



**National Park Service  
U.S. Department of the Interior**

**Social Science Program**

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**Programmatic Approval for NPS-Sponsored Public Surveys**

<b>1. Project Title:</b> Grand Teton National Park (GRTE) Visitor Use Survey	<b>Submission Date</b> 1/13/2014
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**2. Abstract:** An on-site visitor use survey will be used to evaluate social conditions in the MooseWilson corridor of Grand Teton National Park. This project includes two components: 1) investigation of desired social conditions and current issues that may exist given the unique and fragile ecosystem, and diverse user-groups, stakeholders, and visitation patterns; 2) examination of potential social indicators of quality that can serve as proxies for management objectives. The results will be used to inform decisions about future visitor use management of the area.

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**Project Information**

5. <b>Park(s) For Which Research is to be Conducted:</b>	Grand Teton National Park (GRTE)			
6. <b>Survey Dates:</b>	May 26, 2014 - October 17, 2014			
7. <b>Type of Information Collection Instrument (Check ALL that Apply)</b>				
Mail-Back Questionnaire	<input checked="" type="checkbox"/> On-Site Questionnaire	Face-to-Face Interview	Telephone Survey	Focus Groups
<input checked="" type="checkbox"/> Other (explain) A pre-programmed GPS unit will be used to collect additional information.				

8. <b>Survey Justification: (Use as much space as needed; if necessary include additional explanation on a separate page.)</b>	<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>The Moose-Wilson corridor in Grand Teton National Park (GRTE) offers access to recreational activities such as hiking, cycling, and scenic-driving. It is also a key link in Teton county's transportation network that serves as a travel corridor from surrounding communities and is increasingly used as an entrance to the park. Because this area is faced with new and changing use patterns, intensity of uses, and modes of travel, it is challenging to provide quality visitor experiences that depend on high-caliber resource and social conditions. The major challenge within the Moose-Wilson corridor is managing for multiple-uses. Therefore, park managers have requested information about the diverse visitor uses and experiences of current users within the corridor. This visitor use survey will collect information that will be used to inform decisions related to the multiple use management within the corridor.</p>
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9. <b>Survey Methodology: (Use as much space as needed; if necessary include additional explanation on a separate page.)</b>	<p><b>(a) Respondent Universe:</b> The respondent universe for this collection will be all adults (18 years and older) visiting GRTE Moose-Wilson corridor through the Granite and Moose entrances on the Moose-Wilson Road from May 26 to October 17, 2014.</p> <p><b>(b) Sampling Plan/Procedures:</b> This proposed study will use on-site surveys to examine visitor experiences in the Moose-Wilson corridor of GRTE.</p> <p>Sampling will take place at four locations: (1) Granite entrance to Moose-Wilson Road, (2) Moose entrance to Moose-Wilson Road, (3) Laurance S. Rockefeller (LSR) Preserve trailhead, and (4) Death Canyon trailhead. From May 26 to October 17, 2014, sampling days will be evenly stratified by day of the week, time, and location, proportionate to visitation estimates provided by the park. On each sampling day, trained research assistants will be stationed at one of the sampling locations between 7 a.m. and 7 p.m. Research assistants</p>
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will recruit study participants by contacting a random sample of every  $n$ th visitor group as they enter the study area.

**Granite and Moose entrances:**

At the Granite and Moose entrances every  $n$ th visitor group (including both motorists and bicyclists) will be selected as they enter the Moose Wilson Road within the park boundaries. These locations were chosen because they provide adequate parking space for vehicles and bicycles to safely pull off the road. One surveyor will serve as a flagger to control traffic and two surveyors will serve as data collectors. Groups will be greeted by the surveyor after they safely pull off the road segment and introduced to the purpose of the study.

**LSR Preserve and Death Canyon trailheads:**

On opposing days (days when sampling is not taking place at Granite and Moose entrances), trained interviewers will intercept hiking visitors as they enter the trail systems. Every  $n$ th visitor group will be intercepted as they enter the trail system. We will ask the person over 18 years old having the most recent birthday in the group to complete the survey and carry the GPS unit.

All visitors who agree to participate will be asked to complete a pre-survey and will be given a pre-programmed GPS unit. The visitor will be instructed that the GPS unit is to be kept by the primary respondent and that it can only be used to monitor movement during their visit within the Moose-Wilson corridor. Participants will be asked to return the GPS unit upon exiting (whether at the Granite or Moose entrances/exits, or the LSR Preserve or Death Canyon trailheads). The surveyors will be available to receive the GPS units and to administer the post-trip survey.

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**(c) Instrument Administration:**

Surveys will be administered by trained research assistants working under the supervision of the PI, Co-PI, and GRTE staff. The pre- and post-visit survey questionnaires will be administered using tablet computers to facilitate skip patterns and eliminate data entry errors.

All participating respondents, will be read the instructions and administered the pre-survey and given a GPS unit. The GPS unit will be used to determine visitor travel behaviors which will be correlated with responses from the pre- and post-visit surveys. (Note: the GPS units will be pre-programmed, and the respondents will not have to do anything with these units other than carry them.) This process will continue throughout the sampling period. Individuals or groups who are unwilling or unable to participate in the study will be thanked for their consideration. All interactions (i.e., time, location, mode of transportation, etc.) will be documented in a survey log.

Visitors who are unwilling or unable to participate in the study will be asked the following question:

- “What is the primary activity you are planning to do within the corridor?”

The surveyors will also capture additional observational information:

- time of contact,
- gender,
- mode of transportation or
- activity,
- group size,
- number of adults and children in group, and
- potential language barrier

This information combined with the question above will be used to determine any non-response bias. This process will continue throughout the sampling period at each of the study locations.

The research assistant will use the following script when working with potential respondents:

*Hello, I am conducting a study for Grand Teton National Park to better understand the types of experiences visitors seek while recreating within the Moose-Wilson corridor of the park. Your participation is voluntary and your responses will be anonymous. In total, this study will take you about 20 minutes to complete. It will take about 12 minutes to complete this first part of the study, which includes you completing a short survey about the activities and experiences you hope to have in the Moose-Wilson corridor. As you exit at the end of your visit, we will ask you to take an approximately 8-minute survey that will ask about the experiences you had during your visit. During your visit, we would like to ask if you would take this GPS unit with you and return it to our research colleagues as you exit the corridor. Would you be willing to participate?"*

*If NO: "Do you mind if I ask, what is the primary activity you are planning to do within the corridor? Thank you for your time and consideration. I hope you enjoy your visit."*

*If YES: "Thank you for your willingness to assist with this study. Who in your group (who is at least 18 years old) has the next birthday? Would you be willing to participate in the study?"*

Willing participants will then be administered the pre survey instrument and given a GPS unit.

Upon exiting the sampling locations, participating respondents will be administered the post-survey as the GPS unit is collected. At this time the research assistant will use the following script when working with potential respondents:

*"Thank you for assisting us with this study, and returning the GPS unit. Would you be willing to take about 8 minutes to complete the second part of the study?"*

If YES: *"Thank you for your willingness to assist with the second part of this study.*

If NO: *"Do you mind if I ask, what could the managers at Grand Teton National Park do to improve visitor experiences as they plan for the future of the Moose-Wilson corridor? --- Thank you for your time and consideration. I hope you enjoy your visit."*

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

A total of 600 visitors will be contacted during the sampling period. It is estimated that 80% (n=480) will be willing to participate in the surveys. We expect that 95% of the visitors that agree to participate in the pre-survey will also agree to complete the post-survey. These estimates are based on current visitor use and previous research projects conducted by the PI in this and other NPS units (see Marin et al., 2011; Pilcher et al., 2007; Pilcher et al., 2009; Taff et al., 2013). Vaske (2008) concluded that a sample size of approximately 400 respondents in human dimensions research typically allows generalization to a population with a 95% confidence interval that the survey findings will be accurate to within  $\pm 5$  percentage points.

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

The number of refusals will be recorded, reported, and screened for non-response bias using a non-response question for the pre-survey (i.e., *"What primary activity are you planning to do within the corridor?"*) and post-survey (i.e., *"What could the managers at Grand Teton National Park do to improve visitor experiences as they plan for the future of the Moose-Wilson corridor?"*), which will be combined with other observed visitor information (i.e., time of contact, gender, observed mode of transportation or activity, group size, number of adults and children in group, potential language barrier). Data from the study will be analyzed for non-response bias by comparing participating groups' characteristics to non-participating groups' characteristics gathered on the corresponding surveyor's log sheets. Any implications of non-response bias for park planning and management will be reported.

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

The questions included in the survey instruments were designed and reviewed by the PI's, research staff and graduate students, scientists at Pennsylvania State University's Survey Research Center, scientists at Utah State University with expertise in survey research, Grand Teton National Park staff, NPS staff at the Denver Service Center's Visitor Use Management team (Kerri Cahill, Susan McPartland, Ericka Pilcher, Jennifer Stein, and Chris Church), and NPS staff at the Human Dimensions and Biological Resource Management Divisions (Bret Meldrum, Kirsten Leong, and Alia Dietsch). Based on peer-reviews, survey questions were reduced and truncated, to only include approved pool of known questions/topics, and therefore reduce burden time. Pre-testing for clarity and estimated burden time was conducted with undergraduate and

graduate students at Pennsylvania State University.

10 **Burden Estimates:** We plan to approach 600 potential respondents upon their entrance to the park sampling areas. We expect that the initial contact time will take two minutes per person (600 x 2 minutes = 20 hours). We expect that 20% (n=120) of visitors will refuse to participate in the study. For those individuals, we will record their reason for refusal and ask them to answer a non-response check question that will be recorded on the study log (additional observational data will be collected as well). This is estimated to take about one minute to complete (120 x 1 = 2 hours).

For those 600 originally contacted, we expect that 80% (n=480) will agree to complete the pre-survey and take a GPS unit. This will take an additional 12 minutes to complete (480 x 12 minutes = 96 hours).

We plan to approach the 480 original participants at the end of their visit to collect the GPS units, and ask if they would complete the post-survey. We expect that this second contact time will take two minutes per person (480 x 2 minutes = 16 hours). We expect that 5% (n=24) of the original participants will refuse to participate in the post-survey study. For those individuals, we will record their reason for refusal and ask them to answer a non-response check question that will be recorded on the study log (additional observational data will be collected again). This is estimated to take no more than one minute to complete. For those that agree (456 participants), we expect it to take an additional 8 minutes to complete the post-survey (456 X 8 minutes = 61 hours). The total burden for this collection is estimated to be 195 hours.

**Estimation of Respondent Burden**

		Minutes	Hours
On-site contacts		Time to complete contact:	Total time to complete all contacts
Initial contact	600	Initial contact	2
Secondary contact	480	Secondary contact	2
Number of refusals:		Non-respondents	Total time to complete non-response contacts
Initial contact	120	Initial contact	1
Secondary contact	24	Secondary contact	1
Number of responses:		Time to complete survey:	Time to complete both surveys
Pre-survey	480	Pre-survey)	12
Post-survey)	456	Post-survey)	8
			<b>Total Burden Hours: 195</b>

11. **Reporting Plan:** A final technical report will be delivered to the GRTE park managers and staff. The report will contain a description of the study purpose and key findings. Frequency distributions and descriptive statistics will be included for all survey variables. A final copy of the report will also be transmitted to the NPS Social Science Division for archiving in the Social Science Studies Collection.

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## REFERENCES CITED

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