



PROGRAMMATIC REVIEW AND CLEARANCE PROCESS FOR NPS-SPONSORED PUBLIC SURVEYS



The scope of the Programmatic Review and Clearance Process for NPS-Sponsored Public Surveys is limited and will only include individual surveys of park visitors, potential park visitors, and residents of communities near parks. Use of the programmatic review will be limited to non-controversial surveys of park visitors, potential park visitors, and/or residents of communities near parks that are not likely to include topics of significant interest in the review process. Additionally, this process is limited to non-controversial information collections that do not attract attention to significant, sensitive, or political issues. Examples of significant, sensitive, or political issues include: seeking opinions regarding political figures; obtaining citizen feedback related to high-visibility or high-impact issues like the reintroduction of wolves in Yellowstone National Park, the delisting of specific Endangered Species, or drilling in the Arctic National Wildlife Refuge.

SUBMISSION DATE: April 18, 2018

PROJECT TITLE: Visitor use at String and Leigh Lakes Area of Grand Teton National Park: Recreational Users.

ABSTRACT: (not to exceed 150 words)

Grand Teton National Park (GRTE) provides a diversity of outstanding recreational opportunities. However, high levels of visitor use in GRTE are potentially challenging the quality of visitor experiences. This is particularly the case in the high use area of String and Leigh Lakes. The purpose of this collection is to better understand a variety of common visitor use and experience such as motivations, activity types, benefits achieved, and crowding in the String and Leigh Lakes area. The research process includes intercepting two populations (drivers and recreational users) to administer surveys. This research builds off of previous qualitative interviews in the area and is informed by those results. The results of this quantitative research will be used to help inform current and future visitor use management in the String and Leigh Lakes area of GRTE.

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PROJECT INFORMATION:

Where will the collection take place? Grand Teton National Park

Sampling Period Start Date: 06/27/2018 Sampling Period End Date: 08/13/2018

Type of Information Collection Instrument: (Check ALL that Apply)

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

Will an electronic device be used to collect information? No Yes - Type of Device: iPads

SURVEY JUSTIFICATION:

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 and development.

The String and Leigh Lakes area in Grand Teton National Park (GRTE) offers access to a variety of recreational activities like hiking, backpacking, beach use, swimming, canoeing, kayaking, and stand-up paddle boarding, among others. It is also a heavily used area in GRTE where park managers report seeing increases in visitor use that outpaces overall growth in visitor use in GRTE. Because this area is faced with changing use patterns, increasing intensity of visitor use, and multiple recreation user groups, it is challenging to provide quality visitor experience that depend on high-caliber resource and social conditions. The major management issues in the String and Leigh Lake areas are related to parking/transportation, multiple-use, and high visitor use. Therefore, managers at GRTE have requested information related to visitor use and experience of current users within the String and Leigh Lakes area. This research is a second phase of data collection that is informed from previous qualitative research in the area during the previous year. This current proposal will allow managers to understand evaluative components of visitors use and generalize to larger population of visitors. Areas of inquiry include motivations, crowding, and experiential outcomes (e.g. family cohesiveness, connection with nature, self-esteem, etc.). This research will focus on two different groups: vehicles and recreational users in the String and Leigh Lakes area. The results from this collection will inform decisions related to management of the String and Leigh Lakes area.

GPS units are used in this research to track the spatial behavior of visitors, including how they respond to visitor use issues like crowding and other recreational user groups. The GPS unit data will be correlated with responses from the pre- and post-visit surveys. When paired with the survey data, the GPS tracks will provide managers with an

understanding of how motivations and outcomes from the survey relate to spatial behaviors captured by the GPS units. (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.

SURVEY METHODOLOGY:

(A) Respondent Universe:

All adult, recreational users and drivers (18 years and older) visiting the String and Leigh Lakes area of GRTE from June 27, 2018 to August 13, 2018.

(B) Sampling Plan / Procedures:

This proposed collection will use two on-site questionnaires to examine recreational (day) users (e.g. water activities, hiking, picnicking, using the beach area etc.) and drivers (e.g. visitors driving on the Jenny Lake road heading towards the String and Leigh Lakes area). From June 27, 2018 until August 13, 2018, sampling days will be evenly stratified throughout the month by day of week (Monday through Sunday), time (7AM to 7PM), and location. The same would occur for drivers; both locations would be sampled during the same period. Data collection will not occur for both recreational users and drivers on the same days (Table 1).

Table 1. Example On-site Sampling Schedule

Location	On-site Sampling Schedule			Total
	June	July	August	
Recreational users				
North Lot	1	8	5	14
South Lot	1	8	5	14
Boat launch	1	8	5	14
Drivers				
North from String Lake	1	8	5	14
South from String Lake	1	8	5	14

For this study we will distribute 60 GPS units. In a 2014 GRTE study 90-100% of GPS units were recovered from respondents each day. With that we plan to administer about 50-60 GPS units per day because this the maximum our team can handle in one day for sampling. The collection is more constrained by available research personnel than by the number of available GPS units.

Recreational users:

Recreational users will be intercepted at three different locations: A trail leading from the north lot, a trail leading from the south lot, and a trail leading from the boat launch lot. These trails must be used to access the greater area. All three locations will be sampled during the same period (i.e., the North lot, South lot, and Boat launch will all be sampled on a Monday from 7AM to 3PM). Trained research assistants will recruit study participants by contacting a random sample of every *n*th visitor group as they enter the trail systems from the parking lots in the study area. We will ask the person over 18 years old having the most recent birthday in the group to complete the survey and carry

a GPS unit. All visitors who agree to participate will be asked to complete a 5-minute long pre-trip survey and will be given a pre-programmed GPS unit. Recreational users will also complete a 5-minute long post-trip survey (Table 2).

Drivers

Drivers will be intercepted at two different locations on the section of Jenny Lake Road north and south of String Lake Road. This will encompass all vehicles visiting the String and Leigh Lakes area. Every *n*th driver in the sample area will be stopped and asked to participate in the survey. The sample locations were selected using the following two criteria: 1) lower speed limits, and 2) adequate parking space for vehicles to safely pull off the road. One research assistant 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. A screening question (i.e., “*Is String and Leigh Lakes your primary destination today?*”) will be asked as part of the introduction script. If visitors answer “NO” to the screening question, they will not be asked to participate in the study and will continue on. If visitors answer “YES”, the person in the vehicle over 18 years old having the most recent birthday will be asked a series of questions to determine eligibility and will be asked to carry the GPS unit. From road monitoring research conducted in this area, we estimate 50% of vehicles will be heading to the String and Leigh Lakes area as their primary destination and will be eligible to participate in the research (Table 2).

Table 2. Estimated Number of Visitor Contacts during Sampling Period

Location	On-site Sampling Schedule			
	June	July	August	Total
Recreational users				
North Lot	23	180	112	315
South Lot	23	180	112	315
Boat launch	23	180	112	315
Drivers				
North from String Lake	54	400	250	704
South from String Lake	54	100	250	704
Total	177	1,340	836	2,353

(C) Instrument Administration:

Recreational users Survey

The pre- and post-trip surveys will be administered by trained research assistants using tablet computers to facilitate skip patterns and eliminate data entry errors. During the initial contact all participants will be read the instructions, asked to complete the pre-trip survey, and handed a 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 area. At the end of their visit when the surveyors will be available to receive the GPS units and to administer the post-trip survey. If recreational users return after researchers are gone instructions will be attached to the GPS unit with how to return the unit. The instructions will include options to use drop boxes at all exits, visitor centers, or fee booths. We will work

with the park to recover late returns every day. If a visitor accidentally leaves the park with the unit, an email address and phone number will be listed to arrange return. This process was used in the 2014 Grand Teton National Park Visitor Use Survey. About 2,000 GPS units were passed out during that study, and only 5 were not returned. Overnight users will not be given a GPS unit, but will still be administered a survey.

Surveyors will ask visitors who are unwilling or unable to participate in the study the non-response bias questions (See below), and will also capture additional observational information (e.g., time of contact, gender, mode of transportation or activity, group size, number of adults and children in group, and potential language barrier). This information will be combined to determine any non-response bias. This process will continue throughout the sampling period at each of the study locations. The following is an example of the script will be used for recreational users:

Pre-trip survey

“Hello, I am conducting a study for Grand Teton National Park to better understand visitor experiences while recreating within the String and Leigh Lakes area of the park. Your participation is voluntary and your responses will be anonymous. We would like to also ask if you would be willing to take this GPS unit with you during your trip that will track your movements and allow park managers to understand visitors’ spatial behaviors. We ask that you return the GPS to our research colleagues as you exit the area. There are two parts that will take about 5 minutes each to complete. The first part of the study, which includes you completing a short survey about the activities and experiences you hope to have in the String and Leigh Lakes area. At the end of your visit, we will ask you to complete another short survey about the experiences you actually had during your visit. This should take no more than 5-minutes. Would you be willing to participate?”

- **If NO:** *“Do you mind if I ask you a question? From this list, which of the following is the primary activity you plan on participating in during today’s visit? 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 and be responsible for holding the GPS unit?”*
 - **If NO:** *“Do you mind if I ask you a question? From this list, which of the following is the primary activity you plan on participating in during today’s visit? Thank you for your time and consideration. I hope you enjoy your visit.”*
 - **If YES**
 - **SCREENING QUESTION:** *Are you staying overnight in the String and Leigh Lakes area?*
 - **If NO:** *“Great. Here is the GPS unit (hand visitor GPS unit). Let’s begin the survey.”*
 - **If YES:** *“Great. We are only looking for day users to carry GPS units, but you can still complete the survey. Let’s begin the survey”*

Post Trip Survey

At the end of their visit and upon exiting the sampling locations, respondents will be asked to return the GPS unit and to complete the post-trip survey. At this time, the research assistant will use the following post-trip script:

“Thank you for assisting us with this study and returning the GPS unit. Are you willing to take about 5 minutes to complete post survey we mentioned at the beginning of your trip?”

- *If YES: “Thank you. [administer post-trip survey]*
- *If NO: “Do you mind if I ask: Did you plan to visit the String and Leigh Lakes area later in the day to avoid crowds?”*

Thank you for your time and consideration. I hope you enjoyed your visit.”

Driver Survey

The driver survey will be administered by trained research assistants using tablet computers to facilitate skip patterns and eliminate data entry errors. During the initial contact all participants will be read the instructions, asked to complete the survey, and handed a GPS unit. The visitor will be instructed that the GPS unit is to be kept in the vehicle and that it can only be used to monitor movement during their visit within the area. Unlike recreational users, there is no post-trip survey for drivers. Drivers will be instructed to return the GPS unit to marked boxes at the exits of the park as they leave. The GPS unit will be used to determine visitor travel behaviors which will be correlated with responses from the surveys. (Note: the GPS units will be pre-programmed, and the respondents will not have to do anything with these units other than to carry them until the end of their trip.) This process will continue throughout the sampling period.

Surveyors will ask visitors who are unwilling or unable to participate in the study the non-response bias questions (See below), and will also capture additional observational information (e.g., time of contact, gender, mode of transportation or activity, group size, number of adults and children in group, and potential language barrier). This information will be combined to determine any non-response bias. This process will continue throughout the sampling period at each of the study locations.

The following script will be used for drivers:

“Hello, I am conducting a study for Grand Teton National Park to better understand visitor experiences while recreating within the String and Leigh Lakes area of the park. Is your primary destination String and Leigh Lakes today?”

- *If NO: “Okay – thank you. We are only looking for visitors heading to that location. Have a good trip.” (end contact)*
- *If YES: “Okay” (continue)*

“Your participation is voluntary and your responses will be anonymous. It will take about 1 minute to complete this study, which includes you a short survey about the experiences you encountered in the String and Leigh Lakes area. During your visit, we would like to ask if you would take this GPS unit with you that will track where you go, leave it in your car, and return it to our research colleagues at marked drop-boxes as you exit the park. Managers will use the information from the GPS unit to understand visitors’ spatial behaviors. Would you be willing to participate?”

- If **NO**: “Do you mind if I ask you a question? From this list of activities, which of the following is the primary activity you plan on participating in during today’s visit? 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 and keep the GPS unit in the vehicle? (continue to screening question)
 - **SCREENING QUESTION**: Are you staying overnight in park?
 - If **NO**: “Great. Let’s begin the survey”
 - If **YES**: “Great. We are only looking for day users to carry GPS units. Thank you enjoy the rest of your visit.

Willing participants will then be asked to complete the survey, day users will also be given a GPS unit.

(D) Expected Response Rate / Confidence Level:

Recreational users:

Based on previous research in GRTE, GRTE staff input, limitations of staffing, and limited equipment, we anticipate that we will approach 945 individuals to be surveyed. Based on previous research in GRTE and other national parks, we estimate 85% will agree to participate (n=800), and the remaining 15% will refuse (n=145). We anticipate that of the 145 visitors that refuse, 95% (n=138) will agree to answer the non-response bias questions, and the remaining 5% (n=6) will completely refused to participate.

Respondent	Initial Contacts	Acceptance 85%	Non-respondents (Soft refusals) 15%	Non-response survey 95%	Hard Refusals 5%
Pre Trip Survey	945	803	120	114	6
Post Trip Survey	800	680	120	114	6
TOTAL	0	0	0	0	0

Drivers

Based on previous research, GRTE staff input, limitations of staffing, and limited equipment, we are planning to approach 1,408 individuals for both samples. However, after the screening question, we expect that only 50% of people (n=704) will be eligible to participate. Of those, we estimate 85% will agree to answer the questions (n=600), and the remaining 15% will refuse (n=104). We anticipate that of the 104 visitors that refuse, ~95% (n=99) will agree to answer the non-response bias questions, and the remaining ~5% (n=5) will completely refused to participate.

Location	Initial Contacts	Eligible after screening 50%	Acceptance 85%	Non- respondents (Soft refusals) 15%	Non-response survey 95%	Hard Refusals 5%
North from String Lake	704	352	300	52	50	2
South from String Lake	704	352	300	52	49	3
TOTAL	1,408	704	600	104	99	5

Based on the survey sample sizes for both populations in this research (e.g. drivers and recreational users), there will be 95 percent confidence that the survey findings will be accurate to within 5 percentage points. With that, the proposed sample size should be adequate, but will not be used to produce results that will be generalizable beyond the scope of this collection. The sample will suffice for bivariate comparisons and more sophisticated multivariate analysis. For dichotomous response variables, estimates will be accurate within the margins of error and confidence intervals will be somewhat larger for questions with more than two response categories.

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

Non-response bias will be calculated by recording the number of refusals, responses to the non-response questions (see below) and the following observational 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). Both recreational users and drivers will be asked the following non-response bias question for the pre-trip survey.

- *From this list of activities, which of the following is the primary activity you plan on participating in during today's visit? (List of activities will be taken from Question 4 in the pre-trip survey)*

At the end of their visit or upon exiting the sampling location, recreational users will return the GPS unit and be asked to complete the Post-trip Survey. If they refuse to complete this survey, they will be asked the following non-response bias question.

- *Do you mind if I ask, if you planned to visit the String and Leigh Lakes area later in the day to avoid crowds?*

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.

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

This research uses similar methods and questions that have been used in other visitor use studies. In 2014, researchers in the Recreation, Park, and Tourism Management Department at Pennsylvania State University (PSU) conducted the Moose-Wilson Corridor Visitor Use Survey using the same methods and technology. The questions in the survey instrument are specifically from the NPS Pool of Known Questions, though adapted for appropriate context at GRTE and the String and Leigh Lakes area. The questions included in the survey instrument were designed, reviewed and pretested by the following: PI, research staff and graduate students (PSU) with expertise in social science research, and GRTE staff. Pre-testing for clarity and estimated burden time was conducted with graduate and undergraduate students at Pennsylvania State University.

BURDEN ESTIMATES:

The combined estimated annual burden for this collection including the initial contact time, and time to complete the questionnaires for both sample groups (e.g. drivers and recreational users) will be **184 hours**.

Recreational users

The estimates for the Pre and Post trip surveys are based upon the time it will take to make the initial contact, complete the surveys (or non-response survey) and to return the GPS unit. The combined total burden for the Recreational users' survey is estimated to be **156 hours**.

Pre-trip Survey

We are expecting that 85% (n=800) of all visitors contacted will agree to take an additional 5 minutes after the initial contact, to complete the pre-trip survey and take a GPS unit (803 x 6 minutes = 80 hours). Of all of the visitors contacted, we anticipate that 95% (n=135) of those refusing to complete the full survey will agree to answer the non-response check question (135 x 2 = 4 hours). The burden for the remaining visitors that completely refuse to participate will not be calculated due to lack of participation.

Post-trip Survey

At the end of their visit the GPS units will be collected and the 800 visitors will be asked if they would be willing to complete the post-trip survey. We expect that 85% (n=680) will agree to complete the post-trip survey. The time will include one minute for the initial contact and five additional 5 minutes to complete survey (680 X 6 minutes = 68 hours). Based on previous studies 95% (n=114) will refuse to take the post-trip survey however they will agree to take one minute to answer the question that will be used to estimate post-trip non-response bias (114 X 2 minute = 4 hours).

	Responses	Completion Time (minutes)	Annual Burden Hours
Pre-trip			
Completed Survey	803	6	80
Non-response Survey	135	2	4
Subtotal	917		85
Post-trip			
Completed Survey	680	6	68
Non-response Survey	114	2	4
Subtotal	0		72
TOTAL	1,732		156

Drivers Survey

We plan to approach 1,408 potential respondents upon their entrance to the sampling areas. We expect that 50% ($n=704$) of the visitors contacted will be eligible to participate in the study based upon the screening question asking if they were planning to spend the night in the park. Of all of the visitors contacted and were deemed eligible to participate, only 600 of those will agree to take an additional minute (not including the initial contact time) to complete the pre-trip survey and take a GPS unit ($600 \times 2 \text{ minutes} = 20 \text{ hours}$).

Of the eligible visitors ($n=704$), we expect that 15% ($n=104$) will refuse to participate, however 99 will agree to at least answer the non-response questions. For those individuals, we will record their reason for refusal and their responses to the non-response check question, this is estimated to take about one minute (not including the initial contact time) to complete ($99 \times 2 = 3 \text{ hours}$).

The total burden for this collection is estimated to be 23 hours.

	Responses	Completion Time (minutes)	Burden Hours
Completed questionnaire	600	2	20
Non-response survey	99	2	3
Total burden requested:	0		23

REPORTING PLAN:

1. Analyze data and prepare reports: September 2018 – December 2018
 - a. Product: draft reports with visitor frequencies and descriptive statistics regarding visitor experience.
 - b. Product: compiled final draft report for Management, reviewed by colleagues and GRTE staff.
2. Write final report to GRTE Management Team: March, 2019
 - a. Product: final report to GRTE management staff
 - b. Product: Presentation of survey results

NOTICES

Privacy Act Statement

General: This information is provided pursuant to Public Law 93-579 (Privacy Act of 1974), December 21, 1984, for individuals completing this form.

Authority: National Park Service Research mandate (54 USC 100702)

Purpose and Uses: This information will be used by The NPS Information Collections Coordinator to ensure appropriate documentation of information collections conducted in areas managed by or that are sponsored by the National Park Service.

Effects of Nondisclosure: Providing information is mandatory to submit Information Collection Requests to Programmatic Review Process.

Paperwork Reduction Act Statement

We are collecting this information subject to the Paperwork Reduction Act (44 U.S.C. 3501) and is authorized by the National Park Service Research mandate (54 USC 100702). This information will be used by The NPS Information Collections Coordinator to ensure appropriate documentation of information collections conducted in areas managed by or that are sponsored by the National Park Service. All parts of the form must be completed in order for your request to be considered. We may not conduct or sponsor and you are not required to respond to, this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number. OMB has reviewed and approved The National Park Service Programmatic Review Process and assigned OMB Control Number 1024-0224.

Estimated Burden Statement

Public Reporting burden for this form is estimated to average 60 minutes per collection, including the time it takes for reviewing instructions, gathering information and completing and reviewing the form. This time does not include the editorial time required to finalize the submission. Comments regarding this burden estimate or any aspect of this form should be sent to the Information Collection Clearance Coordinator, National Park Service, 1201 Oakridge Dr., Fort Collins, CO 80525.