

**SUPPORTING STATEMENT B
FOR PAPERWORK REDUCTION ACT SUBMISSION**

[REDACTED]
OMB Control Number 10 - [REDACTED]

Collections of Information Employing Statistical Methods

The agency should be prepared to justify its decision not to use statistical methods in any case where such methods might reduce burden or improve accuracy of results. When the question "Does this ICR contain surveys, censuses, or employ statistical methods?" is checked "Yes," the following documentation should be included in Supporting Statement B to the extent that it applies to the methods proposed:

1. Describe (including a numerical estimate) the potential respondent universe and any sampling or other respondent selection method to be used. Data on the number of entities (e.g., establishments, State and local government units, households, or persons) in the universe covered by the collection and in the corresponding sample are to be provided in tabular form for the universe as a whole and for each of the strata in the proposed sample. Indicate expected response rates for the collection as a whole. If the collection had been conducted previously, include the actual response rate achieved during the last collection.

Due to the very low population density of central Idaho (< 1 household per square mile), we will use an event-based sampling method to conduct this survey, targeting county fairs and community events in four specific counties in Central Idaho. County fairs have been illustrated to serve as useful sampling sites for rural residents increasing sampling efficiencies while simultaneously targeting the desired population (Rose & Lindberg, 2016). For the survey, all residents of these counties with a valid zip code attending a county event are eligible. Additionally, visitors from outside of the primary respondent universe not residing within those counties are a secondary universe that can also opt-into survey participation.

The primary respondent universe for this collection will include residents of households in counties within or adjacent to the Salmon River Basin (n = 15,545 households). Counties include Custer, Lemhi, Idaho, and Valley. Only one member per household will have the opportunity to complete the survey to avoid the potential for nested data. Similarly, only one member per household outside the Salmon Rive Basin from the secondary universe will have the opportunity to complete the survey. There will be no attempts to generalize the results outside the scope of this study and this universe of potential respondents.

Respondent universe and expected sample size

Sample	*Respondent Universe	Contacts	Response rate	Expected number of responses
**Primary universe				
1. Custer County	1,808 (Households)	634	50%	317
2. Lemhi County	3,328 (Households)	690	50%	345
(3) Idaho County	6,603 (Households)	728	50%	364
(4) Valley County	3,806 (Households)	700	50%	350
Primary universe total	15,545	2,752	50%	1,376
***Secondary universe <i>Event visitors</i>	3.	800	50%	400
Total	-	3,552	50%	1,776

*Our proxy for estimating appropriate primary universe sample size and event attendance numbers is County level data.

**Potential sampling sites include but are not limited to the Custer County Fair, Reside Rendezvous, Sawtooth Gathering, Lemhi County Fair, Idaho County Fair, Big Water Blowout River Festival, Valley County Fair, & Winter Carnival

***Secondary universe includes visitors attending events from outside of the 4-county primary universe.

2. Describe the procedures for the collection of information including:

- * **Statistical methodology for stratification and sample selection,**
- * **Estimation procedure,**
- * **Degree of accuracy needed for the purpose described in the justification,**
- * **Unusual problems requiring specialized sampling procedures, and**
- * **Any use of periodic (less frequent than annual) data collection cycles to reduce burden.**

Based on our estimations, we conservatively anticipate a response rate of 50% for the entire event-based survey design to intercept a representative sample of residents of counties within and adjacent to the Salmon River Basin. County households reflect US census data for Custer, Lemhi, Valley, and Idaho Counties. Event-based sampling will target events in the county seats of Challis, Salmon, Cascade, and Grangeville, as well as Riggins, McCall, and Stanley. Our estimate of the response rate is incredibly conservative and based on (80%) in Trentleman et al. (2016) which details the effectiveness of personal interaction on survey response in rural environments in the Intermountain West. This effort will produce sample sizes for the primary universe that are considered robust in the aggregate with acceptable margins of error at $\pm 5\%$ at the 95% confidence level for all aggregate samples and potential sub-samples. For the secondary universe, a convenience sampling approach will allow intercepted event attendees to opt-in to survey participation. As the secondary universe includes the entire global population, there is no effort made to generalize the visitor population, which will comprise a convenience

sample, outside the scope of this study.

3. Describe methods to maximize response rates and to deal with issues of non-response. The accuracy and reliability of information collected must be shown to be adequate for intended uses. For collections based on sampling, a special justification must be provided for any collection that will not yield "reliable" data that can be generalized to the universe studied.

Best practices for in-person intercepts in rural environments in the western United States are modified from Trentlemen et al. (2016). Sample practices include direct interaction to leverage social exchange dynamics, utilizing tablet-based sampling with surveyor assistance, surveyor working from a preset script, and assisting with questionnaire completion, when requested by respondents. A minimum of two researchers will be present at each sampling event.

The surveys in this collection will follow the same sampling procedures although the locations and settings will differ. The initial contact with event attendees will be used to explain the study and determine if they are interested in participating (see script below). This should take approximately one minute. The attendees that refuse to participate will be asked if they would be willing to take a minute to respond to non-response bias questions (which will be recorded by the survey administrator). The number of refusals will be recorded and used to calculate the overall response rate for the collection.

Attendees selected for participating in the survey will be read the following script:

“Hello, my name is _____. I am conducting a survey for the U.S. Geological Survey to better understand your use of natural resources in the Salmon River Basin. Your participation is voluntary, and all responses will be kept anonymous. Would you be willing to take a 15-minute survey?”

→If **YES** – then ask, “has any member of your group been asked to participate in this survey before?”

If **“YES”** (already asked to participate) then, “*Thank you for agreeing to participate in this study. Have a great day.*”

If **“NO”** (have not been previously asked to participate) then,
“*Thank you for agreeing to participate. Please use this tablet to answer the questions in the survey, please let me know if you have any questions about the process.*” Record responses in spaces provided on the tracking sheet.

→If **NO–** (soft refusal) - ask them if they would be willing to answer the non-response bias questions (listed below) and then thank them for their time. Record responses in spaces provided on the tracking sheet.

→If **NO–** (hard refusal) - end the contact and thank them for their time.

The following questions will be the non-response bias check for this collection:

- 1) Do you reside in Custer, Lemhi, Valley, or Idaho county? ___yes ___no ___not sure
- 2) If “yes,” which county: ___Custer ___Lemhi ___Valley ___Idaho
- 3) If “no,” what county and state: _____ (County) _____ (State)

All responses will be recorded on a log for every survey contacted. Results of the non-response

bias check will be described in a report and any implications for park planning and management will be discussed.

4. Describe any tests of procedures or methods to be undertaken. Testing is encouraged as an effective means of refining collections of information to minimize burden and improve utility. Tests must be approved if they call for answers to identical questions from 10 or more respondents. A proposed test or set of tests may be submitted for approval separately or in combination with the main collection of information.

Pretesting with stakeholders (n=3) from the Idaho Department of Park and Recreation and the US Forest Service helped to refine the questionnaire. As these individuals are not part of the desired primary or secondary respondent universe, no results are presented here. That said, language surrounding natural resource uses, question sequencing, and carry-forward applications were added following their helpful feedback. More specific information can be found in Supporting Statement A.

5. Provide the names and telephone numbers of individuals consulted on statistical aspects of the design and the name of the agency unit, contractor(s), grantee(s), or other person(s) who will actually collect and/or analyze the information for the agency.

Individuals (outside of the submitters) that were consulted on statistical aspects of the design:

- 1) Keith Jones, Idaho Department of Parks and Recreation, 208 769-1511, Keith.Jones@idpr.idaho.gov
- 2) Monika Derrien, PhD, Pacific Northwest Research Station, US Forest Service, 206-732-7824, monika.derrien@usda.gov
- 3) Chris Armatas, PhD, Rocky Mountain Research Station, US Forest Service, 406-542-4192, christopher.armatas@usda.gov

Individuals who will collect and analyze the information for the agency

- 1) Chris Zajchowski, PhD, University of Idaho, 385-222-1055, czajchowski@uidaho.edu
- 2) Nathan Moody, University of Idaho, 208-731-9348, nmoody@uidaho.edu
- 3) JD Wulfhorst, PhD, University of Idaho, 208-885-2572, jd@uidaho.edu