1	225	85%	191	5
Site 2	225	85%	191	5
Site 3	225	85%	191	5
Site 4	225	85%	191	5
Site 5	225	85%	191	5
Site 6	225	85%	191	5
TOTAL	0	85%	0	

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

To assess any response bias that may occur, we will document the observable characteristics of all non-respondents (gender, group size, traveling with children or pets) and stated reasons for their refusal. We will ask the following two questions from the survey instrument to determine any non-response bias:

1. *On this particular trip, are you a:[check one]*

- day user (on the trail for one day only)*
- overnight user/backpacker (out for more than one day)*
- thru hiker (hiking the length of the trail in one calendar year)*
- section hiker (hiking sections of the Appalachian Trail with the intent of hiking the entire trail over an extended period of time)*

2. *Please tell us about your trip.*

*How many days did you (or will you) spend on the trail?*

\_\_\_\_\_ # of days on trail

*How many miles did you (or will you) hike \_\_\_\_\_ # of miles hiked*

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

The survey instrument was developed by the Penn State research team in collaboration with the staff at the Appalachian Trail National Scenic Trail. It was based on a literature review of similar research and patterned after an earlier study conducted by Robert Manning and Alan Graefe at the AT (OMB #1024-0224). The Penn State research team includes Professors Alan Graefe and Andrew Mowen and graduate research assistants Michael Ferguson and Forrest Schwartz. The NPS reviewers include Rita Hennessy (Assistant Superintendent), Matt Robinson (GIS Specialist), Jessica Bundy (Facility Management System Specialist).

We pre-tested the questions with available <9 people in the local area (e.g. university graduate students and hikers). The instrument was updated based on the comments received.

10 **Burden Estimates:** We plan to approach approximately 1,350 individuals during the sampling period. With an anticipated response rate of 85%, we expect to receive about 1,146 total complete questionnaires for this collection.

We expect that the initial contact time will be about one minute per person (1,350 x 1 minute = 23 hours). We expect that 204 (15%) visitors will refuse to participate during the initial on-site contact; for those individuals we will record their reason for refusal, several observable characteristics and two questions used for the non-response check. This is estimated to take no more than 2 minutes (204 x 2 minutes = 7 hours) to complete each session.

For those who agree to participate (n= 1,146) an additional 15 minutes will be required to complete the on-site questionnaire (1,146 responses x 15 minutes = 287 hours). The total burden for this collection is thus estimated to be 317hours.

Estimated Number of Contacts		Estimation of Time		Estimation of Respondent Burden	
Total Number of Initial Contacts	1,350	Estimated Time (mins.) to Complete Initial Contact	1	Estimated Burden Hours	23
Estimated number of on-site refusals	204	On-site Refusal/nonresponse	2	Estimated Burden Hours	7
Total Number of Responses	1,146	Time to complete and return surveys	15	Estimated Burden Hours	287
				<b>Total Burden</b>	<b>317</b>

11. **Reporting Plan:** PSU will prepare a report outlining key survey findings, trends and implications for planning, management, and future trail visitor surveys. This report will include, but not be limited to the following topics:

- Background and purpose of the study
- Results of literature review
- Study methods
- Statistical results and comparisons of selected trail user segments
- Implications and recommendations for planning/management and future research.