



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: 11/18/2016

Project Title: Jenny Lake Visitor Experience Study

Abstract (not to exceed 150 words)

Jenny Lake is one of the most highly visited areas in Grand Teton National Park (GRTE). As visitor use increases to this area, Grand Teton, and all National Parks, it is important to identify, understand, and monitor key components to the visitor experience. This study seeks to understand visitor experience at Jenny Lake, specifically visitor's motivations, expectations, and perceptions of their experience by employing on-site visitor intercept surveys. On-site survey will be conducted from May to October of 2017. All adults (aged 18 and older) in the sampling area during the sampling period will be eligible to participants in the survey.

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Project Information**Where will the collection take place?****Grand Teton National Park - Jenny Lake****Sampling Period****Start Date:05-22-17****End Date:09-30-17****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 iPad tablet computer**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.

Jenny Lake is one of the most highly visited areas in Grand Teton National Park (GRTE). It offers a plethora of activities, ranging from hiking, camping, picnicking, swimming, and water recreation. In terms of visitor services, it also has a visitor center, ranger station, and general store. Additionally, Jenny Lake Boating, Inc. offers a shuttle service, which shuttles hikers to the opposite side of Jenny Lake, giving much shorter access to key areas of interest in recommended Wilderness, such as Hidden Falls or Inspiration Point. The alternative to taking the shuttle is to hike approximately 2.5 miles around to the opposite side of the lake. The Jenny Lake Boating, Inc. shuttle is a component of visitor experience at Jenny Lake, and affects both visitors who decide to ride the shuttle boat, and those that do not. On peak days, it is reported that the Jenny Lake Boating, Inc. shuttles more than 1,200 visitors from the East Shore to the West Shore of Jenny Lake between the hours of 7 AM and 7 PM.

Currently, this is little to no scientific understanding of visitor experience in the Jenny Lake area of Grand Teton National Park (GRTE). Being one of the highest visited areas within the park, understanding visitor's expectations, motivations, and perceptions of quality are important to ensure that visitors are having high quality experiences. Currently, the Jenny Lake Renewal Plan is complete and construction of the plan is underway. The plan seeks to improve trails, visitor services, and visitor experiences. Gathering information on the current visitor experience at Jenny Lake is important to understand what experiences visitors are seeking at Jenny Lake and if they are achieving high quality experience there.

Additionally, one of the main roles of the social scientist at Grand Teton National Park is to study visitor use and experience, specifically in regards to boating and climbing concessionaries. As concessions management continues to make decisions about the Jenny Lake Boating contract, information about its social impacts to the Jenny Lake area is imperative. As managers continue to plan for the future of Jenny Lake, the information collected in the study will serve as a baseline of visitor experience for comparison for future studies, and give insight to motivations, expectations, and perceptions of an ever-increasing visitor base. Being that little is currently known of the dimensions of visitor experience at Jenny Lake, this study is

exploratory in nature.

Survey Methodology

(a) Respondent Universe:

The respondent universe will be all adults (18 years old and older) exiting the Jenny Lake trail system from May 22 to September 30, 2017.

(b) Sampling Plan/Procedures:

For the past two years, the Jenny Lake shuttle boat transported more than 140,000 people across Jenny Lake each year. Additionally, there is a lakeshore trail that completes a circle around the lake. Trail counters indicate that more than 50,000 people per year for the past five years have hiked on the lakeshore trail. The Jenny Lake shuttle boat is positioned in such a way that passengers must hike on the lakeshore trail for a short distance prior to boarding. Surveyors will be stationed in the area between the shuttle boat and exit of the trail system to intercept participants. Based on previous visitation in this area, it is estimated that more than 200,000 people will pass by the surveyor's location throughout the sampling period. Additionally, participants may also enter the trail system via String Lake. In the past 3 years, more than 40,000 people have entered the Jenny Lake trail system from this location. Participants will also be intercepted in this location to ensure that everyone visiting Jenny Lake, regardless of point of egress, has an equal chance to be surveyed.

Beginning May 22 through September 30, 2017 survey sampling will take place at two egress points of Jenny Lake:

- Between the east dock of Jenny Lake Boating, Inc. and the exit of the trail system
- near the String Lake trailhead

Location	Sampling Days Per Site				
	May	June	July	August	September
East Dock of Jenny Lake Boating Inc.	3	6	6	6	3
String Lake trailhead	1	2	4	4	1
Total	4	8	10	10	4

The 36 Sampling days will be stratified by day of the week, time, and location. Due to higher visitation at the East Dock, there will be more sampling days at this location. Participants will be surveyed as they exit the trail system. On each sampling day, two trained researchers will be stationed at one of the locations for six and a half hours between 8 a.m. and 7 p.m. Researchers will recruit study participants by contacting a random sample of visitors as they exit the sampling locations. One visitor group will be intercepted approximately every 10 minutes by one researcher, the other researcher will standby for safety purposes and to be available to answer any non-participating visitor questions. If researchers are unable to meet their sampling quota for the month, which will be assessed mid-month each month, additional day(s) will be instated and the sampling procedures will continue as described above. Sampling will not occur on holidays or days with expected abnormal visitation (e.g. Memorial Day, Independence Day, Labor Day, or the Day of the full lunar eclipse), as to not skew the sample.

Jenny Lake Survey Sample Plan 2017

Location	Estimated Number of Visitor Contacts					
	May	June	July	August	September	TOTAL
East Dock of Jenny Lake Boating Inc.	62	125	126	125	62	500
String Lake trailhead	20	42	84	84	20	250
TOTAL	82	167	210	210	82	750

Visitors who agree to participate will be asked to complete a survey on-site in the presence of the recruiter. 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 visitors refusing to complete the full survey will be asked if they would be willing to answer questions that will be used to check for non-response bias. In addition to the responses to the non-response bias questions, additional characteristics (i.e., gender, activity, group size, number of adults and children in group, and potential language barrier time, location, mode of transportation) will be documented in a study log.

(c) Instrument Administration:

Surveys will be administered by trained researchers working under the supervision of the PI. All respondents will be given a laminated copy of the survey questions and the recruiter will use a tablet computer to record their verbal responses. The “interview” method will be used to facilitate skip patterns and eliminate data entry errors. This process will continue throughout the sampling period.

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

Hello, I am conducting a study for Grand Teton National Park to understand visitor's motivations, expectations, and experiences in the Jenny Lake area. Your participation is voluntary and your responses will be anonymous. In total, it will take you about 8 minutes to complete to complete a short survey. Would you be willing to participate?"

If NO: *Do you mind if I ask three very quick questions?*

- *What is the primary activity you are planning to do during your visit?*
- *During your visit today, did other visitors and their activities interfere with your visit at Jenny Lake?*
- *How many times have you visited Jenny Lake?*

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 is at least 18 years old and has the next birthday? Would you be willing to participate in the study?"*

The surveyor will then provide the instructions for completing the survey

(d) Expected Response Rate/Confidence Levels:

A total of 750 visitors will be contacted during the sampling period. It is estimated that 80% (n=600) will be

willing to participate in the surveys. These estimates are based on previous research with hikers in Grand Teton National Park conducted in the summers of 2014 and 2015 on the Moose-Wilson Corridor (Newman et al., 2015 & Newman, et al., 2016). The research in 2014 and 2015 in Grand Teton employed similar methodology (e.g. an exit survey of every nth visitor group). In 2014, the response rate was 90% and in 2015 the response rate was 87.8%. Additionally, a small sample of qualitative interviews (less than nine people) was conducted at Jenny Lake in the summer of 2016 with a 100% response rate. Given that Jenny Lake is also within Grand Teton National Park, and hikers are being surveyed, a response rate of 80% is believed to be an achievable goal.

Vaske (2008) concluded that the estimated sample size for human dimension of natural resource research, typically allows generalization to a population with a 95% confidence interval that the survey findings will be accurate to within ± 5 percentage points. The results of this collection will not be used generalize any population beyond the visitor participating in this study during this sampling period. Sampling and recruiting efforts will conclude at the end of the sampling period.

Estimated response rates based upon number of visitor contacts

East Dock of Jenny Lake Boating Inc.

	Initial Contacts	Acceptance 80%	All Non-respondents 20%	Non-response survey 80%	Hard Refusals 20%
May	62	50	12	10	2
June	125	100	25	20	5
July	126	100	25	20	5
August	125	100	25	20	5
September	62	50	13	10	3
TOTAL	0	00	100	0	0

String Lake trailhead

	Initial Contacts	Acceptance 80%	All Non-respondents 20%	Non-response survey 80%	Hard Refusals 20%
May	20	16	4	3	1
June	42	34	8	6	2
July	84	67	17	14	3
August	84	67	17	14	3
September	20	16	4	3	1
TOTAL	0	0	0	0	00

Response rates based upon total estimated number of all visitor Contacted

	Initial Contacts	Acceptance 80%	All Non-respondents 20%	Non-response survey 80%	Hard Refusals 20%
East Dock of Jenny Lake Boating	500	400	99	80	19
String Lake trailhead	250	200	50	39	11
TOTAL	0	00	050	120	0

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

All visitors contacted who do not agree to participate will also be asked to provide responses to the following questions that will serve as the non-response bias check:

- *What is the primary activity you are planning to do during your visit?*
- *During your visit today, did other visitors and their activities interfere with your visit at Jenny Lake?*
- *How many times have you visited Jenny Lake?"*

In addition to the non-response survey questions, the surveyor will also record the following observational data for all non-respondent (including the "hard refusals)

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

This process will continue throughout the sampling period at each of the study locations. This information will be used to determine any non-response bias. Any non-response bias will be reported in final reports.

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

The questions included in the survey instrument were designed, reviewed and pretested by the following: PI, Grand Teton National Park staff (Jenny Lake Boating Inter Disciplinary Team), as well as NPS staff with the Denver Service Center's Visitor Use Management program. Based on peer-reviews, survey questions were reduced and truncated, to include approved pool of known questions/topics, and therefore reduce burden time. Pre-testing for clarity and estimated burden time was conducted with less than 9 graduate student at Penn State, as well as staff at Grand Teton National Park. The final draft of the survey includes all edits and correction obtained from the pretest efforts.

Burden Estimates

We plan to approach 750 potential participants (500 at the Jenny Lake Boating trail and 250 at the String Lake Trailhead). We expect that the initial contact time for all visitors will take at least one minute per person (750 x 1 minute = 13 hours). We expect that 20% (n = 150) of visitors will refuse to participate in the study. For those individuals, their reason for refusal will be recorded and they will be asked to answer the non-response check questions. Based upon our estimated response rate of all of the people that refuse to take the survey 80% (n=120) will agree to answer the non-response check questions and 20% (n=30) will give a "hard refusal" and walk away. The time to complete the non-response questions is estimated to take about one minute to complete (120 x 1 minute = 2 hours).

For the 750 originally contacted, we expect that 80% (n=600) will agree to complete the survey. This will take an additional 8 minutes to complete (600 x 8 minutes = 80 hours).

The total annual burden for this collection is estimated to be 95 hours.

Estimated Total Number		Estimation of Time (minutes)		Estimation of Burden (hours)	
Initial Contacts	750	Initial Contact	1	Initial Contact	13
Nonresponse survey	120	Nonresponse survey	2	Nonresponse survey	2
Completed surveys	600	Completed survey	8	Complete survey	80
Total				Total	95

Reporting Plan

A final technical report will be delivered to the park managers and staff at Grand Teton National Park. 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.