

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



Social Science Program

Expedited Approval for NPS-Sponsored Public Surveys

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| 1. | Project Title Submission Date: | Visitor Capacity and Use Monitoring Research at Snake River Headwaters in Grand Teton National Park | May 20, 2011 |
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| 2. | Abstract: | The study is instrumental in addressing the user capacity mandate of the Wild and Scenic Rivers Act to document kinds and amounts of visitor use in the Snake River headwaters corridor. The study fills an identified data gap in understanding of river use. Methods include observational research on use types and use levels, as well as rapid assessment of visitors' perceptions of their experience recreating along the Snake Headwaters. The protocols are scheduled to be implemented May – September 2011, and serve as monitoring protocols that similar National Park Service (NPS) units and wild and scenic rivers could adapt and implement. Further, this implementation at the Snake River is a replication of similar work at Ozark National Scenic Riverways and other locations as previously approved by the Office of Management and Budget (OMB). Results from this survey will be used to support current and active development of the Snake Headwaters Comprehensive River Management Plan (RMP). | |
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(not to exceed 150 words)

3. Principal Investigator Contact Information

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Project Information

5. Park(s) For Which Research is to be Conducted: Grand Teton National Park

6. Survey Dates: 05/15/2011 (mm/dd/yyyy) to 09/15/2011 (mm/dd/yyyy)

7. Type of Information Collection Instrument (Check ALL that Apply)

- Mail-Back Questionnaire On-Site Questionnaire Face-to-Face Interview Telephone Survey Focus Groups

Other (explain) _____

8. Survey Justification: (Use as much space as needed; if necessary include additional explanation on a separate page.)

The National Park Service initiated this survey effort to collect river use data required for its upcoming Snake River management plan. The river's headwaters flow through Grand Teton National Park and are managed under a 1997 plan. These plans typically have a 10 – 15 year lifespan.

An updated river management plan being developed to address the evolving use and management onsite. However, the plan requires accurate and current data on the types, amounts, and distributions of river use. Since the 1997 plan's completion, the National Park Service has not gathered the needed river user capacity data. This survey directly assists in fulfilling that need, as mandated in the Wild and Scenic Rivers Act (WSRA).

WSRA requires comprehensive planning of designated rivers to address "resource protection, development of lands and facilities, user capacities, and other management practices necessary or desirable to achieve the purposes of this Act." As required by the act, the *Snake Headwaters Comprehensive River Management Plan* will

- clearly describe the rivers "outstandingly remarkable values," which are the river-related or river dependent, and unique, rare, or exemplary characteristics that make a river eligible for inclusion in the national wild and scenic rivers system;

- establish a management program in the river corridors that protects the rivers' outstandingly remarkable values, free flowing condition and water quality; and
- address user capacity, establishing the types and levels of visitor use appropriate in the river corridor.

This survey will be a key tool used to measure user capacity requirements of the WSRA.

Legal and Policy Requirements for Research

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, operations, management, education, and interpretive activities.

The RMP planning process will comply with the National Environmental Policy Act and assess a range of alternative visitor use management strategies. The information gathered in this project will inform those alternatives by assessing the current amount and type of use in the park and evaluating visitors' perceptions of their park experience. The results of this study are a needed source of information (also including public and stakeholder comments, staff recommendations, other research, etc.) that management will require for evaluating alternatives.

The specific objectives for this research include:

1. *Document current uses and use patterns.* This element of the study will provide park managers with descriptions of the type of use and the number of visitors currently using the Snake River headwaters within the park boundary.
2. *Describe visitors' perceptions of river use densities.* This element of the study will be used to assess if visitors encounter the amount of people they expected and if they have conflicts with other river users.
3. *Describe visitors' perceptions of change on the rivers.* This element of the study will measure visitor's perceptions of how use and use levels have changed over time along the Snake River headwaters.

Understanding existing use levels and visitor perceptions will be a significant contribution to supporting development of the new

comprehensive river management plan for the Snake Headwaters. This is the most basic and relevant type of information needed to inform important decisions about management alternatives and user capacity within the river corridor. This study will use a rapid assessment approach, piloted by Dr. Ken Chilman and applied more recently by Dr. Logan Park of Southern Illinois University at Ozark National Scenic Riverways (Marnell et al. 1978, Chilman et al., 1996, Brown and Chilman 2001). This approach is both efficient and effective for collecting the needed data in a timely manner to support the planning effort. In addition to supporting development of the plan, it is anticipated that this rapid assessment tool will be replicated in the future to support on-going monitoring and management efforts on the Snake Headwaters. Finally, testing these methods on another river will support further refinement of this type of data collection and monitoring protocol, which can support other planning and management efforts for wild and scenic rivers in the NPS.

9. **Survey Methodology:**
(Use as much space as needed; if necessary include additional explanation on a separate page.)

(a) Respondent universe:

All adults, 18 years of age or older, visiting the Snake River Headwaters in Grand Teton National Park from 5/15/2011 to 9/20/2011.

(b) Sampling plan/procedures:

Surveys will be administered along the Snake River headwaters at six river access sites. The sampling schedule will target: canoeists, rafters, tubers, boater, and other river users. Sampling days will be stratified by weekdays vs. weekend days and holidays, and months. The sampling schedule will be composed of the weeks, weather permitting, from 5/15/2011 to 9/20/2011, and will be repeated after each of the three sets of four weeks are completed. Surveys will be administered onsite to visitor groups as they exit the riverways, from 12:00 p.m. to 7:00 p.m. The survey staff will wear NPS volunteer uniforms or Southern Illinois University logo clothing, to promote easy identification of staff by visitor groups.

At the start of each sampling period, the surveyors will approach the first group of visitors to exit the river at the intercept location. The group will be asked if they are willing to participate in the survey. Refusals will be logged along with group size, craft type, the number of children under 18 in the group, the apparent language spoken, and field staff comments on the reason for refusal. These data will be used to assist in non-response bias analyses. If the visitors are willing to participate, the surveyors will ask the adult group member with the most recent birthday to the sampling day to serve as the individual respondent. The survey will be conducted as a face-to-face interview, with all responses recorded on the questionnaires by survey staff. At the conclusion of the interview, the group will be thanked for their participation and staff will approach the next group for participation, to complete a census of river users debarking at survey sites.

Experience from past replications of this procedure suggests that the

arrival rate of groups is infrequent enough that all groups arriving at study locations can be contacted for participation (Personal communication to Dr. Ken Chilman). This process will continue throughout the day, and a series of short rest breaks for survey staff will be included in the schedule.

(c) Instrument administration:

The questionnaire used in this study is based on past replications' instruments previously approved by OMB, and has been updated to include standardized instrument language. The basis on past replications is being done to facilitate comparisons with previous research and sampling protocols.

Trained survey staff will be stationed at river user access/take out sites such that they can conduct continuous counts of visitor use levels at the sites. Where access/take-out sites are not conducive to accurate counts of river use, nearby locations providing better count vantage points have been determined (e.g., a bridge crossing overlooking a take-out). Where this approach is necessary, "count-only days" have been developed using the same stratification approach as survey sampling, described earlier.

Groups will be read the following script:

Hello, I am _____ and am working for the University of Southern Illinois in cooperation with Grand Teton National Park. We are doing a survey of visitors to the Snake River headwaters this year. It takes about 10 minutes to complete and your answers are completely voluntary and anonymous. Would you be willing to answer some questions?

If YES: We would like to talk to the person in your group 18 years or older who had the most recent birthday.

If NO: I understand. I hope you enjoy your visit.

(d) Expected response rate/confidence levels:

Onsite survey response rates have reduced dramatically in the past 10 years. Additional research is needed to address the problems associated with declining response rates for on-site surveys. According to Dr. Jim Gramann (personal communication) a conservative estimate of 60% will yield the responses necessary to provide a reasonable assessment of recreation on the Snake River for the purposes addressed in item 8 above.

Past rapid assessment river use surveys conducted under similar conditions and practices have yielded sample sizes of approximately 100-150 visitors per survey site per year. Therefore, we expect to

contact approximately 800 visitor groups across 6 survey stations located along the river, stratified by weekend and weekday periods and expect 480 or 60%, to agree to respond. With these anticipated sample sizes, we will be 95% confident that the true population parameters are +/- 4 percentage points of the sample statistic. This degree of accuracy reflects current peer reviewed scholarly publications dealing with river use data.

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

An interview log (attached) will be filled out by each survey administrator to record the disposition of each contact, including the characteristics of respondent groups and non-respondents groups. Non-response bias will be tested by comparing groups on these characteristics (e.g., group size, time of visit). Results of the analysis will be reported and any implications for interpretation of the results will be discussed in the final report.

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

The instrument for this study has been used in the field five times, and we will be using the same instrument to compare past results across multiple locations against current results. The content of the survey has been reviewed by the principal investigator, additional faculty at Southern Illinois University- Carbondale, and NPS officials. In addition, this revision of the survey incorporates question content and formatting that has been used at other OMB-approved projects for the NPS.

With a response rate of 60%, we plan to approach 800 individuals. We expect that the initial contact time will be at least one minute per person (800 x 1 minutes = 13 hours). For those who agree to participate (480), an additional 10 minutes will be required to complete the questionnaire (480 response x 10 minutes = 80 hours). The burden for this collection is estimated to be 93 hours.

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| 10. | Total Number of Initial Contacts | 800 | 11. | Estimated Time to Complete Initial Contact | 1 min | 12. | Total Burden Hours: | 93 |
| | Expected Respondents: | 480 | | Instrument (mins.): | 10 min | | | |

13. **Reporting Plan:** A technical report will be submitted to GRTE. We will also conduct a debriefing workshop for park staff in the fall of 2011. A copy of the technical report will be submitted to the NPS Social Science Program for inclusion in the Social Science Studies Collection.

Frequencies means, modes, and standard deviations will be used to describe visitor characteristics. Cross-tabulations, t-tests, or analyses of variance will be used to compare perceptions between motorized and non-motorized river users.

References

Brown, G. and Chilman, K. (2001). 2001 River use monitoring report for lower Current River. Ozark National Scenic Riverways. USDI National Park Service, Van Buren, MO.

Marnell, L., Foster, D., & Chilman, K. (1978). River recreation research conducted at Ozark National Scenic Riverways, 1970-1977: a summary of research projects and findings. National Park Service, Van Buren, Missouri. 139 pp.

SNAKE RIVER HEADWATERS RIVER USE SURVEY

Interviewer: Name: _____ Date: _____ Time: _____ Place: _____

1a. On this visit, what activities did you or your personal group participate in while visiting the Snake River in Grand Teton National Park? Please mark (•) all that apply. [Topic Area 3 – ACT 22]

- Rafting
- Kayaking / boating
- Fishing / angling
- Picnicking
- Photography
- Nature study
- Other (Please specify) _____

1b. Which **one** of the above activities was the primary activity that you and your personal group participated in while visiting the Snake River Headwaters area? [Topic Area 3 – ACT 23]

Primary Activity: _____

1c. At what location did you begin your activity today? _____

[Topic Area 3 – Variation of ACT 22 used to describe specific location within the park]

2. For this trip, how long did you and your group recreate on the Snake River at Grand Teton National Park?

[Topic Area 3 – ININ1]

Number of hours, if less than 24 hours _____

OR

Number of days, if 24 hours or more _____

3. How many times have you recreated on the Snake River inside Grand Teton National Park? Please mark (•) one. [Topic Area 1 – VISITHIS1]

- This is my first time here
- 2 – 5 times
- 6 – 10 times
- 11 – 25 times
- More than 25 times

4. Year of first visit _____ (enter 2011 if this is your first visit) [Topic Area 4 – Variation of VISITHIS1 used to determine number of years based on exact year versus estimation of number of years.]

5. What kind of group are you a part of today? Please mark (●) **one**. [Topic Area 1 – GR5]

- Solo
- Personal group
- Commercial group
- Other group, please explain _____.

6. Why did you choose to recreate at the Snake River in Grand Teton National Park today?

[Topic Area 3 – TPLAN 22]

7. Have you recreated on other sections or tributaries of the Snake River? Please mark (•) one.

[Topic Area 3 – Variation of ACT22 – specific to this area in the park]

Yes → Please specify the location _____

No

8. Did you have a particular reason for choosing this section of the Snake River in Grand Teton National Park today? Please mark (●) one. [Topic Area 2 –TPLAN22]

Yes → What were your reason(s)? _____

No

9. If this is **not** your first visit to the Snake River in Grand Teton National Park, what changes in conditions have you noticed since your first visit? [Topic Area 6 – Variation of OPMGMT 5 – requesting information based on previous visits and experiences]

OR

____ This is my first visit to Snake River in Grand Teton National Park

10. When you were on the river today, about how many other groups of people did you encounter? Please mark (•) one. [Topic Area 5 – Variation of CROWD17 – this question provides a range of responses versus relying on the respondent to provide specific the number of groups]

- zero other groups
- 1 – 5 other groups
- 6 – 10 other groups
- 11 – 15 other groups
- more than 15 other groups

11. Did you feel crowded on the river today? Please circle a single number. [Topic Area 5 – CROWD1]

| Not at all Crowded | | | Slightly Crowded | | | Moderately Crowded | | | Extremely Crowded |
|-----------------------|---|---|---------------------|---|---|-----------------------|---|---|----------------------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |

OR Not sure

12. On a scale of 1 to 9 (with 1 being “not at all important” and 9 being “extremely important”), how important would it be to you to encounter fewer people during your trip? Please circle a single number. [Topic Area 5 – Variation of CRWDATT5 – the variation to this question provides a single response versus multiple responses provide in the current pool of known questions.]

| Not at all Important | | Slightly Important | | | Moderately Important | | Extremely Important | |
|----------------------|---|--------------------|---|---|----------------------|---|---------------------|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

OR Not sure

13. Were other river users a problem for you during your visit? Please mark (•) one.

[Topic Area 6 – EVALSERV 19]

- Yes → Mark all that apply: Offensive behavior
 No Noise
 Unsafe behavior
 Littering
 Too many others / congestion
 Incompatible activities → Please specify: _____
 Other: _____

14. Please evaluate the quality of the facilities and services along the Snake River that you may have used today. Please circle **one** number for each facility or service that you used today. If you did not use a particular listed facility or service, or are unsure about an answer, please circle the appropriate response.

[Topic Area 6 – EVALSERV21]

| | Very poor quality | | | Neutral | | Very high quality | | | | |
|--------------------------|-------------------|----|----|---------|---|-------------------|---|------------|----------|--|
| Raft Put-ins / Take-outs | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Trails | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Restrooms | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Wayside exhibits | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Informational signs | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Picnic areas | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Trash receptacles | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Parking spaces | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |
| Disabled persons access | -3 | -2 | -1 | 0 | 1 | 2 | 3 | Didn't use | Not Sure | |

15a. What did you like most about your visit to the Snake River Headwaters today?

[Topic Area 6 – EVALSERV25]

15b. What did you like least about your visit to the Snake River Headwaters today?

[Topic Area 6 – EVALSERV24]

- 16 What year were you born? _____ [Topic Area 1 – AGE1]
17. Do you live in the United States? Mark (●) one. [Topic Area 1 – RES3]
- Yes → What is your Zip Code? _____
 - No → What country do you live in? _____

The questions below will not be verbalized but will be recorded as observational data in the survey log. These observations will be recorded for both respondents and non-respondents

Observer Record:

How many people are in the group, including respondent? _____ [Topic Area 1 – GR3]

Is respondent Mark (●) one. [Topic Area 1 – GEND1]

- Male
- Female

Surveyor river location: _____ [Topic Area 3 – ACT19]

Is a commercial guide present? Mark (●) one. [Topic Area 1 – GR6]

- Yes, guided
- No, not guided

PRIVACY ACT and PAPERWORK REDUCTION ACT STATEMENT: 16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by park managers to better serve the public. Response to this request is voluntary. No action may be taken against you for refusing to supply the information requested. Your responses will be anonymous. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a valid OMB number.

BURDEN ESTIMATE STATEMENT: Public reporting burden for this form is estimated to average 10 minutes per response. Direct comment regarding the burden estimate or any other aspect of this form to: