



Expedited Approval for NPS- Sponsored Public Surveys

1. Project Title | Submission Date: Copper Basin Community Harvest Survey, Wrangell-St. Elias National Park | November 10, 2009

2. Abstract: National parks in Alaska created under the Alaska National Interest Lands Conservation Act allow qualified rural residents to harvest fish, wildlife, and other subsistence resources. Communities in south central Alaska's Copper Basin have cultural ties to lands now encompassed by Wrangell-St. Elias National Park and Preserve. Local residents have subsistence rights on these lands. To develop resource management strategies for the parklands, the National Park Service (NPS) needs information on harvest patterns among Copper Basin residents, resource distribution systems, and the impact of the changing rural economy on subsistence activities. This project will survey residents of four communities in the Copper Basin on these topics. Besides informing NPS resource management, the Copper Basin Community Harvest Survey will allow updates to be made to the Alaska Department of Fish and Game's Community Subsistence Information System.
(not to exceed 150 words)

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Project Information

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

6. Survey Dates: (mm/dd/yyyy) to (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.)

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. This includes interactions of resident peoples and those traditionally associated with the parks, as the residents of the Copper Basin are to Wrangell-St. Elias National Park and Preserve. Such studies are needed to provide a scientific basis for park planning, development, operations, management, education, and interpretive activities.

Wrangell-St. Elias National Park and Preserve needs information about subsistence harvesting and exchange to develop resource management strategies for the park. National parks in Alaska that were created under the Alaska National Interest Lands Conservation Act (ANILCA) allow qualified rural residents to harvest fish, wildlife, and other subsistence resources. To effectively manage the natural resources that are their responsibility, the NPS must understand the human impacts of these harvest patterns. A key concern is how subsistence users in rural Alaska are adapting to dramatic alterations in the natural and economic environments caused by climate change and deteriorating economic conditions. How they activate long-term kin-based support in the context of environmental and economic change may have important outcomes for their harvesting practices. This questionnaire provides information that will provide important data on each of these topics.

The continuation of subsistence activities creates a unique administrative and legal context for social science in the ANILCA parks. Section 812 of ANILCA states, "The Secretary [of the Interior], in cooperation with the State and other appropriate Federal agencies, shall undertake research on fish and wildlife and subsistence uses on the public lands." Thus, NPS managers of ANILCA parks have a mandated responsibility to conduct social science studies of subsistence.

The Alaska Department of Fish and Game (ADF&G), Division of Subsistence, has as its primary purpose to conduct research and analyze data on subsistence harvests in rural Alaska. According to the Division's mission statement, its "main duty lies in the area of human dimensions research which focuses on understanding human systems, that is, people and their ways of living, using systematic methods of gathering and analyzing information developed for the social sciences, including interviews, mapping, surveys, direct observation, and participant observation."

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

(a) **Respondent universe:** The respondent universe is households in four Copper Basin communities: Chistochina, Gulkana, Tazlina, and Copper Center, Alaska. These communities are all in the subsistence resident zone for Wrangell-St. Elias National Park and Preserve (36 Code of Federal Regulations 13.1902). Chistochina and Gulkana are small, predominantly Alaska Native communities. Copper Center and Tazlina are larger communities with a mix of Native and non-native residents. There are an estimated 35 households each in Chistochina and Gulkana. All of these households will be surveyed. Due to their larger size, samples of 80 households in Copper Center (out of 172 total households) and 103 households in Tazlina (out of 135 total households) will be surveyed.

(b) **Sampling plan/procedures:** Because of the small size of the communities, there is no need for sampling in Chistochina and Gulkana. Researchers will interview one or two heads of each household. A list of households will be obtained from the local tribal councils.

Eighty Copper Center households will be sampled. Occupied houses in the community will be mapped by the local research team. Households will be numbered and then randomly sampled. The resident zone community of Tazlina is comprised of two distinct neighborhoods. All 53 households in the Copperville neighborhood will be surveyed, and a random sample of 50 out of 82 households in the Tazlina neighborhood will be surveyed. The procedure for generating the sample for the Tazlina neighborhood is the same as that for Copper Center.

For all households in Gulkana and Chistochina, and the randomly selected households in Copper Center and Tazlina, researchers will contact each household by phone or in person. We will explain the project and ask heads of households if they are willing to participate in the interview. We expect that the initial contact will take about 10 minutes.

In those communities and neighborhoods where the goal is to survey all households, households that decline to participate will be skipped.

(c) **Instrument administration:** The survey will be administered in the smaller communities of Chistochina and Gulkana in February 2010 and in Copper Center and Tazlina in February through April 2011. After respondents agree to participate in the survey, researchers will conduct a face-to-face interview with the head, or possibly two heads, of the household. The survey instrument includes 10 areas of inquiry (see Attachment 2, below). Depending upon family size and levels of subsistence harvest, the number of questions asked and the time it takes to complete them will vary considerably. Based on past experience with similar surveys, we anticipate that the survey will take an average of 60 minutes to complete. Much of the interviewing will be done by local fieldworkers who will receive extensive training on the importance of the research for the community.

(d) **Expected response rate/confidence levels:** We expect that 228 households, or 90% of all households contacted, will agree to participate in the survey. In a similar subsistence study done in Buckland in 2004 (OMB #1024-0224, NPS 04-003), 81 out of 88 possible household surveys were completed, for a 92% response rate. For each community, we anticipate that the standard error of the proportion for all resources will be plus or minus 5% to 10% at the 95% confidence level.

(e) **Strategies for dealing with potential non-response bias:** Even though the response rate is expected to exceed 80%, the research team has contacted the

Cheesh-na Tribal Council, the local governing body for Chistochina, and asked for its support for the project. The same procedure is being followed in the other three communities. The councils' recognition of the importance of this research in protecting the community's subsistence activities will be a key factor in mitigating non-response. Another strategy for increasing participation rates is to conduct the survey mid-winter, when local residents tend to be less busy with subsistence activities than other times of year.

The number of refusals will be recorded, reported, and screened for non-response bias. Data will be analyzed for non-response bias by comparing respondent characteristics (sex, group size, time of visit) to the characteristics of households that decline to participate (i.e., non-respondents). This will be done using both the refusal records (e.g., time of day and sex of person contacted) and census estimates (how do the characteristics of those responding compare to the community as a whole). Results of the non-response analysis will be reported and implications for interpreting the results will be discussed.

- (f) Description of any pre-testing and peer review of the methods and/or instrument (recommended): The Alaska Department of Fish and Game, Division of Subsistence, has employed similar survey instruments since the 1980s to document subsistence harvests. The instrument to be used in the Copper Basin is modeled closely after the one used in a similar ADF&G survey in Emmonak, Alaska in 2009. It is also similar to two earlier cooperative projects between the NPS and ADF&G. The survey instrument used in Buckland was approved by the OMB in 2003 (OMB 1024-0224 NPS 04-003) and the instrument used in Kiana was approved in 2007 (OMB Approval 1024-0224 NPS 07-009). The Buckland instrument was developed collaboratively, with input from ADF&G, the University of Alaska's Institute of Social and Economic Research, and the National Park Service. The collaboration drew upon years of collective experience conducting similar surveys in rural Alaska Native villages, as well as expertise in economics and anthropology.

Attachment 1 is a literature review.

Attachment 2 is a list of the question areas in the survey instrument, showing which topic area in the Guidelines for the NPS programmatic approval is associated with each question area.

The survey instrument is for Chistochina. The instruments for the other three communities will be identical with the exception of the community name, community partners, and the year for which information is being collected. For Tazlina and Copper Center, for example, harvest information will be collected for 2010, and all dates in the instrument will be changed from 2009 to 2010.

10.	Total Number of Initial Contacts Expected Respondents:	253	228	II.	Estimated Time to Complete Initial Contact Instrument (mins.):	10	60	12.	Total Burden Hours:	270
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13. **Reporting Plan:** Project personnel will collaborate with NPS staff to complete a technical report by October 2012. The final report will be presented to the communities in hard copy and through a meeting with study participants. It will document study methods, results, and conclusions. Analysis will include statistical methods used in similar reports, including frequency distributions, means, ANOVA, t-tests, and their non-parametric equivalents, to determine statistical differences in activities, household types, etc. The report will also be furnished to Wrangell-St. Elias National Park,

the Alaska Department of Fish and Game, Division of Subsistence, and the Pacific Northwest Cooperative Ecosystem Study Unit. A copy of the report will be sent to the NPS Social Science Program for inclusion in their archives. The format will follow NPS guidelines.

Attachment 1: Literature Review

Section 812 of the Alaska National Interest Lands Conservation Act, the enabling legislation for Wrangell-St. Elias National Park and Preserve, states, "The Secretary [of the Interior], in cooperation with the State and other appropriate Federal agencies, shall undertake research on fish and wildlife and subsistence uses on the public lands." Such studies provide important information that is used in the management of these resources and uses. The current study is needed because no up-to-date information exists to answer the research question. Similar studies to those being proposed here were conducted in the communities affiliated with Wrangell-St. Elias National Park and Preserve in the mid- to late 1980s, shortly after the park's establishment and more than two decades ago. These are the most recent readily available comprehensive harvest surveys of these communities:

Haynes, Terry L., Martha Case, James A. Fall, Libby Halpin, and Michelle Robert. 1984. The use of Copper River salmon and other wild resources by Upper Tanana communities, 1983-1984. ADF&G Division of Subsistence, Technical Paper No. 115.

Marcotte James R. 1992. Wild fish and game harvest and use by residents of five Upper Tanana communities, Alaska, 1987-88. ADF&G Division of Subsistence, Technical Paper No. 168.

Mills, David D., and Anne S. Firman. 1986. Fish and wildlife use in Yakutat, Alaska: contemporary patterns and changes. ADF&G Division of Subsistence, Technical Paper No. 131.

Stratton, Lee, and Susan Georgette. 1984. Use of fish and game by communities in the Copper River Basin, Alaska: a report on a 1983 household survey. ADF&G Division of Subsistence, Technical Paper No. 107.

The methods and questions to be used in the study are well-established and tested. The mission of the lead organization on the project, Alaska Department of Fish and Game Subsistence Division, is to scientifically gather, quantify, evaluate, and report information about customary and traditional uses of Alaska's fish and wildlife resources. It has more than 25 years experience with such studies. For the period of 2005 to 2009, for example, an annual average of nearly 30 community surveys were conducted by ADF&G to collect updated data. The most recent NPS-sponsored study was completed in 2007 in Kiana, a community affiliated with the Western Arctic National Parklands (OMB # 1024-0224 NPS 07-009). Examples of recent studies done in other national park-affiliated communities (but not sponsored by NPS) include:

Fall, James A., Davin L. Holen, Brian Davis, Theodore Krieg, and David Koster. 2006. Subsistence harvests and uses of wild resources in Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth, Alaska, 2004. ADF&G Division of Subsistence, Technical Paper No. 302.

Holen, Davin L., William E. Simeone, and Liz Williams. 2006. Wild resource harvests and uses by residents of Lake Minchumina and Nikolai Alaska, 2001-2002. ADF&G Division of Subsistence, Technical Paper No. 296.

Magdanz, James S., Charles J. Utermohle, and Robert J. Wolfe. 2002. The production and distribution of wild food in Wales and Deering, Alaska. ADF&G Division of Subsistence, Technical Paper No. 259.

Magdanz, James S., Robert J. Walker, and Ronald R. Paciorek. 2004. The subsistence harvests of wild foods by residents of Shungnak, Alaska, 2002. ADF&G Division of Subsistence, Technical Paper No. 279.

Simeone, William E. 2002. Wild resource harvests and uses by residents of Cantwell, Alaska, 2000. ADF&G Division of Subsistence, Technical Paper No. 272.

Williams, Liz, Chelsie Venechuk, Davin L. Holen and William E. Simeone. 2004. Lake Minchumina, Telida, Nikolai, and Cantwell subsistence community use profiles and traditional fisheries use. ADF&G Division of Subsistence, Technical Paper No. 295.

Attachment 2: Question-by-question justification of survey instrument

The survey instrument documents subsistence activities over the past year for each sampled household in the community. The survey has several components. One or possibly two respondents (the heads of household) respond for each household. Because of the context, many questions in this survey (with the exception of demographic measures) do not correspond directly to items in the NPS pool of known questions. However, they do correspond to the seven question categories approved for the NPS generic clearance, including “Individual Activities and Use of Park Resources.” Among other things, this section describes questions on how “individuals may harvest berries, fish, game animals, firewood, or seashells” (NPS, 2006. *Guidelines and Submission Form for Expedited Review of NPS-Sponsored Public Surveys, Focus Groups and Field Experiments*, p. 2.

Survey questions and corresponding categories by page number are:

Page 2: Topic Area 1, Individual characteristics. These questions ask about household characteristics that are useful in understanding variability in subsistence harvest patterns between households.

Pages 3 – 20: Topic Area 3, Individual activities and use of park resources and Topic Area 4, Individual expenditures (p. 20 only). These questions ask directly for information on households’ harvest of park resources for subsistence during the previous year. Because of differences in the resources harvested and the importance of subsistence in household economies, not all respondents will answer all questions. Questions on p. 20 about home heating and annual spending on home heating relate directly to the harvest of fuelwood from parklands.

Pages 21 – 22: Topic Area 1, Individual characteristics. These questions ask about the structure of the household economy, including income sources. Because many Native Alaska households are characterized by mixed subsistence-market economies, differences in the proportion of one type of economy vs. the other are critical for understanding subsistence harvest of park resources.

Pages 23 – 24 (open-ended comments): Topic Area 7, Individual Opinions on Park Management.

A more detailed description of how questions fall within the scope of the NPS programmatic approval follows:

Pre-interview information:

INFORMED CONSENT (p. 1)

Respondents will be also given a card with text concerning the Privacy Act and Paperwork Reduction Act compliance, and also a burden estimate statement. The card is reproduced below:

PRIVACY ACT and PAPERWORK REDUCTION ACT statement:

16 U.S.C. 1a-7 authorizes collection of this information. This information will be used by the National Park Service, the Federal Subsistence Management Program, and the Alaska Department of Fish and Game, Division of Subsistence 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 name will not appear anywhere on the completed survey. An agency may not conduct or sponsor the collection of information, and a person is not required to respond to such collection, unless a currently valid OMB control number is displayed.

Burden estimate statement:

Public reporting burden for completing the questionnaire is estimated to take an average of 60 minutes. Direct comments regarding the burden estimate or any other aspect of this form to:

Barbara Cellarius, Wrangell-St. Elias National Park and Preserve, Resources Division, Mile 106.8 Richardson Highway, PO Box 439, Copper Center, AK 99573, (907) 822-7236, Barbara_Cellarius@nps.gov.

1. Permanent Household Members – Topic Area 1, Individual Characteristics (pp. 2)

Household information: Who were members of this household between January and December, 2009?

2. Household Member Participation – Topic Area 1, Individual Characteristics (pp. 3-4)

In which subsistence activities did household members participate in 2009?

3. Commercial fish and marine invertebrate harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 5-7)

Between January and December 2009, did members of your household try to harvest or use (commercially harvested salmon, other freshwater fish, marine invertebrates, shellfish)?

If yes, please estimate the amount harvested.

4. Subsistence fish, shellfish and marine invertebrate harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 8-11)

Between January and December 2009, did members of your household try to harvest or use (salmon, other fish, shellfish or marine invertebrates)?

If yes, please estimate amounts harvested.

Last year, did your household use less, more, or about the same amount as in the past? If less or more, why?

Where did members of your household fish for or harvest fish, shellfish, or marine invertebrates in 2009? Please mark the places on the map.

5. Subsistence land mammal harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 12)

Between January and December 2009, did members of your household try to harvest or use (moose, caribou, other large land mammals)?

If yes, please estimate the number harvested.

Last year, did your household use less, more, or about the same number of large land mammals as in the past? If less or more, why?

Where did members of your household hunt for or harvest large land mammals in 2009? Please mark the places on the map.

6. Subsistence small land mammal and furbearer harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 13-14)

Between January and December 2009, did members of your household try to harvest or use (small land mammals, furbearers)?

If yes, please estimate the number harvested.

Last year, did your household use less, more, or about the same number of (small land mammals, furbearers) as in the past? If less or more, why?

Where did members of your household hunt for, attempt to trap, or harvest small land mammals or furbearers in 2009? Please mark the places on the map.

7. Subsistence bird harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 15-18)

Between January and December 2009, did members of your household try to harvest or use (geese, swans, ducks, other birds, or bird eggs)? If yes, please estimate the number harvested.

Last year, did your household use less, more, or about the same amount of birds or eggs as in the past? If less or more, why?

Where did members of your household hunt for or harvest birds or eggs in 2009? Please mark the places on the map.

8. Subsistence wild plant harvests over the past year – Topic Area 3, Individual Activities and Uses of Park Resources (pp. 19)

Between January and December 2009, did members of your household try to harvest or use (berries, mushrooms, other plants or firewood)? If yes, please estimate the amount harvested.

Last year, did your household use less, more, or about the same amount of plants as in the past? If less or more, why?

Where did members of your household harvest or attempt to harvest plants or firewood in 2009. Please mark the places on the map.

9. Comparing this year with previous years, transportation and heating – Topic Area 3, Individual Activities and Uses of Park Resources; Topic Area 4, Individual Expenditures.

Between January and December 2009, did your household use less, same, or more wild resources overall as in recent years? If different, how and why was your use different?

In 2009, did your household get enough wild foods to meet its needs?

Between January and December 2009, did members of your household use equipment like boats, snow machines, or four-wheelers to harvest subsistence foods? Does your household own, borrow, lease, or charter this equipment?

What proportion of your household's heating comes from firewood? In the past 5 years, has your harvest area for firewood changed? If so, why? How much do you spend annually to heat your home?

10. Jobs and other income – Topic Area 1, Individual Characteristics (pp. 21-22)

For each household member 16 or older, please list each job held between January and December 2009. Please also list other income sources for this household between January and December 2009?

11. Comments -- Topic Area 76, Individual Opinions on Park Management (p. 23)

Do you have any other questions, comments, or concerns?