



National Park Service
U.S. Department of the Interior

Social Science Program

OMB Control Number: 1024-0224
 Current Expiration Date: 08-31-2015

Programmatic Approval for NPS-Sponsored Public Surveys

Submission Date 09.15.2014

1. **Project Title:** Human Dimensions of Migratory Wildlife: Documenting the Attitudes and Values of Gateway Community Residents in Greater Yellowstone

2. **Abstract:** This collection will consist of 40 semi-structured, in-depth interviews with ranchers, elected officials, business owners and residents in two Greater Yellowstone gateway communities. The information will be used to understand their attitudes and values toward wildlife that migrate out of the park, the level of social tolerance for these animals and to understand the social context shaping migratory wildlife conservation.

This research will be used to inform wildlife management at Yellowstone National Park and to foster more socially aware conservation strategies across Greater Yellowstone.

3. **Principal Investigator Contact Information**

First Name:	Dr. Elizabeth Covelli	Last Name:	Metcalf
Title:	Assistant Professor		
Affiliation:	College of Forestry and Conservation, University of Montana		
Street Address:	CHCB 465, 32 Campus Drive		
City:	Missoula	State:	MT Zip Code 59812
Phone:	406.243.4448	Fax:	
Email:	Elizabeth.metcalf@umontana.edu		

4. **Park or Program Liaison Contact Information**

First Name:	David	Last Name:	Hallac
Title:	Chief		
Park:	Yellowstone National Park		
Office/Division:	Yellowstone Center for Resources		
Street Address:	PO Box 168		
City:	Mammoth Hot Springs	State:	WY Zip code: 82190
Phone:	(307) 344-2203	Fax:	
Email:	david_hallc@nps.gov		

Project Information

5. **Park Where Research is to be Conducted:** Yellowstone National Park

6. **Survey Dates:** November 1, 2014 to March 1, 2014

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

Mail-back Questionnaire

Face-to-Face Interview

Focus Groups

On-Site Questionnaire

Telephone Survey

Other (explain)

8. **Survey Justification:** *The National Park Service Act of 1916, 38 Stat 535, 16 USC 1, et seq., requires that the National Park Service (NPS) preserve the national parks for the use and enjoyment of present and future generations. At the field level, this means resource preservation, public education, facility maintenance and operation, and physical developments that are necessary for public use, health, and safety. Allocation of funding is to be roughly in proportion to the seasonally adjusted volume of use (P. L. 88-578, Sect. 6) and in consideration of visitor characteristics and activities for determining carrying capacity (92 Stat. 3467; P. L. 95-625, Sect. 604 11/10/78). Other federal rules (National Environmental Policy Act, 1969 and NPS guidelines) require visitor use data in impact assessment of development on users and resources as part of each park's general management plan.*

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

One of the most pressing challenges in the Greater Yellowstone Ecosystem (GYE) is the management of wildlife migrating seasonally out of Yellowstone National Park. Because of this, the National Park Service has requested the collection of information needed to evaluate the attitudes and values that residents of GYE gateway communities have towards wildlife and to understand how gateway community residents want to engage with public land managers about the management of migratory wildlife in and around Yellowstone.

This collection will provide NPS managers with information they lack concerning values and attitudes in Yellowstone gateway communities that can be used when designing public outreach strategies for area wildlife management. This study will inform and guide regional discussions about the human dimensions of wildlife conservation by providing opportunities for increased dialogue and relationship-building between gateway communities and the NPS and other wildlife management agencies. The study will give local residents a unique opportunity to describe the challenges of co-existing with these migratory wildlife species as well express their opinion about how agency-sponsored communications and public engagement processes can be improved. The proposed collection is guided by the following questions:

1. What are the attitudes and values of Yellowstone gateway communities towards wildlife that migrate out of the park?
2. How do attitudes and values differ across key gateway community subpopulations with a stake in migratory wildlife management?

3. In what ways does the level of daily interaction with wildlife in gateway communities shape people's attitudes and values?
4. How do gateway community residents want to engage with public land managers about wildlife management?

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

(a) Respondent universe:

We will conduct 40 interviews using the following criteria.

All respondents must

- Be self-identified as a rancher, community leader, local resident or business leader
- Reside within the two gateway communities in Montana: West Yellowstone and Gardiner Basin
- Have professional or personal experiences with wildlife migrating out of Yellowstone National Park.
- Be 18 years or older

(b) Sampling plan/procedures:

The researchers will interview people in each community invested in the issue of wildlife management in the Yellowstone area. Each interviewee will fit one of four self-identified stakeholder category: rancher, community leader, local resident, business owner. To recruit interviewees, the researchers will use a chain referral sampling method (Penrod et. al. 2003). The researchers will first consult with National Park Service scientists (key informants) to generate the initial ranked list of potential interviewees for each category that they think are influential voices within the communities. The researchers will also call other key informants from state agencies, county commissioners, the chamber of commerce and NGO's who work on the issue to initiate a second referral chain of potential interviewees who they think are influential individuals from each category.

Table 1. Expected Total Number of Respondents

	Ranchers	Community Leaders	Local Residents	Business Owners
Gardiner Basin	3	5	6	6
West Yellowstone	3	5	6	6
TOTAL	6	10	12	12

The selection process for each category of interviewees will be as follows. From this list of recommendations provided by each of our chains, we will pick the highest ranking name, from each category. We will call the individual to invite them to participate in the study. If they accept, we will schedule a time and place to meet. If they decline, we will ask them if they would be willing to answer the non-response bias questions below. We will then use the generated list to select a replacement. The replacement will be the person with the next highest recommendation. This process will continue until we reach our goal of the number of interviewees per category. At the conclusion of each interview,

we will ask the interviewee for the names of other people invested in the issue who may or may not share their perspective. Results from each chain will be monitored throughout the data collection period and recruitment efforts modified as necessary to ensure the most representative sample of the attitudes and values in each category. Modifications may include reductions or increases in the number of interviewees in each category depending on the degree of variation and frequency of repetition in responses.

(c) Instrument administration:

All Interviews will be conducted in-person at locations selected by the respondents. The locations may include the respondents' home, office, or a public space. When requested, telephone interviews will be conducted.

Before the interview begins, the researcher will explain the purpose of the study, the elements of the Paperwork Reduction Act including the time it will take to complete the interviews, and a request to sign the Informed Consent Form as required by the University of Montana Institutional Review Board. They will be asked for their permission to tape-record the interview.

An interview guide will be used to facilitate the collection of this information. The interviewer will prompt for further detail or ask follow-up questions as necessary for clarity throughout the process. The time to complete the interviews is estimated to be 45 minutes, however based on previous experiences there may be interviews that take more time (60 minutes) and some that will be very long (90 minutes). An account for the variation in time and associated burden are listed in Item 10 below.

(d) Expected response rate/confidence levels:

The response rate for this study is expected to be at least 80%. In similar studies focused on understanding the attitudes and opinions of specific communities of practice towards Yellowstone National Park's stewardship and management, response rates have been higher than 90%. In Freimund et al. 2009's interviews with Yellowstone snowmobile and snowcoach guides about the effects of new winter use management policies on visitor experiences and park wildlife, 100% (n=22) of the guides approached for interviews agreed to participate and were eager to share their experiences. In a different study on visitor perceptions of the winter experience and on visitor support for management actions, Davenport et al. 2002 conducted in-depth visitor interviews at six locations within YNP with a 94% response rate (n=93).

We are expecting that because of the topic and interest in the subject, the local residents will be eager to share their ideas and opinions about National Park stewardship and management. We are calculating the respondent burden based on three levels of interviews: typical (45 minutes), long (60 minutes) and very long (90 minutes). The interviewers will allow the respondents to discuss the subject and will use the script to guide the conversation.

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

In order to identify any important patterns in those people who elect to not participate in interviews, researchers will record the stakeholder affiliation, reason for refusal and answers to the following questions during the initial contact phone call:

1. Which, if any, of the following categories would you say best fits you: rancher, community leader, resident or business owner?
2. How does wildlife wandering out of Yellowstone affect your personal life or business or community? [Probe] How do you respond to these effects?
3. How do you typically come into contact with wildlife outside of the park and at what times of the year?

Results of the non-response bias check will be reported and any implications for planning and management will be discussed.

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

Five peer reviews of the proposed study and its interview guide were conducted. Peer reviewers included two federal agency scientists, one university faculty, and two other scientists familiar with wildlife management in YNP. Reviewers' feedback was helpful and assisted with crafting efficient interview questions. There was a concern that the interview guide had too many questions and that some of the questions were poorly worded. The number of questions were reduced from 38 with probes to 26 without probes and re-conceptualized to focus on the four key research questions mentioned above. Additionally, based on suggestions previous yes/no questions were changed to open ended responses. There was also a concern that the sample did not include businesses other than tourism operators. That particular stakeholder group has been broadened to include small business owners that may be impacted by migrating wildlife.

10 **Burden Estimates:** Given an anticipated response rate of 80%, we will need to contact 50 individuals to achieve the verbal agreement to participate in the study from 40 individuals.

For all respondents, we expect that the initial phone call contact will take 5 minutes for those who agree to participate this time will be used to gather contact information and to schedule the interview. For the non-response bias

check we anticipate that five minutes will be needed for the ten individuals who decline to participate to answer the three questions above. The total initial contact time for all 50 people in the sample will be five minutes per person (50 x 5 minutes = 4 hours).

For those who agree to participate (n= 40) we expect 45 minutes will be required to complete a typical interview; 60 minutes to complete a long interview; and 90 minutes to complete a very long interview. The total burden for this collection is estimated to be 42 annual hours.

Estimated Respondent Burden Hours

Estimated Number of Contacts	Estimation of Time (Minutes)	Estimation of Burden (Hours)
Key Informant 8	Key Informant Interview 15	Key Informant Interview 2
Potential Interviewees 50	Potential Interviewees 5	Potential Interviewees 4
Non Respondent Survey 10	Non Respondent Survey 5	Non Respondent Survey 1
Total Number of interviews	Time to interviews	Estimated Burden
Typical 30	Typical 45	Typical 23
Long 7	Long 60	Long 7
Very Long 3	Very Long 90	Very Long 5
		Total Burden Hours 42

11. **Reporting Plan:** This project will result in several key deliverables: 1) a Summary Report with recommendations for public outreach and socially-responsive bison management, 2) public presentations of research findings, and 3) published peer-reviewed journal articles.

The summary report will be archived with the NPS Social Science Program for inclusion in the Social Science Studies Collection as required by the NSP Programmatic Approval Process. Hard copies and electronic copy of the final report will be submitted to the park.

References Cited:

Freimund, W., Patterson, M., Bosak, K., & Saxen, S. (2009). "Winter experiences of Old Faithful visitors in Yellowstone National Park." Final Report. University of Montana.

Penrod, J., Preston, D.B., Cain, R.E., & Starks, M.T. (2003). A discussion of chain referral as a method of sampling hard-to-reach populations. *Journal of Transcultural Nursing*, 14(2), 100 - 107.

Davenport, M.A., Borrie, W.T., Freimund, W.A., & Manning, R.E. (2002). Assessing the relationship between desired experiences and support for management actions at Yellowstone National Park using multiple methods. *Journal of Park and Recreation Administration*, 20(3), 51 - 64.