



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: 6-10-2021

PROJECT TITLE: Taggart Lupine Area Visitor Use and Experience Study

ABSTRACT: (not to exceed 150 words)

The purpose of this collection is to inform site redevelopment plans in the Taggart Lake and Lupine Meadows area of Grand Teton National Park (GRTE). The plans are to redevelop parking, trailheads, and associated visitor infrastructure. The size and configuration of this infrastructure will influence the volume and flow of visitors, which will affect visitor experiences and resource qualities in the area. Consequently, to achieve its experience and resource management objectives, GRTE must understand the relationships among visitor experiences, volumes, distributions, infrastructure use.

PRINCIPAL INVESTIGATOR CONTACT INFORMATION:

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PROJECT INFORMATION:

Where will the collection take place? Grand Teton National Park - Taggart and Lupine Meadows

Sampling Period Start Date: 7/7 2021

Sampling Period End Date: 8/31/2021

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

☐ Mail-Back Questionnaire

☒ On-Site Questionnaire

☐ Telephone Survey

☐ Face-to-Face Interview

☐ Focus Groups

☐ Other (List)

Will an electronic device be used to collect information? ☐ No ☒ Yes *iPads for onsite survey*

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. This policy also 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. We are authorized to collect this information by the National Park Service Protection Interpretation and Research in System (54 USC §100702).

Due to its proximity to the park entrance and accessibility to a popular lake at the base of the Teton Range, the Taggart Lake area is a unique and important location within GRTE. The associated trails provide access to a myriad of year-round recreation opportunities. Visitation to these areas has increased substantially, but current data is deficient in providing managers with the details needed to inform site redevelopment plans for the area, specifically related to parking lot reconstruction and trailhead development.

The Taggart and Lupine Meadows parking areas and trailheads are connected by the Valley Trail. In the summer, both parking areas frequently fill to capacity by 10:00am, and overflow onto roadways and roadside vegetation. Both ecological and social impacts are occurring given the current use levels, and data is needed to understand the extent. Given the current use levels, without data to inform visitor experience as it relates to the protection of the park resources, this important area of the park has the potential to be overcrowded and ecologically damaged, negating the mission of the NPS for this area.

To help address these infrastructure (i.e., parking and roadway), resource, and visitor use management issues, GRTE is planning to redevelop parking areas and trailheads in the Taggart Lake area. Understanding visitor use levels, distributions, behaviors, and experiences in Taggart Lake area is imperative to inform site redevelopment in a way that is sustainable for this and future generations.

The type of data that is proposed to be collected from this effort includes: Visitor characteristic and experience data including group and visit characteristics and visitor use conditions as experienced and evaluated by visitors. These data are required to associate the quantitative indicators of visitor use conditions with the quality of visitor experiences as expressed by visitors themselves. These data are needed at two levels: 1) trail-specific level within the Taggart and Lupine area as measured via the Perception of Crowding survey portion of the study; and 2) at the site-wide level for the whole of the Taggart and Lupine area as measured by the exit questionnaire.

SURVEY METHODOLOGY

(A) Respondent Universe:

All adults (18 years of age and older) visiting the Taggart Lake and Lupine Meadow areas of GRTE during the sampling timeframe (July 7 to August 31, 2021).

Sampling Plan / Procedures:

Sampling will be stratified by hour of the day (e.g., 08:00 – 14:00, 12:00 – 18:00) and day of week (e.g., weekend days, weekdays). Sampling periods will be scheduled to collect representative data across temporal strata to the extent possible. A total of 1,260 potential respondents are estimated to be contacted in this sampling effort.

During sampling periods, a random sampling of potential respondents will occur onsite targeting visitor groups entering the trail network from the Taggart and Lupine Meadows parking areas. A stratified sampling method will be used to select every *n*th visitor group during the sampling days and times. A total of 7 sampling days at each location will be stratified by day of the week.

All visitors that agree to participate will be asked to wear a sticker that will be used to identify them as participants in the study. At three selected points along the trail, these visitors will be stopped and asked to complete the *Visitor Encounter Survey*. Upon exiting the Taggart and Lupine Meadows trailheads, all participants who have been administered the *Visitor Encounter Survey* will be stopped and asked to complete the exit survey. Table 1 presents anticipated numbers of sampling days, visitors contacted per day, visitors contacted per month, and total visitors contacted over the sampling period.

Table 1. On-Site Sampling Days

	July			August			Total
	Sampling days per period	# Visitors contacted/day	# Visitors/Sampling period	Sampling days per period	# Visitors contacted/day	# Visitors/Sampling period	Visitors contacted
Taggart	2	110	220	5	110	550	770
Lupine Meadows	1	70	70	6	70	420	490
TOTAL	3	180	290	11	180	970	1,260

(B) Instrument Administration:

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

At the start of each sampling period, the first visitor group entering the sampling area will be greeted and asked if they would be willing to participate. Approximately one minute will be used during the initial contact to explain the purpose of the study and to select the adult member of the of the group (18 years or older) with the next birthday to serve as the respondent for the survey. If the visitor does not agree, surveyors will thank them for their time, ask if they would be willing to answer the three non-response bias questions and thanked for their time. Those who refuse to respond to non-response questions will be coded as 'hard refusals' and thanked for their time. On each sampling day, a survey administrator will use the sampling procedure described above and the follow the example script below.

Administrator

Hello, I am conducting a study for Grand Teton National Park to better understand visitors use and experiences while recreating within the Taggart Lake and Lupine Meadows part of the park. Your participation is voluntary, and your responses will be anonymous. As a part of this study you will be asked at three separate points along the trail to answer two questions about your experience. At the end of your trip we will ask you to complete a short questionnaire. Counting the two stops along the trail and the short survey it we are only requesting about 14 minutes of your time to provide the park managers with information that will help improve visitor experiences in the future.

Visitor

Yes, I want to participate.

Administrator

Great, I am going to ask the adult with the next upcoming birthday to carry this survey with them during your visit here today. As you travel through the Taggart Lake area today you will see other survey administrators dressed like me (i.e., wearing survey administration uniforms e.g., Penn State shirt, name tag). They will ask you two questions about your experiences up to that point on the trail. Before you start would you answer the following three questions? [administrator asks the non-response questions]. Thank you very much for your time, have a good trip.

- *Including today, how many times have you visited this trailhead?*
- *What is your primary destination today?*
- *About how long, in hours or minutes, do you plan to visit this area today?*

Visitor

No, I do not want to participate.

Administrator

No problem, would you be willing to answer a few quick questions? [administrator asks non-response questions].

- *Including today, how many times have you visited this trailhead?*
- *What is your primary destination today?*
- *About how long, in hours or minutes, do you plan to visit this area today?*

All survey administrators will be trained on every aspect of on-site surveying, including survey administration, avoiding sampling bias, and handling all types of survey situations, especially safety of visitors and the administrator. Quality control will be ensured by monitoring interviewers in the field, and by checking their contact logs at the end of each sampling day. If on-site acceptance rates are lower than the expected 80% during the sampling period, an experienced on-site field supervisor will provide additional training and support for the survey administration process, including:

- Ensuring that survey administration protocols are being followed properly,
- Recommending the adjustment of the specific bounds of the survey administration area to better capture flows of visitors, and
- Recommending the reduction of the time interval.

While conducting the above procedures, survey administrators will follow all applicable COVID-related policies and guidelines as outlined by NPS and the Pennsylvania State University.

A total of 1,260 visitor contacts are expected during the sample period (July $n=290$ and August, $n=970$). It is anticipated that 80% of the 1,260 contacted visitors will agree to participate on-site, however it expected that 50% of the visitors contacted will complete and return the final questionnaire. Tables 2 and 3 below outline anticipated response rates and confidence intervals for the study. They are based on the following assumptions.

- Typical summer daily use levels at the Taggart and Lupine Meadows trailheads are approximately 220 and 140 visitor groups per day, based on data provided from the park for 2020.
- Anticipated participation rates will be approximately 80%, based on recent social science research in GRTE (D'Antonio, et al., 2018).
- Anticipated 'hard refusal' (i.e., declining to answer non-response questions) rates will be approximately 10%.

This acceptance rate and response rate is consistent with response rates for similar on-site surveys conducted in national park units around the country. As a result, we anticipate that we will receive 1,080 completed encounter surveys from visitors contacted during the sampling periods. Anticipated margins of error are estimated based on the procedures used to estimate margins of error within the NPS Socioeconomic Monitoring program (NPS, 2019). It should be noted that the anticipated margin of error for Lupine Meadows trailhead exit questionnaires is 6%, which is greater than the typically desired 5%. This difference in anticipated margin of error results from anticipated contacts of $N = 392$ rather than they typically minimum desired of $N = 400$. When analyzing data and interpreting results, researchers will acknowledge this nominal difference in margin of error and limit the scope of analysis and interpretation accordingly

Table 2. Anticipated Onsite Survey Response Rates: Visitor Experience Survey Encounter

	Total Number of Visitor Contacts	Completed Encounter Surveys (80% of contacts)	Soft Refusals (20% of contacts)	Completed Non-Response Surveys (30% of soft refusals)	Hard Refusals (70% of soft refusals)
Taggart	770	616	154	139	15
Lupine	490	392	98	88	10
TOTAL	1,260	1,008	252	227	25

We anticipate that of the visitors completing the encounter surveys along the trail that 80% ($n=807$) will agree to complete the exit survey. We will use the *Visitor Encounter Survey* to conduct the non-response bias check for the visitors refusing to complete the exit survey.

Table 3. Anticipated Exit Survey Response Rates

	Total Number of Visitor Contacts	Completed Onsite Surveys (80% of contacts)	Soft Refusals (20% of contacts)	Completed Non-Response Surveys (30% of soft refusals)	Hard Refusals (70% of soft refusals)
Taggart	616	493	99	30	69
Lupine	392	314	62	19	43
TOTAL	1,008	807	0	49	0

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

The number of refusals will be recorded, reported, and screened for non-response bias by using the following non-response question taken from the survey:

- Including today, how many times have you visited this trailhead?
- What is your primary destination today?
- About how long, in hours or minutes, do you plan to visit this area today?

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

- *day, time, and location of contact*
- *apparent activity (e.g., day hike, overnight backpack, rock climb/mountaineer)*
- *apparent group size*
- *apparent number of adults and children in group,*
- *apparent arrival mode of transportation*

Data from the study will be analyzed for non-response bias by comparing participating groups' characteristics to non-participating groups' characteristics. Any implications of non-response for park planning and management will be reported and interpreted.

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

This collection uses similar methods and questions that have been used in other NPS visitor use studies, and the survey questions are specifically from the NPS Pool of Known Questions. The questions were adapted for the appropriate context in the GRTE. The questions included in the survey instrument were designed, reviewed, and pretested by the following: PI, research staff and graduate students, scientists in the Recreation, Park, and Tourism Management Department at Pennsylvania State University with expertise in social science research, and park staff, including park Social Scientist, Dr. Jennifer Newton. Interview style pre-testing for clarity and estimated burden time was conducted with research staff and graduate students at Pennsylvania State University.

BURDEN ESTIMATES

The total respondent burden for this collection is estimated to be 337 hours. Error: Reference source not found provides a summary of burden estimates. We have estimated respondent burden as follows:

- **Initial Contact and Visitor Encounter Survey:** (67 hours) The initial contact will take less than 2 minutes-minutes to determine eligibility, acceptance of the invitation to participate, provide instructions, and conduct the non-response bias check (1,008 respondents x 4 minutes = 67 hours). An additional 2-minutes will be needed to respond to the *Visitor Encounter Survey* (1,008 respondents x 4 minutes = 67 hours).
- **Exit Survey:** (269 hours) The visitors will be intercepted at the end of their visit. It will take about one-minute to provide the instructions before administering the survey and no more than 10 minutes to complete the *Exit Survey*.
- **Exit Survey non-response bias check** (1hour) We will use the *Visitor Encounter Survey* to conduct the non-response bias check for the visitors refusing to complete the exit survey. One minute will be used to request participation and conduct the non-response bias check (49 respondents x 1 minute = 1 hour).

Table 4. Combined Burden Estimates for Taggart and Lupine

	Completed Responses	Completion Time * (minutes)	Burden Hours (rounded up)
Initial Contact and Visitor Encounter Survey	1,008	4	67
Exit Survey	807	20	269
Exit Survey Non-response	49	2	1
TOTAL	0		0

* Initial contact time of one minute is added to the times to complete the surveys

REPORTING PLAN:

A final technical report will be delivered to the park managers and staff at GRTE. The report will contain a description of the study purpose, methodology, 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, as well as to the NPS Research Permit and Reporting System.

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.