

Subsistence Harvests and Uses of Wild Resources in Kenny Lake/Willow Creek, Gakona, McCarthy, and Chitina, Alaska, 2012



An Overview of Study Findings

Background

The following is a brief overview of research conducted by the Division of Subsistence of the Alaska Department of Fish and Game (ADF&G) in partnership with the National Park Service, Wrangell-St. Elias National Park and Preserve, to provide baseline information about the role of subsistence uses of fish, wildlife, and wild plant resources in the communities of Kenny Lake/Willow Creek, Gakona, McCarthy, and Chitina, Alaska. The study period for this report covered January 1 to December 31, 2012. Funding was provided to ADF&G through a cooperative agreement with the National Park Service (NPS), Alaska Regional Natural Resource Projects funds, NPS Ethnography Program, NPS Alaska Subsistence Research Projects, and Wrangell-St. Elias National Park and Preserve base funding to conduct a multi-year, multi-community harvest update project. This report is project year 3. In 2010, research was conducted in Chistochina for the 2009 study year, or project year 1 (Kukkonen and Zimpelman 2012). In 2011, research was conducted in Copper Center, Slana and the Nabesna Road, Mentasta Lake, and Mentasta Pass for the 2010 study year, or project year 2 (La Vine et al. 2013).

Methods

The primary data gathering method was systematic household surveys using a modified version of the ADF&G Division of Subsistence standard data gathering instrument. The surveys were conducted face-to-face with community residents. The study team interviewed a total of 194 households in the 4 study communities: 67% of the households in McCarthy (39 households), 85% in Chitina (46 households), 39% in Kenny Lake/Willow Creek (67 households), and 55% in Gakona (42 households). With the help of community research assistants, household interviews were conducted to collect harvest and use information for all wild resources. Each household had accompanying mapping conducted for each resource, including use area and/or harvest location, amount of harvest, and month of harvest. Participation was voluntary, and individual-level as well as household-level data are confidential, as are mapped harvest locations. In addition, subsistence users were asked to discuss their observations about resource use and abundance and their concerns relating to subsistence resources and their continuing opportunities to harvest subsistence resources.

Findings

Project data describe high participation in harvesting, a diverse harvest of, and continued reliance on wild resources for all study communities. During 2012, residents of all communities participated in subsistence hunting, fishing, and gathering for nutrition and to support their way of life. A vast majority of households used wild resources in 2012; an estimated 97% or more of each study community's households exhibited at least some use of wild resources. Ninety-three percent or more of the households in all 4 communities engaged in fishing, hunting, trapping, and gathering activities; in 2 communities 98% or more households attempted to harvest wild resources. Sharing of resources played a significant role in the distribution of wild foods; households in McCarthy (100% of households), Gakona (93% of households), Chitina (87% of households), and Kenny Lake/Willow Creek (81% of households) received wild foods from other households (Figure 1).

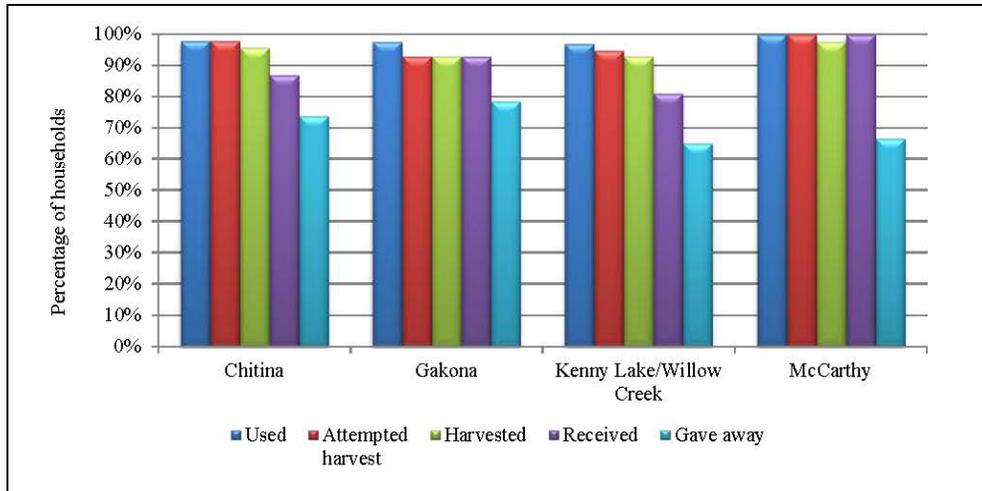


Figure 1.–Harvests and uses of wild resources, study communities, 2012.

Figure 2 represents the composition of each study community’s harvest by resource category. While harvest composition varied from community to community, salmon (specifically sockeye salmon) and large land mammals (mostly moose) composed the bulk of each community harvest. Fish (both salmon and nonsalmon fish) composed the bulk of the harvest for Chitina (83%) and Kenny Lake/Willow Creek (75%), but made smaller contributions to the harvests in Gakona (66%) and McCarthy (57%). Large land mammal harvests composed 27% of the harvest in McCarthy, 24% of the harvest in Gakona, 19% in Kenny Lake/Willow Creek, and 12% of the harvest in Chitina.

Vegetation, almost all of which was berries, made important contributions to all community harvests, perhaps not by weight but as one of the most used resource categories in all 4 communities. The remaining categories of small land mammals, marine invertebrates, and birds and eggs made smaller contributions to overall community harvests in terms of usable pounds harvested. Many households also harvested and used wood and trapped animals for fur, but firewood and some furbearers are typically not eaten and are thus excluded from the estimated harvest weight in usable pounds.

Table 1 represents the top 10 ranked most used resources in each study community, whether that resource was harvested by the responding household or shared with the household by other harvesters. Firewood made the ranking list in all communities, as did sockeye salmon, moose, and multiple species of berries.

Figure 3 shows the estimated per capita harvests over the course of 3 studies starting in 1982 to the present study for 2012. Overall, with the exception of McCarthy, in most 2012 study communities the per capita harvest remained high over time. As estimated in pounds usable weight, harvests of wild foods in 2012 was 246 lb per person in Chitina, 171 lb per person in Gakona, 141 lb per person in Kenny Lake/Willow Creek, and 87 lb per person in McCarthy.

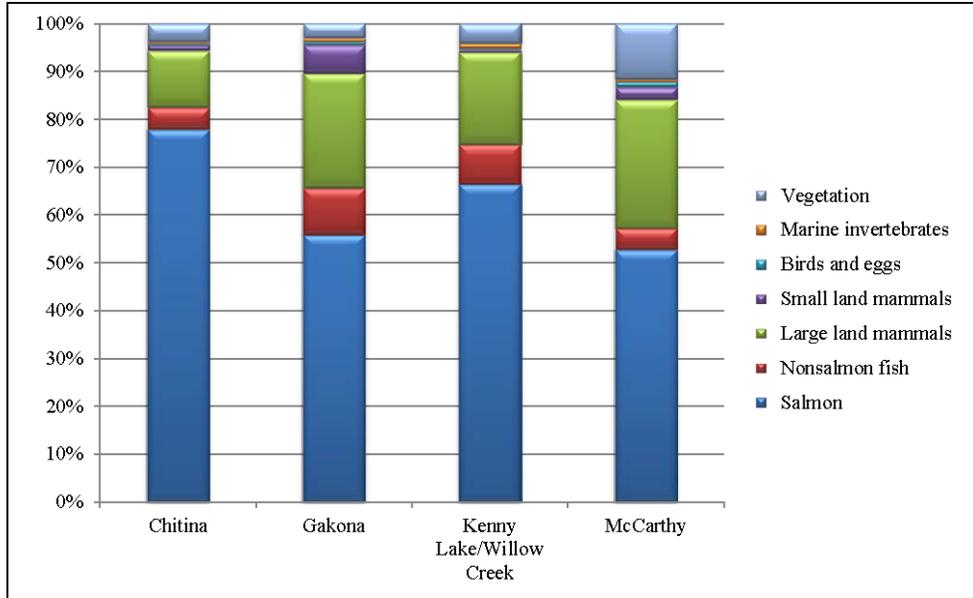


Figure 2.—Composition of harvest as a percentage of the total harvest by resource category, study communities, 2012.

Table 1.—Top 10 ranked resources used by households, study communities, 2012.

Chitina			Gakona		
Rank ^a	Resource	Percentage of households using	Rank ^a	Resource	Percentage of households using
1.	Sockeye salmon	93.5%	1.	Sockeye salmon	92.9%
2.	Firewood	76.1%	2.	Firewood	83.3%
3.	Moose	67.4%	3.	Moose	81.0%
4.	Chinook salmon	60.9%	4.	Blueberry	73.8%
4.	Raspberry	60.9%	5.	Pacific halibut	52.4%
6.	Blueberry	58.7%	6.	Caribou	50.0%
7.	Rainbow trout	52.2%	6.	Raspberry	50.0%
8.	Caribou	50.0%	8.	Chinook salmon	47.6%
9.	Highbush cranberry	43.5%	8.	Lowbush cranberry	47.6%
10.	Pacific halibut	41.3%	10.	Unknown mushrooms	31.0%

Kenny Lake/Willow Creek			McCarthy		
Rank ^a	Resource	Percentage of households using	Rank ^a	Resource	Percentage of households using
1.	Firewood	83.2%	1.	Firewood	94.9%
1.	Sockeye salmon	83.2%	2.	Sockeye salmon	84.6%
3.	Caribou	62.7%	3.	Raspberry	74.4%
4.	Moose	59.8%	4.	Moose	61.5%
5.	Blueberry	57.3%	5.	Unknown mushrooms	53.8%
6.	Chinook salmon	52.9%	5.	Highbush cranberry	53.8%
7.	Lowbush cranberry	43.3%	7.	Lowbush cranberry	51.3%
8.	Pacific halibut	42.2%	8.	Pacific halibut	46.2%
9.	Raspberry	40.5%	8.	Blueberry	46.2%
10.	Coho salmon	31.0%	10.	Currants	38.5%

Source ADF&G Division of Subsistence household surveys, 2013.

a. Resources used by the same percentage of households share the lowest rank value instead of having sequential rank values.

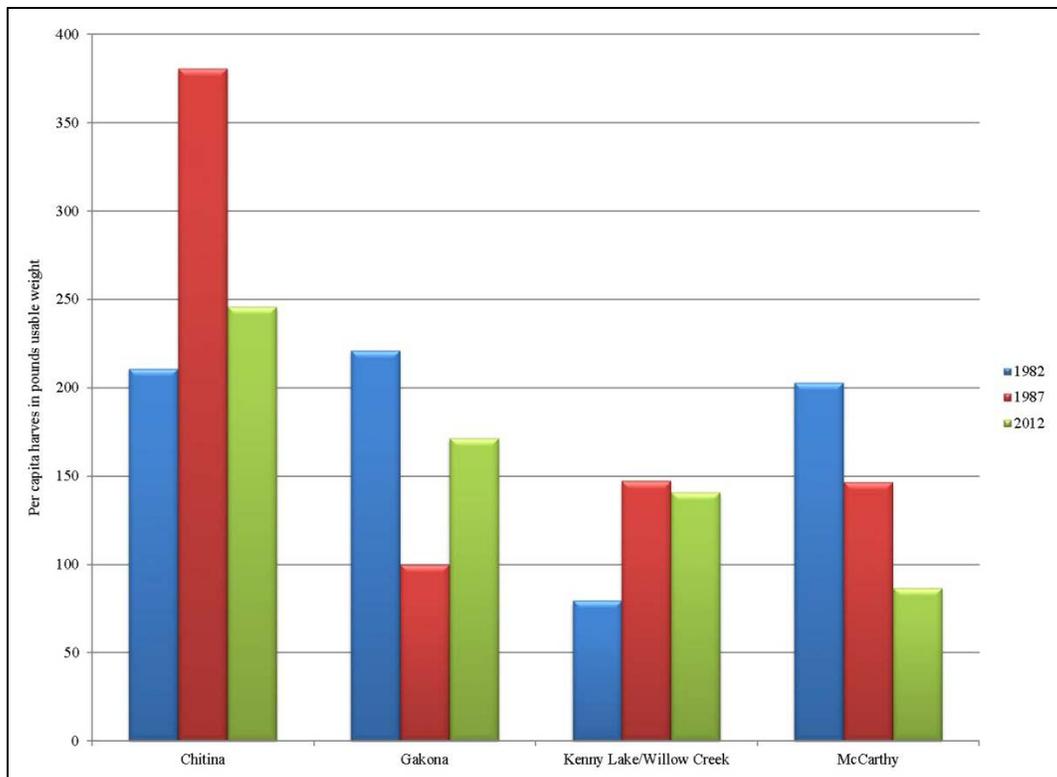


Figure 3.—Estimated harvests by pounds per capita, study communities, 1982, 1987, and 2012.

For More Information

Complete results for this project appear in: *La Vine, R. and G. Zimpelman, editors. 2014. Subsistence Harvests and Uses of Wild Resources in Kenny Lake/Willow Creek, Gakona, McCarthy, and Chitina, Alaska, 2012. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 394, Anchorage.*

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