

**Customary and Traditional Use Worksheet, Alaska
Hare and Snowshoe Hare, Game Management Units 9,
10, 11, 13, 16B, and 17**

Prepared by

Amy L. Wiita, Jacqueline M. Keating, and Brian L. Davis

for the Central/Southwest Board of Game meeting, February 2018

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Division of Subsistence



Symbols and Abbreviations

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Weights and measures (metric)		General		Measures (fisheries)	
centimeter	cm	Alaska Department of Fish and Game Alaska Administrative Code all commonly accepted abbreviations	ADF&G AAC	fork length	FL
deciliter	dL			mideye-to-fork	MEF
gram	g			mideye-to-tail-fork	METF
hectare	ha			standard length	SL
kilogram	kg	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	total length	TL
kilometer	km				
liter	L				
meter	m				
milliliter	mL	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	Mathematics, statistics	
millimeter	mm			all standard mathematical signs, symbols and abbreviations	
				alternate hypothesis	HA
				base of natural logarithm	e
Weights and measures (English)				catch per unit effort	CPUE
cubic feet per second	ft ³ /s	at	@	coefficient of variation	CV
foot	ft	compass directions:		common test statistics	(F, t, χ^2 , etc.)
gallon	gal	east	E	confidence interval	CI
inch	in	north	N	correlation coefficient	
mile	mi	south	S	(multiple)	R
nautical mile	nmi	west	W	correlation coefficient	
ounce	oz	copyright	©	(simple)	r
pound	lb	corporate suffixes:		covariance	cov
quart	qt	Company	Co.	degree (angular)	°
yard	yd	Corporation	Corp.	degrees of freedom	df
		Incorporated	Inc.	expected value	E
		Limited	Ltd.	greater than	>
Time and temperature		District of Columbia	D.C.	greater than or equal to	≥
day	d	et alii (and others)	et al.	harvest per unit effort	HPUE
degrees Celsius	°C	et cetera (and so forth)	etc.	less than	<
degrees Fahrenheit	°F	exempli gratia		less than or equal to	≤
degrees kelvin	K	(for example)	e.g.	logarithm (natural)	ln
hour	h	Federal Information		logarithm (base 10)	log
minute	min	Code	FIC	logarithm (specify base)	log2, etc.
second	s	id est (that is)	i.e.	minute (angular)	'
Physics and chemistry		latitude or longitude	lat. or long.	not significant	NS
all atomic symbols		monetary symbols		null hypothesis	HO
alternating current	AC	(U.S.)	\$, ¢	percent	%
ampere	A	months (tables and figures): first three		probability	P
calorie	cal	letters	Jan.,...,Dec	probability of a type I error	
direct current	DC	registered trademark	®	(rejection of the null hypothesis when true)	α
hertz	Hz	trademark	™	probability of a type II error	
horsepower	hp	United States		(acceptance of the null hypothesis when false)	β
hydrogen ion activity	pH	(adjective)	U.S.	second (angular)	"
(negative log of)		United States of America (noun)	USA	standard deviation	SD
parts per million	ppm	U.S.C.	United States Code	standard error	SE
parts per thousand	ppt,	U.S. state	use two-letter abbreviations	variance	
volts	V		(e.g., AK, WA)	population sample	Var var
watts	W				

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AND SNOWSHOE HARE, GAME MANAGEMENT UNITS 9, 10, 11, 13,
16B, AND 17**

by

Amy L. Wiita, Jacqueline M. Keating, and Brian L. Davis
Alaska Department of Fish and Game, Division of Subsistence, Anchorage

Alaska Department of Fish and Game
Division of Subsistence
333 Raspberry Road, Anchorage, Alaska 99518

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*Amy L. Wiita, Jacqueline M. Keating , and Brian L. Davis,
Alaska Department of Fish and Game, Division of Subsistence
333 Raspberry Road, Anchorage, Alaska 99518-1599, USA*

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1. INTRODUCTION

BACKGROUND

The Alaska Board of Game will consider Proposal 135 regarding Alaska hares in the Bristol Bay region at its 2018 Central/Southwest regulatory meeting. The board has not made a determination as to whether there are customary and traditional uses (C&T) of hares in Game Management Units (GMU) 9, 10, 11, 13, 16B or 17 pursuant to Alaska Statute 16.05.258.1 There are two species of hares in Alaska: Alaska hare (*Lepus othus*) and snowshoe hare (*L. americanus*). Snowshoe hares occur throughout Alaska but are not found in the far northern coastal regions, on the lower Alaska Peninsula and Aleutian Islands, or on most islands of Southeast Alaska. Alaska hares occur in western portions of the state on the Bering Sea coast, Yukon-Kuskokwim Delta, Bristol Bay and the Alaska Peninsula. A different species, the Arctic hare, *L. arctus*, occurs only in northeastern Canada. In preparation for regulatory work on Proposal 135, the department has prepared this C&T worksheet for the board's consideration at its February 2018 meeting in Dillingham.

This customary and traditional use summary for Alaska and snowshoe hares (hereafter, "hare(s)") in Units 9, 10, 11, 13, 16B and 17 (figures 1 and 2) provides a description of customary and traditional harvest and use practices for hares from the ethnographic and ethnohistorical literature of various parts of Alaska, as well as from contemporary household survey projects. Appendix A is included at the end of this report to provide pertinent quotations related to customary and traditional uses of hares from the literature.

2. THE EIGHT CRITERIA

CRITERION 1: LENGTH AND CONSISTENCY OF USE

A long-term consistent pattern of noncommercial taking, use, and reliance on the fish stock or game population that has been established over a reasonable period of time of not less than one generation, excluding interruption by circumstances beyond the user's control, such as unavailability of the fish or game caused by migratory patterns.

Small game, such as hare, has been a valued source of food and raw materials (such as fur) in Southcentral and Southwestern Alaska from the prehistoric period to the present (Morris 1985:114). Archaeological sites contain bones of small mammal species, including hares.² VanStone and Townsend (1970) note the historical use of hares by residents of the region. Among the Yup'ik Eskimo and Dena'ina Athabascans residing in southwest Alaska (GMUs 9 and 17), various longstanding cultural traditions and values surrounding the harvest and use of hares speak to the length and consistency of the use of hares (Appendix A). Similarly, Division of Subsistence harvest data indicate Aleuts living in GMU 10 have established cultural patterns of use for hares. Townsend (1981) discusses the long history of subsistence uses of various resources, including small game, by the Dena'ina throughout the GMU 11 region. Dena'ina trapping of furbearers is also noted by Townsend (1981). The Ahtna of Unit 13 also have an extensive history of hunting and trapping: "The Ahtna traditionally ate...rabbit" as well as other mammals, birds, fish, and plants (de Laguna and McClellan 1981:648). Hares are available year round and are harvested during every season (Morris 1985:114) but are especially important in winter and early spring, when other sources of food may be scarce or nonexistent.

1. GMU 16A is not included in this worksheet because it is within the Anchorage-Matsu-Kenai nonsubsistence area. Under AS 16.05258(a), the Board of Game does not make customary and traditional use findings for nonsubsistence areas.

2. Dr. Ben A. Potter, "Ancient Beringians," Accessed January 12, 2018, <https://sites.google.com/a/alaska.edu/dr-ben-a-potter/ancient-beringians>

Hare populations rise and fall on a multi-year rhythmic cycle³⁴. Fluctuations in resource availability can result in low harvests at times and fluctuating harvest trends over time. When large land mammal populations are low, hares, like other small mammals, can be an important source of meat. In the Koyukuk River region, north of the units discussed here but sharing similar patterns of resource dependence, documentation shows that when other game species were unavailable, Koyukon Athabascans sometimes survived an entire winter season solely on hares, making them one of the most important subsistence animals (Nelson 1983). “A Huslia man recalled his mother bringing in catches of 40 hares from routine checks of her snare line. ‘If it wasn’t for rabbits,’ an elder told me, ‘we wouldn’t be alive today’” (Nelson 1983:215). Given the prevalence of hares in the GMUs and documented harvest data, similar reliance on small game such as hare is evident for the Central/Southwest region as well.

Hares continue to be an important commonly harvested subsistence resource throughout Alaska. Division of Subsistence studies show that it is not uncommon for 15% to 40% of the households in the Lake Clark region of GMU 9 to be involved in the harvesting of hares (Table 1). In 1987, household surveys showed that hares were harvested by 40% of Ugashik households and 30% of Pilot Point households and in 1992, half of the households in Igiugig reported harvesting hares (Table 1). In the Slana Homestead South community in GMU 11, hares were harvested by 35% of households in 1987 for a total harvest of 1,362 hares (Table 1). In 1982, 48% of Gakona household in GMU 13 harvested hares (Table 1). In 2012, hares were the most numerous species harvested by Talkeetna households. Fifty percent of households in Nondalton harvested 169 small land mammals in 2004, of which 8% were hares; the two most important small game species were beaver and porcupine, followed by lynx and snowshoe hare (Fall et al. 2006). In 1999, nearly 60% of the households in Twin Hills (GMU 17) reported using hares and half the households harvested hares. Wright et al. (1985) report all seven subregions of Bristol Bay (Togiak, Nushagak Bay, Nushagak River, Iliamna Lake, Upper Alaska Peninsula, Chignik, and Lower Alaska Peninsula) used hares.

Subsistence uses of hares occur in GMU 10 as well. A subsistence survey in 1990 in the Aleutian Islands community of Akutan in GMU 10 indicated that 12% of the Akutan households used Arctic hares, 8% of households harvested Arctic hares, and an estimated 22 individual Arctic hares were harvested. No snowshoe hare harvest or use was indicated. Seven percent of Nikolski households surveyed used hares, although none were harvested: all were received.

Harvest history estimates from 1973–2014 in the communities within GMUs 9, 10, 11, 13, 16B, and 17 surveyed by the Division of Subsistence appear in Table 1 and show a history of harvest and use throughout the GMUs. For additional regional harvest data see also Coiley-Kenner et al. 2003; Evans et al. 2013; Fall, Andersen, et al. 1993; Fall et al. 1995, 2006, 2012; Fall, Mason, et al. 1993; Fall and Morris 1987; Holen et al. 2014, 2015; Krieg et al. 2009; La Vine and Zimpelman, editors 2014; Morris 1985, 1986, 1987; Schichnes and Chythlook 1991; Schroeder et al. 1987; Stanek 1987; Wright et al. 1985.

-
3. “The Alaska hare is rare and is perhaps decreasing in range and numbers, although population size is known to fluctuate and little to no population studies are currently ongoing. The last reported population high was on the western Seward Peninsula and in the Yukon-Kuskokwim Delta region in the 1970s. Throughout the hare’s southern distribution on the Alaskan Peninsula, high population numbers have not been reported since winter 1953–54 (Schiller and Rausch 1956).” (<http://www.adfg.alaska.gov/index.cfm?adfg=alaskahare.main>)
 4. “Populations of snowshoe hare are subject to cycles of high abundance and scarcity. The population in an area will build up over a period of years to peak abundance, followed by a sudden decline to a very low level. During periods of peak abundance, there are as many as 600 animals per square mile (230/km²) of range. The exact cause or causes for the decline are unknown. Some possibilities include overbrowsing their food supply, predators, and shock disease due to stress, parasites, or a combination of these.” ADF&G Species; Snowshoe Hare (*Lepus americanus*) Species Profile (<http://www.adfg.alaska.gov/index.cfm?adfg=snowshoehare.main>)

CRITERION 2: SEASONALITY

A pattern of taking or use recurring in specific seasons of each year.

Traditionally, small game animals were taken year-round, but might be particularly important in the spring when travel was difficult and other resources unavailable (de Laguna and McClellan 1981:648).

Winter is the best season for harvesting furbearing animals for pelts because the fur is thicker in the colder months. In most regions hares are generally harvested in the winter for both food and pelts. In GMU 9, as in other regions of the state, such as the Koyukon Athabascan region (Nelson 1983:12), hares are hunted in winter during an intense harvesting period (Morris 1987, 1985). Hunters take hares in the winter months both as the focus of a hunting outing, and as an incidental opportunistic harvest while targeting big game animals (Morris 1987:85; Schroeder et al. 1987:332). Occasional hunting can occur as early as late August in communities such as Egegik and in those Pacific coast communities in the Chignik region (Morris 1987; Schroeder et al. 1987:404). Gulkana residents on the border of GMUs 13 and 11 have also reported harvesting hares occasionally as early as August (Holen et al. 2015). Hares are less commonly harvested in summer.

On the Alaska Peninsula, small game hunting occurs from mid-August until at least the end of March when preparations for salmon fishing begin. Ptarmigan and hares are especially taken in November to February when hunters are looking for caribou, although specific trips for these species are made as well (Schroeder et al. 1987:81,87,91).

CRITERION 3: MEANS AND METHODS OF HARVEST

A pattern of taking or use consisting of methods and means of harvest that are characterized by efficiency and economy of effort and cost.

Hares are relatively easy to catch. Among the Ahtna Athabascans of the Southcentral region (GMUs 11 and 13) women would traditionally harvest hares using snares while men used shotguns; however, more recently, both men and women use shotguns⁵. Snaring and shooting are also the methods used to take other small game, such as ptarmigan and grouse, in the Copper River Basin (Reckord 1983:155).

Concerning Chitina in the Copper River Basin, Reckord (1983:89) noted that:

When hares are abundant, they are an important food source, especially to those who live year round in Chitina. In an hour, six or eight can be shot and brought home for the table. Hare totally disappears from the diet when the species hits the bottom of its cycle. Women sometimes use simple snares made of thin picture-framing wire for catching hares.

Morris (1986) reported that several of the communities in the Iliamna Lake region (Iliamna, Kokhanok, Pedro Bay, and Nondalton) trap hares; trapping continues today. Some people use snowmachines or four-wheelers to check their trap lines.

Schroeder et al. (1987) and Evans et al. (2013) note that small game such as hares are often harvested near communities or while travelling and Wright et al. (1985:77) mentions “often, after school, boys take three-wheelers and skirt the village looking for hare or porcupine.”

Hare hunting is often practiced as a means of making efficient use of time while traveling across the landscape in search of other larger game species or while focusing on other resource activities (Fall and Morris 1987; Morris 1987; Schroeder et al. 1987; Wright et al. 1985).

5. ADF&G Division of Subsistence. “Customary and Traditional Use Worksheet -11(22) Small Game - Game Management Units 6-11,13-17 Hare, Grouse, and Ptarmigan.” Unpublished document on file at ADF&G Division of Subsistence Anchorage Office, 1992.

CRITERION 4: GEOGRAPHIC AREAS

The area in which the noncommercial, long-term, and consistent pattern of taking, use, and reliance upon the fish stock and game population has been established.

Communities throughout southwest Alaska, the Aleutian Islands, Alaska Peninsula, and Southcentral Alaska have reported hunting a variety of small game species, including hares (Coiley-Kenner et al. 2003; Evans et al. 2013; Fall, Andersen, et al. 1993; Fall et al. 1995, 2006, 2012; Fall, Mason, et al. 1993; Fall and Morris 1987; Holen et al. 2014, 2015; Krieg et al. 2009; La Vine and Zimpelman, editors 2014; Morris 1985, 1986, 1987; Schichnes and Chythlook 1991; Schroeder et al. 1987; Stanek 1987; Wright et al. 1985).

Hunters find hares throughout much of GMUs 9, 10, 11, 13, 16B, and 17. Hares are taken in both the forest and on the tundra and are hunted year round in Ekwok, Koliganek, and New Stuyahok (Schichnes and Chythlook 1991:55,59). Because hares are usually taken while people are engaged in other subsistence activities, maps of hunting areas rarely depict separate areas for hares.

For Iliamna Lake communities, Morris (1986:115) says hunting for small game species such as hares was often done opportunistically while looking for moose or caribou, usually in areas adjacent to the community. Areas closest to communities are most heavily used, but hares are taken opportunistically by hunters or trappers traveling throughout community harvest areas. People hunt throughout the region but generally focus effort in their own particular hunting territories. As has been found in other regions of the state, it is likely families in these GMUs traditionally would have traveled in search of hares during “hungry times,” staying wherever they found them in great abundance. Hunting camps would have often been selected in part due to their proximity to areas of abundant hares and other small game, which could be harvested for fresh meals and snacks.

CRITERION 5: MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING

A means of handling, preparing, preserving, and storing fish or game that has been traditionally used by past generations, but not excluding recent technological advances where appropriate.

Hares are primarily used for fur as a source of income and food for human consumption. Now, as in the past, most hares are eaten fresh or frozen for later use. Morris (1985:115) states hunting for small game species such as hares was often done opportunistically while looking for moose or caribou. Little data have been collected on the handling, preparing, preserving, and storing of hares in GMUs 9, 10, 11, 13, 16B, and 17. This does not indicate a lack of use. Given the documented harvest data, we can surmise the means of processing the hares in these GMUs is similar to other regions of the state.

In Manokotak, hare fur is used for skin sewing items such as parkas, hats, and mukluks (Schichnes and Chythlook 1988:153). Craft uses of hares occur in other communities as well.

CRITERION 6: INTERGENERATIONAL TRANSMISSION OF KNOWLEDGE, SKILLS, VALUES, AND LORE

A pattern of taking or use that includes the handing down of knowledge of fishing or hunting skills, values, and lore from generation to generation.

In many communities, hunting small game such as hares or porcupines is among the first subsistence activities engaged in by young boys. For example, In Iliamna Lake communities “it was reported that young boys went out in the afternoon or on weekends using three-wheelers or on foot to hunt hare or porcupine” (Morris 1986:115). Morris (1986:118) also notes that, “Game birds were also hunted in the general vicinity of the communities by youngsters after school hours.”

Little additional data exist on the transmission of knowledge, skills, values, and lore relating specifically to hares in GMUs 9, 10, 11, 13, 16B, and 17. Hunting knowledge in other regions is typically taught parent to child. Learning commonly occurs experientially, when children follow their parents hunting,

fishing, gathering, and to camp. The Division of Subsistence conducted a survey in the northern Alaska community of Wales in 1994 that asked questions on this topic. The most commonly cited “teachers” were parents, grandparents, and older siblings. The most commonly cited “students” were children, grandchildren, and younger siblings. An occasional exception was crafts, like carving and sewing, which have been taught in schools as well as at home. Today, children learn hunting skills, such as how to shoot accurately, by first using small caliber rifles to hunt small game such as hares. Similarly, in the past, young children learned hunting skills by first learning to snare hares. Knowledge concerning small game was also passed from generation to generation through stories (Magdanz et al. 2011). The passing on of knowledge, skills, traditions, and lore is similar, although individual techniques and methods may vary, throughout the state. It is reasonable to assume, without specific reference to historical documentation for communities within GMUs 9, 10, 11, 13, 16B, and 17, that similar methods have been used over the years within these communities as well.

CRITERION 7: DISTRIBUTION AND EXCHANGE

A pattern of taking, use, and reliance where the harvest effort or products of that harvest are distributed or shared, including customary trade, barter, and gift-giving.

In Iliamna Lake communities, Morris (1986:115) noted that:

Small game brought home was usually eaten fresh. Unlike sharing of large mammals, distribution of small game normally means giving away the entire animal. Another type of sharing involved inviting others in for a meal in which the fresh harvest was served.

Across the communities in the region where Division of Subsistence has conducted studies, researchers have found sharing and distribution of wild resources. A majority of the surveyed communities in the GMUs reported sharing hares (Table 1). Table 1 lists the percentage of households in surveyed communities in GMUs 9, 10, 11, 13, 16B, and 17 using, harvesting, giving, and receiving hares and serves to document the extent of sharing of this particular resource over time. Most communities that reported harvesting hares also reported giving and/or receiving this resource. In most communities, households use wild foods harvested by others through sharing networks, so the percentages of households harvesting usually are lower than the percentages of households using wild foods. Some communities having no harvests still received hares for use, such as the community of Nikolski in GMU 10, where, although no hares were harvested, 7% of the households received hares and used them. For these households, hares contributed to their subsistence resource use even when not harvested within the community. In 2010, over 30% of the households in Mentasta Lake shared hares. Regional Division research findings report sharing of not only various wild resources (including hares) but also processing facilities (e.g., smoke houses), storage (e.g., freezers) and equipment (e.g., boats, nets, transportation) (Fall, Andersen, et al. 1993; Fall et al. 2006; Fall, Mason, et al. 1993; Fall and Morris 1987; Krieg et al. 2009; Morris 1986, 1987, 1985; Schroeder et al. 1987; Wright et al. 1985). Residents of the region note sharing with almost anyone, in general, and with everyone in need (Payne et al. 1983).

CRITERION 8: DIVERSITY OF RESOURCES IN AN AREA; ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS

A pattern that includes taking, use, and reliance for subsistence purposes upon a wide variety of fish and game resources and that provides substantial economic, cultural, social, and nutritional elements of the subsistence way of life.

Subsistence harvests in communities of the southwest Alaska and rural southcentral Alaska are relatively high and diverse. Generally, subsistence harvests in communities off the road system with larger percentages of Alaska Natives in their populations and that face less competition from urban-based hunters and fishermen, have relatively high levels of resource harvests (Wolfe and Walker 1987).

Harvests in regional and subregional centers (Dillingham, Bristol Bay Borough, Chignik) average about 200–250 pounds per person (usable weight) per year. Harvests in the smaller communities are higher: those of the Alaska Peninsula and Nushagak Bay average about 400 pounds per person, while subsistence harvests in Nushagak River and Iliamna/Lake Clark villages range from 600 to 800 pounds or more. In addition to moose, major resources in Bristol Bay and on the Alaska Peninsula include five species of Pacific salmon; nonsalmon fish such as Dolly Varden, smelt, and northern pike; small game birds; marine mammals; and wild plants. Small land mammals played a key role in the diets of households in many of the communities in the GMUs.

Wild food harvest is similarly extensive and diverse in the Aleutian Islands. In Unalaska annual total harvests average around 200 pounds per person (usable weight). Harvests are larger in smaller communities like False Pass, Akutan, and Nikolski, ranging from 300 to 700 pounds per person per year. Species important to False Pass households include caribou, coho salmon and harbor seal; Unalaska households depend mainly on coho and sockeye salmon, halibut, and marine invertebrates.

Subsistence uses and harvest of fish, mammals, birds, and wild plants play a major role in the contemporary economy and way of life in Tyonek and Beluga (Stanek et al. 2007). Most residents of both communities participated in the harvesting and processing of wild foods. Sharing of resources was common and involved most community households. In 2005–2006, subsistence harvest levels were substantial, totaling 664 pounds usable weight per household, or 217 pounds per person, in Tyonek, and 539 pounds per household, or 204 pounds per person, in Beluga. Subsistence harvests were also diverse. On average in 2005–2006, Tyonek households used nine different wild resources, and Beluga households used 15.

The major role of subsistence harvest continued in 2013 with a total subsistence harvest by Tyonek residents of 24,249 pounds (Jones et al. 2015). Salmon composed the majority of the harvest at this time (69% of the total harvest), followed by large land mammals (14%), nonsalmon fish (8%), and vegetation (6%); additionally, each contributing 1% or less of the total harvest, birds and eggs, small land mammals, marine mammals, and marine invertebrates were harvested. The community harvest by wild resource category in order of most to least was salmon (16,766 lb total, or 118 lb per capita), large land mammals (3,471 lb total, or 24 lb per capita), nonsalmon fish (1,863 lb total, or 13 lb per capita), vegetation (1,352 lb total, or 10 lb per capita), and marine mammals (360 lb, or 2 lb per capita). The harvests of birds and eggs, small land mammals, and marine invertebrates each contributed 1 lb or less per capita (Jones et al. 2015).

In Skwentna, the total estimated harvest for all fish, wildlife, and wild plant resources during 2012 was 9,966 lb, or 161 lb per capita. Fish provided the majority (46%) (4,559 lb, or 74 lb per capita) of the total pounds of wild resources harvested by Skwentna households. Land mammals provided 45% of the total harvest (4,528 lb, or 73 lb per capita). Vegetation, birds, and marine invertebrates also contributed to the total harvest of wild resources by Skwentna residents. Vegetation provided 5% (487 lb, or 8 lb per capita), birds provided 3% (260 lb, or 4 lb per capita), and marine invertebrates provided 1% (131 lb, or 2 lb per capita) of the total harvest (Holen et al. 2014).

From 2009–2013, across the Copper River Basin, salmon were the most harvested resource (58%), followed by large land mammals (25%), and nonsalmon fish 9%. In order of decreasing importance was the harvest of vegetation (5%), small land mammals (2%), marine invertebrates (1%), and birds and eggs (less than 1%). The Copper River is an important source of salmon for many community members (Holen et al. 2015).

Historical comparisons with the 1982 and 1987 study years in the Copper River Basin shed light on wild resource harvest trends in the region (McMillan and Cuccarese 1988; Stratton and Georgette 1984). Overall, the per capita harvest of wild resources has increased from 1982 (110 lb) to 1987 (145 lb) to the 2000s (160 lb).

Detailed household harvest survey data for particular study years are available in Coiley-Kenner et al. 2003; Evans et al. 2013; Fall, Andersen, et al. 1993; Fall et al. 1995, 2006, 2012; Fall, Mason, et al. 1993; Fall and Morris 1987; Holen et al. 2014, 2015; Krieg et al. 2009; La Vine and Zimpelman, editors 2014; Morris 1985, 1986, 1987; Schichnes and Chythlook 1991; Schroeder et al. 1987; Stanek 1987; Wright et al. 1985. Data from these sources may be found in the Division of Subsistence Technical Papers series (<http://www.adfg.alaska.gov/sf/publications/>) and the Community Subsistence Information System (<https://www.adfg.alaska.gov/sb/CSIS/>).

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TABLES AND FIGURES

Table 1.—Subsistence harvest and use of hares in surveyed communities of GMUs 9, 10, 11, 13, 16B, and 17 from 1973–2014.

Community	Study year	Resource	Percentage of households					Estimated	Estimated pounds harvest		
			Using	Attempting	Harvesting	Giving	Receiving	total harvest	Units	Total	Per capita
Unit 09B											
Igiugig	1983	Arctic hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	33.3	33.3	33.3	ND	0.0	11.0 ind.		22.0	0.3
		Unknown hare	33.3	33.3	33.3	ND	0.0	18.0 ind.		55.0	0.8
	1992	Arctic hare	40.0	40.0	40.0	10.0	0.0	17.0 ind.		94.0	2.0
		Snowshoe hare	20.0	10.0	10.0	0.0	10.0	4.0 ind.		7.0	0.2
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Iliamna	2005	Snowshoe hare	8.3	8.3	8.3	0.0	0.0	5.0 ind.		10.0	0.3
	1983	Arctic hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	5.0	5.0	5.0	ND	0.0	2.0 ind.		4.0	0.0
		Unknown hare	5.0	5.0	5.0	ND	0.0	2.0 ind.		5.0	0.0
	1991	Arctic hare	8.7	8.7	8.7	4.3	0.0	34.0 ind.		190.0	1.9
		Snowshoe hare	13.0	13.0	13.0	0.0	0.0	17.0 ind.		34.0	0.3
2004		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Kokhanok	1983	Arctic hare	26.3	26.3	26.3	ND	0.0	43.0 ind.		239.0	1.7
		Snowshoe hare	36.8	36.8	36.8	ND	0.0	70.0 ind.		139.0	1.0
		Unknown hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
	1992	Arctic hare	30.6	22.2	22.2	16.7	16.7	293.0 ind.		1,638.0	9.4
		Snowshoe hare	25.0	19.4	19.4	16.7	16.7	316.0 ind.		633.0	3.7
		Unknown hare	5.6	2.8	2.8	2.8	2.8	11.0 ind.		41.0	0.2
Levelock	2005	Snowshoe hare	11.4	11.4	8.6	5.7	2.9	6.0 ind.		12.0	0.1
	1988	Arctic hare	14.8	14.8	14.8	0.0	0.0	51.0 ind.		147.0	1.4
		Snowshoe hare	11.1	11.1	11.1	0.0	0.0	13.0 ind.		27.0	0.3
	1992	Arctic hare	20.0	13.3	13.3	6.7	10.0	9.0 ind.		51.0	0.5
		Snowshoe hare	10.0	3.3	3.3	0.0	6.7	12.0 ind.		23.0	0.2
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Newhalen	2005	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	1983	Arctic hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Unknown hare	9.1	9.1	9.1	ND	0.0	28.0 ind.		85.0	0.7
	1991	Arctic hare	38.5	26.9	26.9	3.8	19.2	80.0 ind.		448.0	2.8
		Snowshoe hare	26.9	23.1	23.1	11.5	11.5	70.0 ind.		140.0	0.9
Nondalton		2004	Snowshoe hare	8.0	8.0	4.0	0.0	0.0	2.0 ind.		5.0
	1973	Arctic hare	ND	ND	ND	ND	ND	0.0 ind.		0.0	0.0
		Snowshoe hare	ND	ND	44.0	ND	ND	166.0 ind.		331.0	2.1
	1980	Arctic hare	ND	ND	7.0	ND	ND	38.0 ind.		210.0	1.3
		Snowshoe hare	ND	ND	35.0	ND	ND	70.0 ind.		140.0	0.8
	1981	Arctic hare	ND	ND	16.0	ND	ND	18.0 ind.		103.0	0.5
Pedro Bay	1983	Snowshoe hare	ND	ND	47.0	ND	ND	140.0 ind.		280.0	1.4
		Arctic hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	14.3	14.3	14.3	ND	0.0	28.0 ind.		57.0	0.2
	2004	Unknown hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	7.9	7.9	7.9	5.3	0.0	14.0 ind.		29.0	0.2
		1982	Arctic hare	5.9	5.9	5.9	ND	0.0	1.0 ind.		7.0
Port Alsworth	1996	Snowshoe hare	5.9	5.9	5.9	ND	0.0	12.0 ind.		25.0	0.4
		Unknown hare	0.0	0.0	0.0	ND	0.0	0.0 ind.		0.0	0.0
		Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	2004	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
King Salmon	1983	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	7.7	7.7	7.7	0.0	0.0	6.0 ind.		19.0	0.3
	2004	Snowshoe hare	9.1	9.1	9.1	0.0	0.0	13.0 ind.		27.0	0.3
		Unit 09C									
		King Salmon	1983	Arctic hare	4.7	ND	4.7	ND	0.0	20.0 ind.	
Snowshoe hare	4.7			ND	4.7	ND	0.0	43.0 ind.		85.0	0.2
Snowshoe hare	10.2			8.2	8.2	2.0	2.0	104.0 ind.		208.0	0.8
Naknek	1983	Arctic hare	5.8	ND	3.8	ND	1.9	24.0 ind.		133.0	0.3
		Snowshoe hare	7.7	ND	5.8	ND	1.9	64.0 ind.		128.0	0.3
	2007	Arctic hare	1.3	1.3	1.3	0.0	0.0	2.7 ind.		15.4	0.0
		Snowshoe hare	13.3	10.7	10.7	4.0	2.7	145.6 ind.		291.1	0.5

-continued-

Table 1.–Page 2 of 4

Community	Study year	Resource	Percentage of households					Estimated		Estimated pounds harvest	
			Using	Attempting	Harvesting	Giving	Receiving	total harvest	Units	Total	Per capita
Unit 09C											
South Naknek	1983	Arctic hare	23.8	ND	14.3	ND	9.5	12.0 ind.		65.0	0.5
		Snowshoe hare	0.0	ND	0.0	ND	0.0	0.0 ind.		0.0	0.0
	1992	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	2007	Snowshoe hare	4.8	0.0	0.0	0.0	4.8	0.0 ind.		0.0	0.0
Unit 09D											
King Cove	1992	Arctic hare	5.3	5.3	5.3	1.3	2.7	38.0 ind.		212.0	0.4
		Snowshoe hare	1.3	1.3	1.3	1.3	1.3	4.0 ind.		8.0	0.0
Nelson Lagoon	1987	Snowshoe hare	7.7	7.7	7.7	0.0	0.0	3.0 ind.		0.0	0.0
Sand Point	1992	Arctic hare	20.2	14.4	13.5	2.9	6.7	147.0 ind.		759.0	1.3
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Unit 09E											
Chignik City	1984	Arctic hare	5.3	5.3	5.3	0.0	0.0	4.0 ind.		25.0	0.2
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	1989	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	5.7	8.6	5.7	2.9	0.0	10.0 ind.		20.0	0.2
	1991	Arctic hare	0.0	3.3	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	10.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Chignik Lagoon	2003	Snowshoe hare	4.5	4.5	4.5	4.5	0.0	1.0 ind.		3.0	0.0
	1984	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		1989	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0
Chignik Lake	1984	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Arctic hare	8.7	0.0	0.0	0.0	8.7	0.0 ind.		0.0	0.0
		Snowshoe hare	9.5	9.5	9.5	0.0	4.8	3.0 ind.		15.0	0.1
	1989	Snowshoe hare	4.8	0.0	0.0	0.0	4.8	0.0 ind.		0.0	0.0
		Arctic hare	4.2	0.0	0.0	4.2	4.2	0.0 ind.		0.0	0.0
		Snowshoe hare	8.3	8.3	8.3	4.2	4.2	4.0 ind.		8.0	0.1
Egegik	1984	Arctic hare	4.0	4.0	4.0	4.0	0.0	3.0 ind.		19.0	0.2
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	2014	Snowshoe hare	0.0	0.1	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Ivanof Bay	1984	Arctic hare	16.7	16.7	16.7	0.0	0.0	3.0 ind.		19.0	0.5
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	1989	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Perryville	1984	Arctic hare	25.0	20.0	20.0	10.0	5.0	7.0 ind.		38.0	0.3
		Snowshoe hare	5.0	5.0	5.0	0.0	0.0	3.0 ind.		5.0	0.0
	1989	Arctic hare	3.7	0.0	0.0	0.0	3.7	0.0 ind.		0.0	0.0
		Snowshoe hare	3.7	3.7	3.7	3.7	0.0	1.0 ind.		2.0	0.0
Pilot Point	2003	Snowshoe hare	3.7	3.7	3.7	0.0	0.0	2.0 ind.		5.0	0.0
		Snowshoe hare	29.4	29.4	29.4	0.0	0.0	30.0 ind.		59.0	0.9
	2014	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Port Heiden	1987	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Ugashik	1987	Snowshoe hare	40.0	40.0	40.0	0.0	0.0	16.0 ind.		32.0	3.2
	2014	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Unit 10											
Akutan	1990	Arctic hare	12.0	8.0	8.0	4.0	4.0	11.0 ind.		22.0	0.2
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Nikolski	2008	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
		Arctic hare	7.1	0.0	0.0	0.0	7.1	0.0 ind.		0.0	0.0
Unit 11											
Chistochina	1982	Hare	54.5	ND	54.5	ND	ND	192.0 ind.		287.0	3.5
	1987	Hare	25.0	21.4	21.4	7.1	3.6	58.0 ind.		87.0	1.1
	2009	Snowshoe hare	33.3	29.6	29.6	14.8	7.4	279.8 ind.		559.7	6.5
McCarthy	2012	Snowshoe hare	2.5	7.6	2.5	0.0	0.0	5.9 ind.		11.8	0.1
McCarthy Road	1982	Hare	61.5	ND	61.5	ND	ND	1,362.0 ind.		2,044.0	38.8
	1987	Hare	52.9	47.1	47.1	5.9	11.8	332.0 ind.		498.0	13.1
Nabesna	1982	Hare	50.0	ND	50.0	ND	ND	69.0 ind.		103.0	2.3
	1987	Hare	8.3	8.3	8.3	0.0	0.0	4.0 ind.		7.0	0.2

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Table 1.-Page 3 of 4

Community	Study year	Resource	Percentage of households					Estimated total harvest	Units	Estimated pounds harvest	
			Using	Attempting	Harvesting	Giving	Receiving			Total	Per capita
Unit 11											
Slana Homestead South	1987	Hare	41.2	35.3	35.3	23.5	11.8	1,103.0 ind.		1,654.0	8.9
South Wrangell Mountains	1982	Hare	53.3	ND	53.3	ND	ND	278.0 ind.		418.0	12.3
	1987	Hare	21.4	21.4	21.4	0.0	0.0	77.0 ind.		116.0	2.4
Unit 13A											
East Glenn Highway	1982	Hare	46.7	ND	46.7	ND	ND	854.0 ind.		1,281.0	7.0
	1987	Hare	10.1	10.1	10.1	3.4	0.0	92.0 ind.		138.0	0.6
Glacier View	1982	Hare	23.3	ND	23.3	ND	ND	156.0 ind.		234.0	1.2
Glennallen	1982	Hare	25.5	ND	23.5	ND	ND	522.0 ind.		783.0	0.9
	1987	Hare	5.7	5.7	5.7	2.1	0.0	209.0 ind.		314.0	0.7
	2013	Snowshoe hare	3.8	3.8	2.5	1.2	1.2	45.4 ind.		90.9	0.2
Lake Louise	1982	Hare	46.2	ND	46.2	ND	ND	72.0 ind.		107.0	2.7
	1987	Hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
	2013	Snowshoe hare	10.0	20.0	10.0	0.0	0.0	4.2 ind.		8.4	0.3
Sheep Mountain	1982	Hare	0.0	ND	0.0	ND	ND	0.0 ind.		0.0	0.0
Tolsona	2013	Snowshoe hare	12.5	12.5	12.5	0.0	0.0	9.0 ind.		18.0	0.8
West Glenn Highway	1987	Hare	11.0	18.6	11.0	3.5	0.0	38.0 ind.		57.0	0.2
Unit 13B											
Gakona	1982	Hare	47.8	ND	47.8	ND	ND	297.0 ind.		446.0	4.1
	1987	Hare	26.1	26.1	26.1	0.0	7.3	93.0 ind.		140.0	0.7
	2012	Snowshoe hare	7.1	11.9	7.1	0.0	0.0	18.3 ind.		36.6	0.2
Gulkana	1982	Hare	25.0	ND	19.4	ND	ND	149.0 ind.		224.0	1.8
	1987	Hare	35.0	30.0	30.0	10.0	10.0	81.0 ind.		122.0	1.8
	2013	Snowshoe hare	10.3	10.3	10.3	6.8	0.0	30.7 ind.		61.4	0.6
Paxson	1987	Hare	28.6	28.6	28.6	14.3	0.0	38.0 ind.		56.0	1.4
	2013	Snowshoe hare	12.5	25.0	12.5	0.0	0.0	6.8 ind.		13.7	0.4
Paxson-Sourdough	1982	Hare	10.0	ND	10.0	ND	ND	13.0 ind.		20.0	0.4
Sourdough	1987	Hare	0.0	11.1	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Mentasta Lake	1982	Hare	42.1	ND	42.1	ND	ND	102.0 ind.		153.0	1.6
	1987	Hare	41.7	33.3	33.3	8.3	8.3	153.0 ind.		230.0	3.0
	2010	Snowshoe hare	34.7	39.1	30.4	30.4	4.3	73.5 ind.		147.1	1.4
Mentasta Pass	1987	Hare	40.0	40.0	40.0	10.0	0.0	29.0 ind.		43.0	1.6
	2010	Snowshoe hare	11.1	22.2	0.0	11.1	11.1	0.0 ind.		0.0	0.0
Slana	1982	Hare	31.3	ND	31.3	ND	ND	93.0 ind.		139.0	2.0
	1987	Hare	18.2	18.2	18.2	4.5	4.5	55.0 ind.		82.0	1.4
	2010	Snowshoe hare	24.1	24.1	24.1	6.4	4.8	242.7 ind.		485.4	2.8
Slana Homestead North	1987	Hare	25.0	25.0	25.0	12.5	0.0	928.0 ind.		1,391.0	22.7
Unit 13D											
Chitina	1982	Hare	47.8	ND	47.8	ND	ND	201.0 ind.		302.0	7.1
	1987	Hare	44.4	38.9	38.9	0.0	5.6	173.0 ind.		260.0	7.5
	2012	Snowshoe hare	19.5	19.5	19.5	4.3	0.0	66.9 ind.		133.8	1.0
Copper Center	1982	Hare	18.5	ND	18.5	ND	ND	330.0 ind.		494.0	1.1
	1987	Hare	17.9	21.0	6.9	1.6	10.9	112.0 ind.		169.0	0.3
	2010	Snowshoe hare	18.7	18.7	16.2	8.7	3.7	246.8 ind.		493.7	1.1
Kenny Lake	1982	Hare	16.7	ND	16.7	ND	ND	286.0 ind.		429.0	1.8
	1987	Hare	19.3	19.3	19.3	0.0	0.0	131.0 ind.		196.0	0.6
	2012	Snowshoe hare	9.7	8.3	8.3	0.0	1.3	109.5 ind.		191.7	0.5
Lower Tonsina	1982	Hare	75.0	ND	75.0	ND	ND	124.0 ind.		186.0	5.3
Mendeltna	2013	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Nelchina	2013	Snowshoe hare	5.5	5.5	5.5	5.5	0.0	9.6 ind.		19.3	0.3
Tazlina	1987	Hare	16.8	16.8	14.8	3.8	1.9	228.0 ind.		342.0	0.9
	2013	Snowshoe hare	3.7	3.7	3.7	0.0	0.0	25.8 ind.		51.6	0.1
Tonsina	1982	Hare	40.0	ND	40.0	ND	ND	522.0 ind.		783.0	3.4
	1987	Hare	22.9	24.2	22.9	17.7	0.0	220.0 ind.		330.0	1.1
	2013	Snowshoe hare	4.3	4.3	4.3	0.0	0.0	8.4 ind.		16.9	0.2
Unit 13E											
Cantwell	1982	Hare	44.2	ND	44.2	ND	ND	425.0 ind.		638.0	4.7
	1999	Snowshoe hare	30.3	26.3	25.0	6.6	7.9	487.0 ind.		959.0	4.7
	2012	Snowshoe hare	7.2	3.6	3.6	1.8	1.8	7.5 ind.		15.0	0.1
Chase	1986	Hare	41.2	47.1	41.2	0.0	0.0	53.0 ind.		80.0	1.0
	2012	Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0
Gold Creek	1986	Hare	40.0	40.0	40.0	0.0	0.0	18.0 ind.		27.0	2.3
Hurricane-Broad Pass	1986	Hare	12.5	0.0	0.0	0.0	12.5	0.0 ind.		0.0	0.0

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Table 1.–Page 4 of 4

Community	Study year	Resource	Percentage of households					Estimated	Estimated pounds harvest			
			Using	Attempting	Harvesting	Giving	Receiving	total harvest	Units	Total	Per capita	
Unit 16B												
Beluga	2006	Snowshoe hare	7.1	7.1	7.1	0.0	0.0	2.0 ind.		4.0	0.1	
Skwentna	2012	Snowshoe hare	10.0	10.0	10.0	0.0	0.0	18.6 ind.		37.3	0.6	
Tyonek	1983	Snowshoe hare	ND	ND	1.3	0.0	1.3	4.0 ind.		6.0	0.0	
	2006	Snowshoe hare	2.1	2.1	2.1	2.1	0.0	2.0 ind.		5.0	0.0	
	2013	Snowshoe hare	2.0	2.0	2.0	0.0	0.0	5.1 ind.		10.3	0.1	
Unit 17A												
Togiak	1999	Hare	15.6	10.8	10.8	6.1	8.2	50.0 ind.		103.0	0.1	
	2008	Arctic hare	1.3	0.0	0.0	0.0	1.3	0.0 ind.		0.0	0.0	
		Jackrabbit	10.0	6.3	5.0	3.8	6.3	18.8 ind.		37.6	0.0	
		Snowshoe hare	6.3	3.8	2.5	0.0	3.8	9.4 ind.		18.8	0.0	
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
Twin Hills	1999	Hare	58.3	50.0	50.0	25.0	25.0	31.0 ind.		89.0	1.3	
Unit 17B												
Koliganek	1987	Arctic hare	19.0	11.9	11.9	4.8	7.1	13.0 ind.		71.0	0.4	
		Snowshoe hare	26.2	19.0	16.7	4.8	11.9	26.0 ind.		53.0	0.3	
	2005	Snowshoe hare	10.7	3.6	3.6	0.0	7.1	6.0 ind.		12.0	0.1	
Unit 17C												
Aleknagik	1989	Arctic hare	26.3	15.8	13.2	18.4	13.2	23.0 ind.		94.0	0.7	
		Snowshoe hare	26.3	21.1	21.1	13.2	5.3	44.0 ind.		89.0	0.6	
	2008	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Hare	15.6	12.5	12.5	6.3	3.1	22.0 ind.		44.0	0.3	
		Jackrabbit	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Snowshoe hare	15.6	12.5	12.5	6.3	3.1	22.0 ind.		44.0	0.3	
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Arctic hare	17.6	23.5	11.8	11.8	5.9	26.0 ind.		56.0	1.0	
Clarks Point	1989	Snowshoe hare	17.6	23.5	17.6	11.8	0.0	24.0 ind.		48.0	0.9	
		Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
	2008	Hare	9.1	9.1	9.1	9.1	0.0	7.0 ind.		13.0	0.3	
		Jackrabbit	9.1	9.1	9.1	9.1	0.0	7.0 ind.		13.0	0.3	
		Snowshoe hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Unknown hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Arctic hare	2.3	4.5	2.3	0.9	0.2	83.0 ind.		468.0	0.2	
		Jackrabbit	1.1	2.6	0.9	0.7	0.2	24.0 ind.		48.0	0.0	
Dillingham	Snowshoe hare	8.2	9.8	7.9	5.4	0.7	361.0 ind.		722.0	0.3		
	Unknown hare	4.1	3.6	2.6	2.3	1.6	100.0 ind.		268.0	0.1		
	Ekwok	1987	Arctic hare	20.6	24.1	17.2	3.4	3.4	13.0 ind.		74.0	0.7
		Snowshoe hare	24.1	27.6	20.7	3.4	3.4	15.0 ind.		31.0	0.3	
Manokotak	1985	Snowshoe hare	48.1	42.6	37.0	25.9	24.1	193.0 ind.		387.0	1.3	
	1999	Hare	40.7	27.2	27.2	21.0	21.0	126.0 ind.		273.0	0.7	
	2008	Arctic hare	0.0	0.0	0.0	0.0	0.0	0.0 ind.		0.0	0.0	
		Hare	14.8	8.2	6.6	4.9	8.2	20.0 ind.		41.0	0.1	
Jackrabbit		1.6	1.6	1.6	1.6	0.0	8.0 ind.		16.0	0.0		
New Stuyahok	2008	Snowshoe hare	9.8	6.6	4.9	3.3	4.9	13.0 ind.		25.0	0.1	
		Unknown hare	3.3	0.0	0.0	0.0	3.3	0.0 ind.		0.0	0.0	
		Arctic hare	7.5	7.5	7.5	2.5	0.0	20.0 ind.		114.0	0.3	
		Snowshoe hare	12.5	12.5	12.5	5.0	0.0	22.0 ind.		44.0	0.1	
		Snowshoe hare	2.0	0.0	0.0	0.0	2.0	0.0 ind.		0.0	0.0	
		Arctic hare	7.5	7.5	7.5	2.5	0.0	20.0 ind.		114.0	0.3	
	1987	Snowshoe hare	12.5	12.5	12.5	5.0	0.0	22.0 ind.		44.0	0.1	
		Snowshoe hare	2.0	0.0	0.0	0.0	2.0	0.0 ind.		0.0	0.0	

Source ADF&G Division of Subsistence CSIS

Note Community / Study years in which only 'Hare' is provided as a resource are instances where species was not asked. Based on area, species may be assumed if only one species is present.

ND = No data.

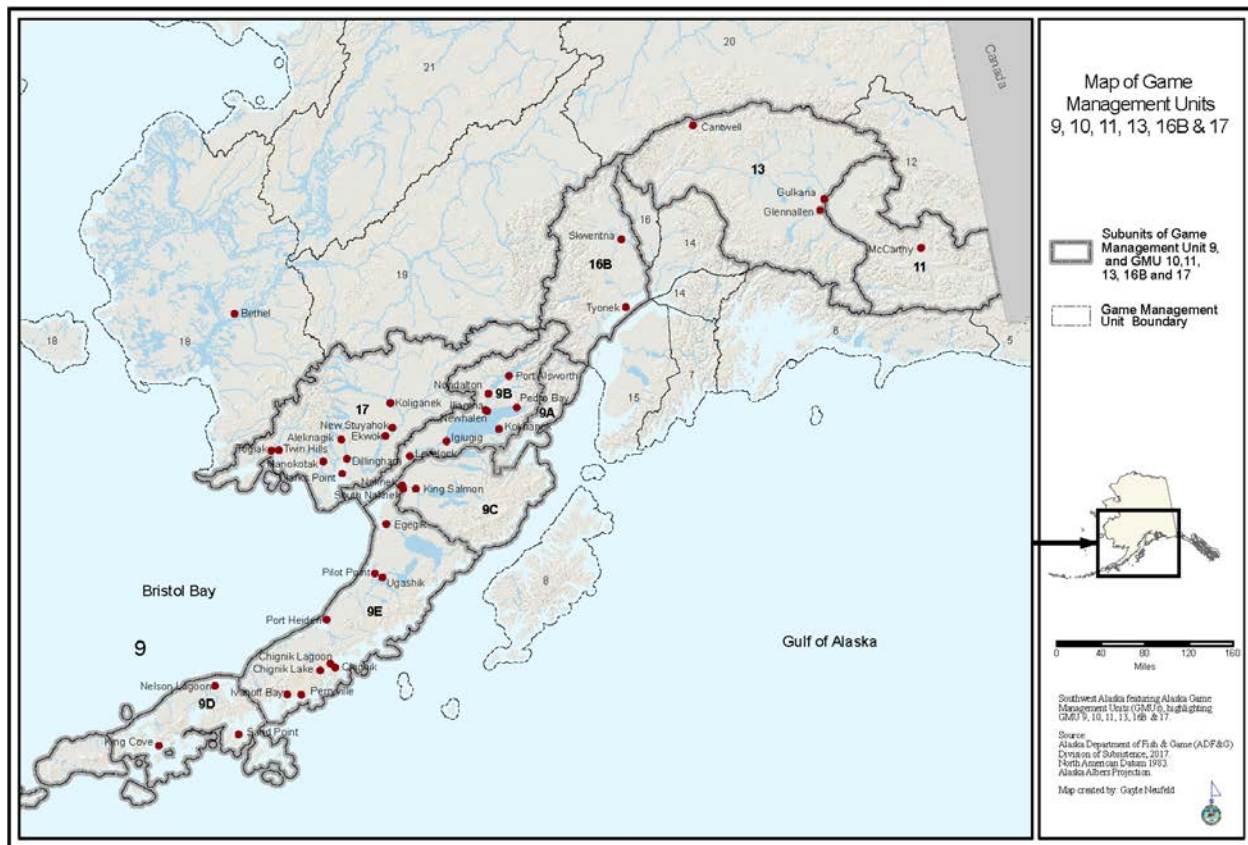


Figure 1.—Alaska Game Management Units 9, 11, 13, 16B, and 17.

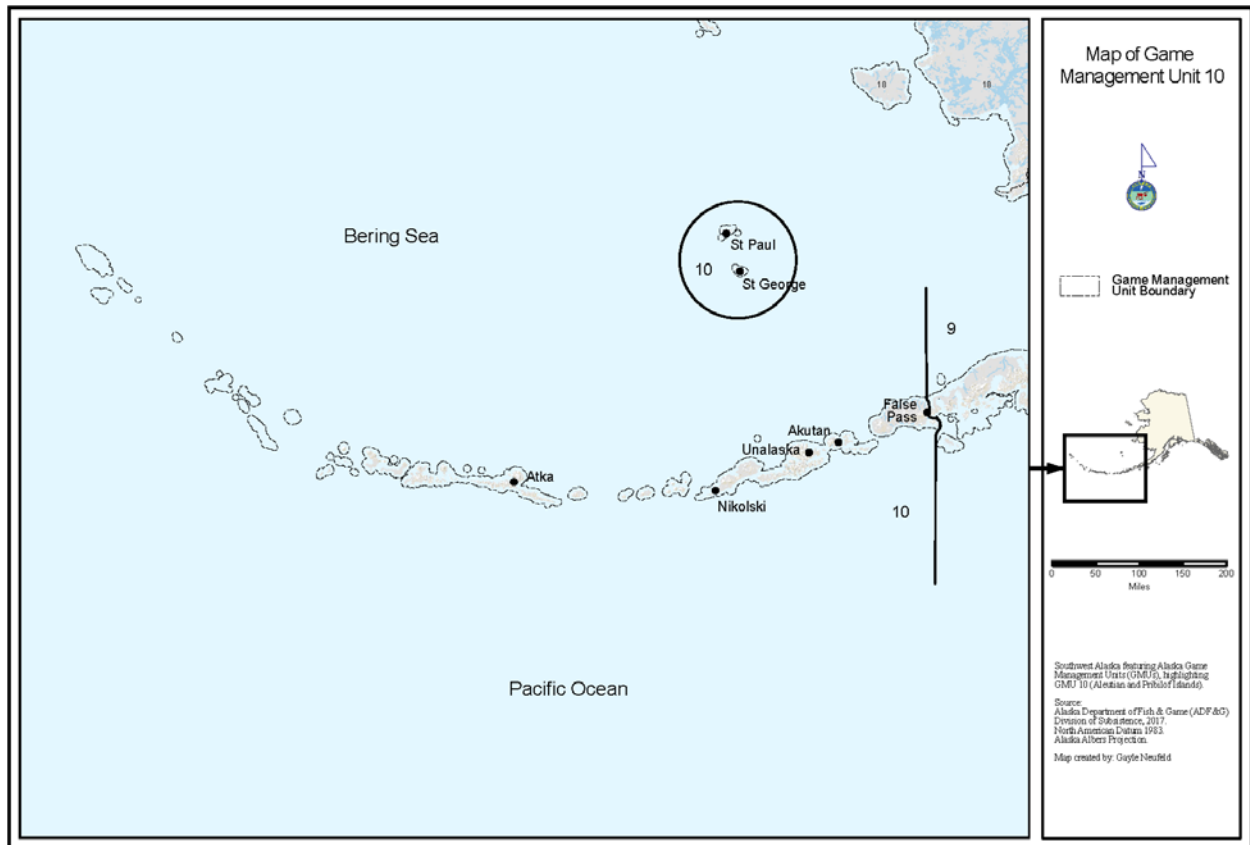


Figure 2.—Alaska Game Management Unit 10.

**APPENDIX A.–LITERATURE EXCERPTS PERTAINING TO CUSTOMARY AND
TRADITIONAL HARE HUNTING AND USE PATTERNS IN GAME MANAGEMENT
UNIT 9, 10, 11, 13, 16B, AND 17**

Following are quotations from selected literature pertaining to customary and traditional hare hunting and use patterns.

Coiley-Kenner, P., T. M. Krieg, M. B. Chythlook, and G. Jennings. 2003. Wild resource harvests and uses by residents of Manokotak, Togiak, and Twin Hills, 1999/2000. Alaska Department of Fish and Game Technical Paper No. 275, Juneau.
<http://www.adfg.alaska.gov/techpap/tp275.pdf>

“In Manokotak during the study period small land mammals, almost exclusively beaver, hares, and porcupine, contributed around 2 percent to the harvest in pounds usable weight.... However, they were used by 66.7 percent of households in Manokotak, 41.3 percent in Togiak, and 83.3 percent in Twin Hills.... Some households harvested small land mammals for meat as well as fur. Other commonly harvested animals were parka or ground squirrel, snowshoe hare, and red fox.” (pg. 129).

Evans, S., M. Kukkonen, D. Holen, and D. S. Koster. 2013. Harvests and uses of wild resources in Dillingham, Alaska, 2010. Alaska Department of Fish and Game Technical Paper No. 375, Juneau. <http://www.adfg.alaska.gov/techpap/TP375.pdf>

“Fewer households (27%) participated in small land mammal harvesting in 2010, and a smaller number (25%) were successful. Most small land mammal hunting took place during the winter because the majority of the harvest was accomplished by trappers who work their trap lines in the winter months by snowmachine. Beavers, which represent the highest harvest in terms of pounds harvested, were trapped for their meat and fur.... Species often harvested while traveling or nearby homes include hares and porcupines. (pg. 34).

Fall, J. A., D. B. Andersen, L. Brown, M. Coffing, G. Jennings, C. Mishler, A. Paige, C. J. Utermohle, and V. Vanek. 1993. Noncommercial harvests and uses of wild resources in Sand Point, Alaska. Alaska Department of Fish and Game Technical Paper No. 226, Juneau. <http://www.adfg.alaska.gov/techpap/tp226.pdf>

“Seven kinds of land mammals were used for food in Sand Point in 1992. These were bison (54.8 percent used), caribou (51.0 percent used), moose (23.1 percent used), Arctic hare (20.2 percent used), wild cattle (15.4 percent used), deer (1 percent) (deer are not locally available; the nearest source is Kodiak and adjacent islands), and brown bear (1 percent).” (pg. 74).

Fall, J. A., R. Mason, T. Haynes, V. Vanek, L. Brown, G. Jennings, Craig Mishler, and C. Utermohle. 1993. Noncommercial harvests and uses of wild resources in King Cove, Alaska. Alaska Department of Fish and Game Technical Paper No. 227, Juneau.
<http://www.adfg.alaska.gov/techpap/tp227.pdf>

“Eight kinds of land mammals were used for food in King Cove in 1992. These were bison (4.0 percent used) (bison are not available locally, but bison meat is obtained from Sand Point residents who hunt the Popof Island herd), caribou (64.0 percent used), moose (8.0 percent used) (moose are generally unavailable in GMU 9D), Arctic hare (5.3 percent used), snowshoe hare (1.3 percent), wild cattle (25.3 percent used), deer (16.0 percent) (deer are not locally available; the nearest source is Kodiak and adjacent islands), and porcupine (1.3 percent). Land mammals

harvested in the largest quantities were wild cattle (19.7 pounds per person) and caribou (19.2 pounds per person).” (pg. 71).

Fall, J. A., D. L. Holen, B. Davis, T. Krieg, and D. Koster. 2006. Subsistence harvests and uses of wild resources in Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth, Alaska, 2004. Alaska Department of Fish and Game Technical Paper No. 302, Juneau.
<http://www.adfg.alaska.gov/techpap/tp302.pdf>

“Winter is also the best season for harvesting furbearing animals because their fur is thick. For example, in 2004 beaver were harvested by 12% of [Newhalen] households and porcupine by 24% of households. Residents also harvested fox, hare, and mink.” (pg. 65)

“The other major resource category that is important for both subsistence foods and for cash income for Nondalton residents is small land mammals. Trapping occurs in the coldest part of the winter when the fur of animals is prime. Fifty percent of households in Nondalton harvested 169 small land mammals in 2004. The two most important were beaver and porcupine, followed by lynx and snowshoe hare.” (pp. 169-170)

Holen, D., S. M. Hazell, J. M. Van Lanen, J. T. Ream, S. P. A. Dejardins, B. Jones, and G. Zimpelman. 2014. The harvest and use of wild resources in Cantwell, Chase, Talkeetna, Trapper Creek, Alexander/Susitna, and Skwentna, Alaska, 2012. Alaska Department of Fish and Game Technical Paper No. 385, Juneau.
<http://www.adfg.alaska.gov/techpap/TP%20385.pdf>

“Other resources such as spruce grouse; small land mammals, including snowshoe hares; and especially berries were important for household harvests. A diversity of small land mammals were harvested. Snowshoe hares, martens, and red (tree) squirrels were harvested by a majority of communities [Cantwell, Chase, Skwentna, Alexander/Susitna, Talkeetna, and Trapper Creek] in abundant numbers. Overall though there was a great diversity in the number and species harvested between all 6 study communities.” (pp. 328–329).

Holen, D., S. M. Hazell, and G. Zimpelman. 2015. The harvest and use of wild resources in selected communities of the Copper River basin and east Glenn Highway, Alaska, 2013. Alaska Department of Fish and Game Technical Paper No. 405, Juneau.
<http://www.adfg.alaska.gov/techpap/TP405.pdf>

“The harvest and use of small land mammals is a traditional activity for Gulkana residents; harvests are made to gather both food and fur. There are a handful of active trappers among Gulkana residents today and some households actively pursue small land mammals primarily for food, particularly snowshoe hares.” (pg. 123)

“Similar to other harvesting practices, small animal harvesting occurred within the Copper River Basin. The trapline farthest from the community ran south of Tazlina Lake, approximately 50 miles away. Hunting for small mammals occurred along the Richardson Highway and along the Denali Highway near Paxson. The most common small mammal harvested for food was the snowshoe hare.” (pg. 299)

Morris, J. M. 1986. Subsistence production and exchange in the Iliamna Lake region, southwest Alaska, 1982-1983. Alaska Department of Fish and Game Technical Paper No. 136, Juneau. <http://www.adfg.alaska.gov/techpap/tp136.pdf>

“[In the Iliamna Region]...frequently birds or small game were taken while hunting caribou or moose” (pp. 55–56).

“Though dictated by fluctuating weather conditions, winter was often an intense resource harvesting period. Traps and snares were set for fur bearing mammals beginning mid-November. Hares were snared and shot. Furbearers were taken for furs to be sold or used for clothing. In addition, the meat of beaver, and occasionally lynx, was eaten.” (pg. 55)

[In Iliamna] “Among furbearers, beaver, fox, land otter, mink, lynx, and hare were successfully trapped. Many of the pelts were used in home sewing. Beaver, hare, and lynx meat was used for human consumption.” (pg. 76)

“Furbearers were trapped by members of each of the Iliamna communities. Species harvested included beaver, red fox, lynx, otter, mink, wolverine, hare, marten, squirrel, and muskrat.... Details of the trapping complex, such as production units, location of traplines, and trapping effort, were not collected during this research. Generally, it appeared that trapping was viewed as a supplemental activity which had the potential of providing both a source of cash income and food and materials for a household's use, Though no household indicated being totally dependent on income derived from furbearer trapping, it was valued as an opportunity to add to the household income while remaining in or near home and using locally available skills. Trapping could be pursued during months when other employment options were limited.” (pg. 115)

Morris, J. M. 1987. Fish and wildlife uses in six Alaska Peninsula communities: Egegik, Chignik, Chignik Lagoon, Chignik Lake, Perryville, and Ivanof Bay. Alaska Department of Fish and Game, Division of Subsistence. <http://www.adfg.alaska.gov/techpap/tp151.pdf>

“While hunting for bigger game, men harvested small game and birds, such as ptarmigan, porcupine, and hare. Occasionally, these small game species were the primarily goal of a hunting trip.” (pg. 91)

Schroeder, R.F., D.B. Andersen, R. Bosworth, J.M. Morris, and J.M. Wright 1987 Subsistence in Alaska: Arctic, Interior, Southcentral, Southwest, and Western regional summaries. Alaska Department of Fish and Game Division of Subsistence, Technical Paper No. 150: Juneau. <http://www.adfg.alaska.gov/techpap/tp150.pdf>

“Small game is taken year-round. Porcupines are taken whenever they are encountered. A few snowshoe hares are snared by young boys. Tundra hares are occasionally hunted near the village or taken incidentally while out after other game. Spruce grouse are hunted in the woods near the village, and ptarmigan are hunted on the tundra in winter or in the brush along river channels in late winter. (pg. 332).

“Small game, including ptarmigan, hares, spruce grouse, and porcupine are taken near the communities or when encountered while travelling.” (pg. 363).

Stanek, R. T. 1987. Historical and contemporary trapping in the western Susitna Basin. Alaska Department of Fish and Game Technical Paper No. 134, Juneau.
<http://www.adfg.alaska.gov/techpap/tp134.pdf>

“Harvest quantities varied among different resources.... The third largest harvest category was small game including beaver, snowshoe hare, muskrat, porcupine, and lynx. Together these species provided 1,751 pounds or 6.5 percent of the overall harvest. Beaver produced the largest amount in this group with 1,540 pounds (87.9 percent). Among the five species in this category, snowshoe hare and porcupine were most commonly eaten by western Susitna Basin residents.” (pp. 39–42)

VanStone, J. W., and J. B. Townsend. 1970. Kijik: An historic Tanaina Indian settlement. Fieliana Vol 59. Field Museum of Natural History.

“Rabbits and ptarmigan are also certain to have been plentiful during the winter months and could easily be taken with snares. In fact, it was likely that these creatures were a staple that could be depended upon when supplies of dried fish were running low...” (pg 157).

Wright, J. M., J. M. Morris, and R. Schroeder. 1985. Bristol Bay regional subsistence profile. Alaska Department of Fish and Game Technical Paper No.114, Juneau.
<http://www.adfg.alaska.gov/techpap/tp114.pdf>

In discussion on species used and seasonal harvests in Nushagak Bay: “Many residents of the subregion rely on local marine, freshwater, and terrestrial resources. They harvest marine mammals, waterfowl, clams, salmon, and a variety of other fish from Nushagak Bay and neighboring coastal areas. Salmon, a number of other types of fish, and waterfowl are harvested in the bay and from rivers and lakes. They harvest moose, porcupine, spruce grouse, furbearers, berries, and fireweed from forests. From the tundra, caribou, ptarmigan, furbearers, and berries are taken...” (pg. 42).

“Small game is taken year-round. Porcupine are taken whenever they are encountered. A few snowshoe hare are snared by young boys. Tundra hare are occasionally hunted near the village or taken incidentally while out after other game.” (pg 52).

In regards to the Upper Alaska Peninsula Subregion: “If caribou are not taken in the immediate vicinity of the community, the midsection of the Alaska Peninsula near the Becharof Wildlife Refuge is a commonly used hunting ground for those with air transportation. Other resources such as, berries, hare, porcupine, or ptarmigan are usually harvested in the vicinity of the home community” (pg. 72).

“Late fall is also a time for continued subsistence fishing. "Fall fish" are a preferred type of salmon. They are taken upstream after the fish have lost most of their fat and will air-dry easily. Chignik Lake is a favorite place to catch silvers, which are preserved by drying or salting. Small mammals are also hunted. Often, after school, boys take three-wheelers and skirt the village looking for hare or porcupine.” (pg. 77).

**APPENDIX B.– CUSTOMARY AND TRADITIONAL USE WORKSHEET -11(22)
SMALL GAME - GAME MANAGEMENT UNITS 6-11,13-17 HARE, GROUSE, AND
PTARMIGAN**

CUSTOMARY AND TRADITIONAL USE WORKSHEET - II(22)

**SMALL GAME - GAME MANAGEMENT UNITS 6-11, 13-17
HARE, GROUSE, AND PTARMIGAN**

Prepared by the Division of Subsistence
Alaska Department of Fish and Game

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Criterion 1. A long term, consistent pattern of use, excluding interruption by circumstances beyond the user's control such as regulatory prohibitions.

Within their ranges in southcentral and southwest Alaska, hare, grouse, and ptarmigan have played an important role in local subsistence economies. Throughout this region in precontact and early contact times, small game species were taken throughout the year as supplements to supplies of fish and big game. They were often relied upon for survival as emergency foods when supplies of staples such as salmon or caribou ran short (e.g. de Laguna and McClellan 1981:648 for the Copper River area [GMUs 11 & 13]). All three resources continue to be important species of small game that are used for subsistence by local communities. As an example, Reckord (1983:104; see also p. 123 on Gulkana) noted for Copper Center in the 1970s and early 1980s that,

"Rabbits" (hares) are a primary subsistence species in Copper Center. Everybody eats rabbit regularly when they are on a high peak in their cycle. Generally, women snare rabbits and men use shotguns, although today many younger women are using shotguns.

The Division of Subsistence Technical Paper Series and Community Profile Database (Scott et al. 1992) provide substantial documentation of harvest and use levels of these species in most small and medium sized communities of southcentral and southwest Alaska in the 1980s. Tables 1, 2, and 3 summarize harvest and use data from the Community Profile Database for each resource.

Also, the following table summarizes harvest levels for each GMU in southcentral and southwest Alaska as documented by division household harvest surveys. Surveys are not conducted in all communities annually, thus the table represents a composite from several years. It is also likely that harvests of these small game species vary greatly from year to year, depending upon resource abundance, weather, travel conditions, and availability of alternative subsistence resources. Especially, hare harvests vary greatly because of the cyclic nature of their population (e.g. Schichnes and Chythlook 1988:153).

	<u>Hare</u>	<u>Grouse</u>	<u>Ptarmigan</u>	
GMU 6	2,387	809	458	
GMU 8	4,268	0	2,339	1983; includes Kodiak City
GMU 9B	286	1,715	1,833	
GMU 9C	162	NA	NA	
GMU 9D	3	0	523	Nelson Lagoon only
GMU 9E	65	0	2,132	
GMU 10	0	0	1,222	False Pass only
GMU 11/13	6,047	2,086	3,551	1982/83; Chase not included
GMU 11/13	4,222	6,058	4,044	1986 or 87/88; excludes Cantwell
GMU 15C	14	95	369	Nanwalek, Port Graham, and Seldovia
GMU 16B	4	127	54	Tyonek only
GMU 17	354	4,389	4,636	

Criterion 2. A use pattern recurring in specific seasons of each year.

Traditionally, small game animals were taken year-round, but might be particularly important in the spring when travel was difficult and other resources unavailable (de Laguna and McClellan 1981:648).

In Iliamna Lake communities, "most effort [is] directed at hunting spruce grouse and ptarmigan during fall and winter" (Morris 1986:118).

In Manokotak, snowshoe and Arctic hares are harvested from November to April. Spruce grouse are hunted primarily in September and October, while ptarmigan are hunted when they form large flocks in late winter and early spring (Schichnes and Chythlook 1988:153, 156).

In Nushagak River villages, spruce grouse are harvested from mid-August to mid-April near each village. Ptarmigan are hunted on the tundra in winter or in the brush along rivers in late winter (Schichnes and Chythlook 1991:204).

On the Alaska Peninsula, small game hunting occurs from mid August until at least the end of March, when preparations for salmon fishing begin. Ptarmigan and hare are especially taken in November to February when hunters are looking for caribou, although specific trips for these species are made as well (Morris 1987:81,87,91).

Criterion 3. A use pattern consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost, and conditioned by local circumstances.

For hares, the most frequently-mentioned methods of harvest today are shooting and snaring. Concerning Chitina in the Copper River Basin, Reckord (1983:89) noted that:

When hares are abundant, they are an important food source, especially to those who live year round in Chitina. In an hour, six or eight can be shot and brought home for the table. Hare totally disappears from the diet when the species hits the bottom of its cycle. Women sometimes use simple snares made of thin picture-framing wire for catching hares.

Snaring and shooting are also the methods used to take ptarmigan and grouse in the Copper Basin (Reckord 1983:155).

In the Nushagak River area, snowshoe hares are snared by young boys and women, while tundra hares are shot while hunters are searching for big game, or while younger men are hunting hare and ptarmigan (Schichnes and Chythlook 1991:196). In Koliganek, ptarmigan are also netted (Schichnes and Chythlook 1991:206). In Manokotak, too, hares are shot with small caliber rifles or snared (Schichnes and Chythlook 1988:153).

Criterion 4. Consistent harvest and use of fish or game which is near, or reasonably accessible from, the user's residence.

For the most part, harvests of small game take place near each community or in areas used to hunt moose or caribou (e.g. Morris 1986:115, on Iliamna Lake villages).

Criterion 5. The means of handling, preparing, preserving, and storing fish and game which have been traditionally used by past generations, but not excluding recent technological advances where appropriate.

Hares, grouse, and ptarmigan are all used for food. Today, most harvests of small game are eaten fresh or frozen for later use.

In Manokotak, hare fur is used for skin sewing such items as parkas, hats, and mukluks (Schichnes and Chythlook 1988:153). Craft use of hare occurs in other communities as well.

Criterion 6. A use pattern which includes the handing down of knowledge of fishing and hunting skills, values, and lore from generation to generation.

In many communities, hunting small game such as hares or porcupines is among the first subsistence activities engaged in by young boys. For example, in Iliamna lake communities "It was reported that young boys went out in the afternoon or on weekends using three-wheelers or on foot to hunt hare or porcupine" (Morris 1986:115). Morris (1986:118) also notes that, "Game birds were also hunted in the general vicinity of the communit[ies] by youngsters after school hours."

Criterion 7. A use pattern in which the hunting or fishing effort or the products of that effort are distributed or shared among others within a definable community of persons, including customary trade, barter, or sharing and gift-giving; customary trade may include limited exchanges for cash, but does not include significant commercial enterprises.

In Iliamna Lake communities, Morris (1986:115) noted that:

Small game brought home was usually eaten fresh. Unlike sharing of large mammals, distribution of small game normally means giving away the entire animal. Another type of sharing involved inviting others in for a meal in which the fresh harvest was served.

Tables 1-3 report the percentage of households in each division study that gave away harvests of hare, grouse, and ptarmigan, or that received these resources from other households.

Criterion 8. A use pattern which includes reliance for subsistence purposes upon a wide diversity of the fish and game resources of an area and which provides cultural, social, and nutritional elements of the subsistence user's life.

Detailed information about subsistence harvests and uses for most small and medium sized communities of southcentral and southwest Alaska are available in the Division of Subsistence Community Profile Database (Scott et al. 1992). Total harvest levels are moderate in most small communities along the road system in southcentral Alaska. For example, in 1987/88, the per capita harvest of wild resources was 173.4 pounds per person in Cooper Center, 99.4 pounds in Glennallen, and 262.2 pounds in Chistochina; the average for the Copper Basin area in 1987/88 was 140 pounds per person. The average number resources used per household in the Copper River area ranged from 5.3 in Glennallen to 12.6 in Paxson in 1987/88. Generally, subsistence harvests in communities off the road system which have larger percentages of Alaska Natives in their populations and face less competition from urban-based hunters and fishermen, have relatively high levels of resource harvests (Wolfe and Walker 1987). In the Bristol Bay and Alaska Peninsula areas, for example, annual harvests in pounds per person range from about 400 to 800 pounds or more. Harvests in these communities are also very diverse. Examples include English Bay (average of 25.0 kinds of wild resources used in 1987), New Stuyahok (average of 17.4 in 1987/88), and Perryville (average of 21.2 in 1989).

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TABLE 1. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS

RESOURCE: Hare

GMU	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Percapita
06C	Cordova	85	29.6	30.1	24.8	8.7	7.8	2381	4760	5.5	2.1
06D	Chenega Bay	84	6.7	6.7	6.7	0.	6.7	6	9	0.5	0.1
	Chenega Bay	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Tatitlek	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Tatitlek	88	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Tatitlek	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
08	Akhiok	82	4.8		4.8			13	26	0.9	0.2
	Akhiok	86	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Akhiok	89	10.	30.	10.	0.	0.	3	5	0.4	0.0
	Chiniak	82	29.4		23.5			532	1064	6.8	1.7
	Karluk	82	20.		20.			68	135	5.2	1.3
	Karluk	86	10.5	10.5	10.5	0.	0.	16	31	1.1	0.2
	Karluk	89	7.1	7.1	7.1	0.	0.	2	5	0.2	0.0
	Karluk	90	17.6	17.6	17.6	0.	0.	13	27	1.4	0.3
	Kodiak City	82	23.2		18.1			2965	5937	2.3	0.7
	Kodiak Coast Guard Stati	82	18.4		18.4			0	0	2.8	1.2
	Larsen Bay	82	15.6		12.5			77	153	3.5	0.8
	Larsen Bay	86	24.3	16.2	16.2	10.8	2.7	60	121	2.3	0.7
	Larsen Bay	89	11.8	8.8	8.8	2.9	5.9	26	53	1.3	0.4
	Larsen Bay	90	8.6	5.7	5.7	5.7	5.7	15	30	0.7	0.2
	Old Harbor	82	22.4		17.1			155	309	3.2	0.8
	Old Harbor	86	11.4	11.4	6.8	9.1	2.3	60	119	1.0	0.3
	Old Harbor	89	4.2	6.3	2.1	4.2	0.	16	31	0.3	0.1
	Ouzinkie	82	50.		40.6			238	477	6.8	2.0
	Ouzinkie	86	44.1	38.2	38.2	11.8	11.8	352	704	11.3	3.6
	Ouzinkie	89	8.6	8.6	5.7	2.9	2.9	39	79	1.1	0.3
	Ouzinkie	90	18.9	17.	17.	1.9	1.9	68	136	2.3	0.6
	Port Lions	82	30.9		25.5			220	441	4.9	1.5
	Port Lions	86	10.8	12.3	9.2	3.1	3.1	127	255	2.8	0.8
	Port Lions	89	13.9	8.3	8.3	5.6	8.3	11	22	0.3	0.1
09B	Igiugig	83	66.7	66.7	66.7	0.		29	77	7.0	1.1
	Iliamna	83	5.	10.	10.	0.		4	9	0.2	0.0
	Kokhanok	83	26.3	47.4	47.4	0.		112	378	14.0	2.6
	Levelock	88	40.7	25.9	25.9	0.	0.	65	174	5.2	1.6
	Neshalen	83	9.1	9.1	9.1	0.		28	85	3.2	0.6
	Nondalton	73						166	331	11.0	2.1
	Nondalton	80						108	350	10.0	2.0
	Nondalton	81						158	383	10.9	1.9

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TABLE 1. HARVEST SUMMARY FROM DIVISION C. HOUSEHOLD SURVEYS
 RESOURCE: Hare

GMI	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Giveaway			Household	Percapita
09C	Nondalton	83	14.3	14.3	14.3	0.		28	57	1.0	0.2
	Pedro Bay	82	11.8	11.8	11.8	0.		14	32	1.5	0.5
	Port Alsworth	83	7.7	7.7	7.7	0.		6	19	0.9	0.2
	King Salmon	83	7.		7.	0.		62	196	1.6	0.5
	Naknek	83	11.5		9.6	1.9		88	261	2.1	0.6
	South Naknek	83	23.8		14.3	9.5		12	65	1.3	0.4
09D	Nelson Lagoon	87	7.7	7.7	7.7	0.	0.	3	0	0.0	0.0
09E	Chignik Bay	84	5.3	5.3	5.3	0.	0.	4	25	0.8	0.2
	Chignik Bay	89	5.7	8.6	5.7	0.	2.9	10	20	0.5	0.1
	Chignik Lagoon	84	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Chignik Lagoon	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Chignik Lake	84	8.7	0.	0.	8.7	0.	0	0	0.0	0.0
	Chignik Lake	89	14.3	9.5	9.5	9.5	0.	3	15	0.5	0.1
	Egegik	84	4.	4.	4.	0.	4.	3	19	0.4	0.1
	Ivanof Bay	84	16.7	16.7	16.7	0.	0.	3	19	1.8	0.5
	Ivanof Bay	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Perryville	84	30.	25.	25.	5.	10.	9	43	1.6	0.3
	Perryville	89	7.4	3.7	3.7	3.7	3.7	1	2	1.0	0.0
	Pilot Point	87	29.4	29.4	29.4	0.	0.	30	59	3.2	0.9
	Port Heiden	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Ugashik	87	40.	40.	40.	0.	0.	16	32	6.4	3.2
11	Chistochina	82	50.		54.5			192	287	9.2	3.4
	Chistochina	87	25.	21.4	21.4	3.6	7.1	58	87	3.0	1.1
	McCarthy Road	82	53.8		61.5			1362	2044	113.5	38.8
	McCarthy Road	87	52.9	47.1	47.1	11.8	5.9	332	498	26.2	13.1
	Slana Homestead South	87	41.2	35.3	35.3	11.8	23.5	1103	1654	25.0	8.8
	South Wrangell Mountains	82	53.3		53.3			278	418	26.1	12.2
	South Wrangell Mountains	87	21.4	21.4	21.4	0.	0.	77	116	5.0	2.4
11,12	Nebesna Road	82	50.		50.			69	103	10.3	2.3
	Nebesna Road	87	8.3	8.3	8.3	0.	0.	4	7	0.5	0.1
13A	Lake Louise	82	38.5		46.2			72	107	7.1	2.7
	Lake Louise	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
13A,130	East Glenn Highway	82	46.7		46.7			854	1281	19.7	7.0
	East Glenn Highway	87	10.1	10.1	10.1	0.	3.4	92	138	2.0	0.6
	Glennallen	82	25.5		23.5			522	783	2.9	0.8
	Glennallen	87	5.7	5.7	5.7	0.	2.1	209	313	1.8	0.6
	Matanuska Glacier	82	16.7		23.3			156	234	3.6	1.2

TABLE 1. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Mare

GMU	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Per capita
13B	Sheep Mountain	82	0.		0.			0	0	0.0	0.0
	West Glenn Highway	87	11.	18.6	11.	0.	3.5	38	57	0.5	0.2
	Gakona	82	47.8		47.8			297	446	13.1	4.1
	Gakona	87	26.1	26.1	26.1	7.3	0.	93	139	2.0	0.6
	Gulkana	82	25.		19.4			149	224	5.2	1.8
	Gulkana	87	35.	30.	30.	10.	10.	81	122	5.5	1.8
	Paxson	87	28.6	28.6	28.6	0.	14.3	36	55	3.2	1.4
	Paxson-Sourdough	82	0.		10.			13	20	0.9	0.3
13C	Sourdough	87	0.	11.1	0.	0.	0.	0	0	0.0	0.0
	Mentasta	82	42.1		42.1			102	153	5.4	1.6
	Mentasta	87	41.7	33.3	33.3	8.3	8.3	153	230	9.1	2.9
	Mentasta Pass	87	40.	40.	40.	0.	10.	29	43	3.9	1.6
	Slana	82	31.3		31.3			93	139	5.3	1.9
	Slana	87	18.2	18.2	18.2	4.5	4.5	55	82	3.2	1.4
	Slana Homestead North	87	25.	25.	25.	0.	12.5	928	1391	39.7	22.7
13D	Chitina	82	43.5		47.8			201	302	12.5	7.0
	Chitina	87	44.4	38.9	38.9	5.6	0.	173	260	13.6	7.4
	Copper Center	82	14.8		18.5			330	494	3.8	1.1
	Copper Center	87	17.9	21.	6.9	10.9	1.6	112	168	1.0	0.3
	Kenny Lake	82	8.3		16.7			286	429	6.1	1.8
	Kenny Lake	87	19.3	19.3	19.3	0.	0.	130	196	2.1	0.6
	Lower Tonsina	82	75.		75.			124	186	20.6	5.3
	Tazlina	87	16.8	16.8	14.8	1.9	3.8	228	342	2.8	0.9
	Tonsina	82	33.3		40.			522	783	10.3	3.4
	Tonsina	87	22.9	24.2	22.9	0.	17.7	220	330	3.4	1.1
13E	Cantwell	82	41.9		44.2			425	638	13.5	4.6
	Chase	86	41.2	47.1	41.2	0.	0.	53	80	2.6	1.0
	Gold Creek	86	40.	40.	40.	0.	0.	18	27	4.5	2.2
	Hurricane-Broad Pass	86	12.5	0.	0.	12.5	0.	0	0	0.0	0.0
14A	Chickaloon	82	22.2		22.2			358	538	17.9	7.6
14B	Parks Highway South	85	6.7	6.7	6.7	0.	0.	9	13	0.1	0.0
	Talkeetna	85	8.8	8.8	8.8	0.	0.	183	274	1.2	0.4
15A	Kenai	82			22.6			4500	6749	3.6	1.1
15C	English Bay	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	English Bay	90	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Homer	82			11.6			1400	2104	1.1	0.3

TABLE 1. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE RESOURCES
RESOURCES here

GMI	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Per capita
16A	Minilchik	82			8.3			36	54	0.2	0.0
	Port Graham	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Port Graham	90	2.2	2.2	2.2	0.	0.	1	2	0.0	0.0
	Seldovia	82			2.9			13	19	0.1	0.0
	Petersville Road	85	11.8	11.8	11.8	0.	0.	8	13	0.5	0.2
16B	Trapper Creek	85	5.3	5.3	5.3	0.	0.	32	47	0.7	0.2
17B	Alexander Creek	82			9.1			0	0	2.7	1.0
	Alexander Creek	84		20.	20.			0	0	1.9	0.7
	Beluga	82			66.7			0	0	3.5	0.7
	Beluga	84		0.	0.			0	0	0.0	0.0
	Lake Creek	82			11.8			0	0	3.9	1.1
	Lake Creek	84		25.	25.			0	0	2.8	0.9
	Skwentna	82			22.7			0	0	1.7	0.4
	Skwentna	84		10.	10.			0	0	1.1	0.3
	Tyonek	83			1.3	1.3	0.	4	6	0.0	0.0
	Koliganek	87	26.2	19.	16.7	11.9	4.8	39	123	2.5	0.6
17C	Clark's Point	89	35.3	35.3	23.5	11.8	17.6	50	104	6.0	0.8
	Ekwok	87	27.6	27.6	20.7	3.4	3.4	29	105	3.2	0.9
	Manokotak	85	48.1	42.6	37.	24.1	25.9	193	387	6.5	1.2
	New Stuyahok	87	17.5	17.5	17.5	0.	5.	43	158	2.1	0.4

TABLE 2. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS

RESOURCE: Grouse

GMU	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Giveaway			Household	Percapita
06C	Cordova	85	16.	18.	14.6	2.4	2.4	729	512	0.6	0.2
06D	Chenega Bay	63	57.1		64.3			0	0	5.2	1.0
	Chenega Bay	84	46.7	40.	40.	6.7	13.3	46	23	1.4	0.4
	Chenega Bay	85	43.8	50.	43.8	6.3	12.5	43	30	1.7	0.5
	Chenega Bay	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Chenega Bay	90	11.1	11.1	11.1	0.	5.6	16	11	0.5	0.1
	San Juan Bay	84	33.3	66.7	50.	16.7	16.7	27	14	2.2	0.8
	Tatitlek	87	10.5	5.3	5.3	5.3	0.	10	7	0.2	0.0
	Tatitlek	88	4.8	4.8	4.8	0.	0.	3	2	0.0	0.0
	Tatitlek	89	4.5	4.5	4.5	0.	0.	4	3	0.1	0.0
	Tatitlek	90	0.	5.9	0.	0.	0.	0	0	0.0	0.0
08	Akhiok	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Karluk	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Larsen Bay	89	2.9	0.	0.	2.9	0.	0	0	0.0	0.0
	Old Harbor	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Ouzinkie	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Port Lions	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
09B	Igiugig	83		0.	0.	33.3		0	0	0.0	0.0
	Iliamna	83		35.	35.	0.		101	50	1.4	0.3
	Kokhanok	83		26.3	26.3	0.		199	99	3.6	0.6
	Levelock	88	59.3	40.7	40.7	40.7	37.	77	77	2.3	0.7
	Neshalen	83		36.4	36.4	0.		154	77	2.9	0.6
	Nondalton	73						128	90	3.0	0.5
	Nondalton	80						150	105	3.0	0.6
	Nondalton	81						350	245	7.0	1.2
	Nondalton	83		71.4	71.4	14.3		980	490	9.0	1.7
	Pedro Bay	82		41.2	41.2	0.		59	30	1.4	0.4
	Port Alsworth	83		46.2	46.2	0.		145	73	3.4	0.9
09C	King Salmon	83		4.7					0	0.0	0.0
	Naknek	83		5.8					0	0.0	0.0
	South Naknek	83		0.					0	0.0	0.0
09E	Egegik	84	0.	0.	0.	0.	0.	0	0	0.0	0.0
11	Chistochina	82	36.4		36.4			39	20	0.6	0.2
	Chistochina	87	39.3	35.7	35.7	7.1	7.1	115	57	1.9	0.7
	McCarthy Road	82	38.5		38.5			94	47	2.6	0.8

TABLE 2. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Grouse

G MU	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Per Capita
11,12	McCarthy Road	87	64.7	64.7	58.8	17.6	23.5	501	250	13.1	6
	Slana Homestead South	87	52.9	47.1	47.1	5.9	23.5	765	382	5.7	7
	South Wrangell Mountains	82	73.3		66.7			189	94	5.9	
	South Wrangell Mountains	87	64.3	64.3	64.3	0.	21.4	159	80	3.4	
13A	Nabesna Road	82	25.		25.			9	4	0.4	0
	Nabesna Road	87	33.3	33.3	33.3	0.	0.	55	28	2.1	0.
13A,13D	Lake Louise	82	30.8		30.8			37	18	1.2	0.
	Lake Louise	87	35.3	35.3	35.3	5.9	5.9	40	20	1.0	0.
13B	East Glenn Highway	82	40.		40.			152	76	1.1	0.4
	East Glenn Highway	87	11.6	11.6	11.6	0.	0.	171	85	1.2	0.3
	Glennallen	82	21.6		21.6			374	188	0.7	0.2
	Glennallen	87	19.1	20.1	18.1	1.	1.	180	90	0.5	0.1
	Matanuska Glacier	82	30.		33.3			164	82	1.2	0.4
	Sheep Mountain	82	11.1		11.1			6	3	0.1	0.0
	West Glenn Highway	87	11.	11.	11.	0.	0.	50	25	0.2	0.0
13C	Gakona	82	26.1		34.8			109	55	1.6	0.5
	Gakona	87	50.8	50.8	50.8	0.	8.7	359	179	2.5	0.8
	Gulkana	82	19.4		19.4			74	37	0.8	0.3
	Gulkana	87	20.	20.	20.	0.	5.	33	17	0.7	0.2
	Paxson	87	50.	50.	50.	0.	14.3	151	75	4.4	1.9
	Paxson-Sourdough	82	50.		50.			55	28	1.2	0.5
	Sourdough	87	55.6	55.6	55.6	11.1	11.1	90	45	4.5	1.7
13D	Mentasta	82	21.1		31.6			81	41	1.4	0.4
	Mentasta	87	58.3	45.8	41.7	20.8	12.5	143	71	2.8	0.9
	Mentasta Pass	87	50.	40.	40.	10.	0.	83	41	3.7	1.5
	Slana	82	6.3		18.8			89	45	1.7	0.6
	Slana	87	31.8	31.8	31.8	0.	0.	145	73	2.9	1.2
	Slana Homestead North	87	62.5	62.5	62.5	0.	12.5	258	129	3.6	2.1
13E	Chitina	82	34.8		39.1			82	41	1.7	0.9
	Chitina	87	33.3	38.9	33.3	0.	5.6	83	42	2.1	1.2
	Copper Center	82	14.8		14.8			67	34	0.2	0.0
	Copper Center	87	36.3	34.	29.3	8.5	14.	606	303	1.8	0.6
	Kenny Lake	82	41.7		41.7			216	108	1.5	0.4
	Kenny Lake	87	34.7	34.7	34.7	0.	2.6	417	208	2.2	0.6
	Lower Tonsina	82	50.		50.			63	32	3.5	0.9
	Tazlina	87	27.8	29.7	27.8	9.1	6.2	260	130	1.0	0.3
	Tonsina	82	33.3		33.3			147	74	0.9	0.3
	Tonsina	87	43.2	41.8	41.8	2.7	24.2	762	381	3.9	1.2

TABLE 2. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
 TONGUE POINT, Grouse

GMI	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Per capi
13E	Cantwell	82	20.9		20.9			39	20	0.4	0
	Chase	86	70.6	70.6	70.6	11.8	11.8	517	259	8.6	3.
	Gold Creek	86	100.	60.	60.	40.	20.	50	25	4.2	2.
	Hurricane-Broad Pass	86	25.	25.	25.	0.	12.5	65	32	2.6	0.
14A	Chickaloon	82	55.6		55.6			273	137	4.5	1.
14B	Parks Highway South	85	30.	30.	30.	0.	0.	297	148	1.1	0.
	Talkeetna	85	27.9	30.9	29.4	0.	2.9	620	310	1.4	0.
15A	Kenai	82			16.4			1521	1520	0.8	0.
15C	English Bay	87	30.3	18.2	18.2	12.1	3.	42	30	0.7	0.2
	English Bay	89	9.1	9.1	9.1	0.	6.1	24	16	0.4	0.1
	English Bay	90	31.4	25.7	22.9	8.6	11.4	42	30	0.7	0.1
	Homer	82			15.			2453	2445	1.3	0.4
	Minilchik	82			33.3			958	959	4.4	1.4
	Port Graham	87	11.1	14.8	9.3	3.7	5.6	14	10	0.1	0.0
	Port Graham	89	8.3	10.4	8.3	4.2	2.1	18	12	0.2	0.0
	Port Graham	90	19.6	21.7	19.6	2.2	6.5	30	21	0.3	0.1
	Seldovia	82			5.7			39	40	0.2	0.0
16A	Petersville Road	85	58.8	58.8	52.9	5.9	5.9	260	130	5.4	2.1
	Trapper Creek	85	36.8	31.6	31.6	5.3	5.3	234	117	1.9	0.6
16B	Alexander Creek	82			27.3			0	0	1.4	0.5
	Alexander Creek	84		20.	20.			0	0	1.4	0.5
	Beluga	82			66.7			0	0	5.6	1.2
	Beluga	84		0.	0.			0	0	0.0	0.0
	Lake Creek	82			47.1			0	0	2.8	0.8
	Lake Creek	84		58.3	58.3			0	0	3.7	1.2
	Skwentna	82			50.			0	0	2.6	0.7
	Skwentna	84		35.	35.			0	0	2.4	0.8
	Tyonek	83			26.3	1.3	6.3	127	63	0.7	0.2
17B	Koliganek	87	35.7	28.6	28.6	9.5	9.5	102	102	2.1	0.5
17C	Clark's Point	89	5.9	0.	0.	5.9	5.9	0	0	0.0	0.0
	Dillingham	84	49.	40.5	39.2	17.6	15.	3934	3932	5.6	1.9
	Ekwok	87	48.3	41.4	41.4	10.3	6.9	106	106	3.3	0.9
	Manokotak	85	37.	35.2	31.5	16.7	22.2	158	159	2.6	0.5
	New Stuyahok	87	15.	12.5	12.5	2.5	2.5	89	89	1.2	0.2

TABLE 3. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Ptarmigan

GMU	Community	Year	Percentage of Households					Estimated	Estimated	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway	Number	Pounds	Household	Percap
								Harvested	Harvested		
06C	Cordova	85	7.3	11.2	6.3	1.	1.5	439	307	0.3	0
06D	Chenega Bay	63	28.6		28.6			0	0	0.3	0
	Chenega Bay	84	6.7	6.7	6.7	0.	6.7	18	9	0.5	0
	Chenega Bay	89	0.	0.	0.	0.	0.	0	0	0.0	0
	Chenega Bay	90	0.	0.	0.	0.	0.	0	0	0.0	0
	Tatitlek	87	5.3	5.3	5.3	0.	0.	3	2	0.0	0.
	Tatitlek	88	4.8	4.8	4.8	0.	4.8	1	1	0.0	0.
	Tatitlek	89	4.5	4.5	4.5	0.	0.	3	2	0.0	0.
	Tatitlek	90	0.	5.9	0.	0.	0.	0	0	0.0	0.
08	Akhiok	82	9.5		9.5			148	103	3.8	1.
	Akhiok	86	0.	0.	0.	0.	0.	0	0	0.0	0.
	Akhiok	89	30.	30.	30.	0.	20.	44	31	2.3	0.
	Chiniak	82	17.6		11.8			64	45	0.2	0.
	Karluk	82	50.		45.			231	162	6.2	1.
	Karluk	86	36.8	10.5	10.5	26.3	15.8	23	16	0.5	0.
	Karluk	89	14.3	14.3	14.3	0.	7.1	11	8	0.4	0.1
	Karluk	90	17.6	17.6	17.6	0.	0.	41	29	1.5	0.3
	Kodiak City	82	7.7		7.7			1635	1143	0.4	0.1
	Kodiak Coast Guard Stati	82	10.5		11.8			0	0	0.4	0.1
	Larsen Bay	82	15.6		9.4			95	67	1.5	0.3
	Larsen Bay	86	13.5	5.4	5.4	8.1	0.	15	11	0.2	0.0
	Larsen Bay	89	8.8	5.9	5.9	2.9	2.9	13	9	0.2	0.0
	Larsen Bay	90	22.9	17.1	14.3	8.6	2.9	55	38	0.9	0.2
	Old Harbor	82	17.1		14.5			142	100	1.0	0.2
	Old Harbor	86	2.3	2.3	2.3	0.	0.	68	48	0.4	0.1
	Old Harbor	89	8.3	12.5	8.3	2.1	2.1	66	47	0.5	0.1
	Ouzinkie	82	3.1		0.			0	0	0.0	0.0
	Ouzinkie	86	5.9	5.9	2.9	2.9	2.9	36	25	0.4	0.1
	Ouzinkie	89	2.9	2.9	2.9	0.	0.	20	14	0.2	0.0
	Ouzinkie	90	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Port Lions	82	3.6		3.6			24	17	0.1	0.0
	Port Lions	86	6.2	7.7	4.6	1.5	0.	125	87	0.9	0.2
	Port Lions	89	2.8	0.	0.	2.8	0.	0	0	0.0	0.0
09B	Igiugig	83		33.3	33.3	0.		15	10	0.9	0.1
	Iliamna	83		40.	40.	0.		146	102	2.8	0.7
	Kokhanok	83		52.6	47.4	5.3		229	160	5.9	1.1
	Levelock	88	77.8	51.9	51.9	59.3	44.4	220	154	4.6	1.4
	Newhalen	83		45.5	45.5	0.		284	199	7.6	1.5

TABLE 3. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCES MANAGEMENT

GMI	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Giveaway			Household	Percapita
	Nondalton	73			64.			557	390	13.0	2.5
	Nondalton	80			43.			250	175	5.0	1.0
	Nondalton	81			32.			251	175	5.0	0.8
	Nondalton	83		57.1	57.1	9.5		877	614	11.3	2.1
	Pedro Bay	82		17.6	17.6	0.		10	7	0.3	0.1
	Port Alsworth	83		30.8	30.8	0.		52	36	1.7	0.4
09C	King Salmon	83		30.2					0	0.0	0.0
	Naknek	83		25.					0	0.0	0.0
	South Naknek	83		57.1					0	0.0	0.0
09D	Nelson Lagoon	87	92.3	84.6	84.6	46.2	46.2	523	262	14.5	3.9
09E	Chignik Bay	84	21.1	10.5	10.5	15.8	0.	63	44	1.5	0.3
	Chignik Bay	89	31.4	31.4	17.1	17.1	5.7	53	37	0.9	0.3
	Chignik Lagoon	84	17.6	5.9	5.9	11.8	0.	5	4	0.1	0.0
	Chignik Lagoon	89	53.3	33.3	26.7	33.3	13.3	22	15	1.0	0.3
	Chignik Lake	84	13.	13.	13.	8.7	13.	43	30	0.9	0.1
	Chignik Lake	89	57.1	52.4	52.4	19.	52.4	521	365	13.0	3.2
	Egegik	84	72.	72.	72.	24.	36.	825	578	13.7	5.9
	Ivanof Bay	84	50.	50.	50.	33.3	16.7	72	50	5.0	1.3
	Ivanof Bay	89	100.	100.	85.7	57.1	85.7	149	104	14.9	3.2
	Perryville	84	95.	60.	60.	75.	30.	547	383	14.1	3.3
	Perryville	89	92.6	63.	59.3	63.	40.7	648	453	14.6	3.9
	Pilot Point	87	70.6	70.6	70.6	11.8	17.6	141	99	5.4	1.5
	Port Heiden	87	73.	59.5	59.5	27.	32.4	370	259	7.0	2.5
	Ugashik	87	80.	80.	80.	0.	20.	66	46	9.2	4.6
10	False Pass	88	90.	65.	65.	65.	55.	1222	611	27.7	8.8
11	Chistochina	82	27.3		27.3			54	27	0.8	0.3
	Chistochina	87	10.7	14.3	10.7	3.6	7.1	54	27	0.9	0.3
	McCarthy Road	82	15.4		15.4			30	15	0.8	0.2
	McCarthy Road	87	29.4	29.4	29.4	0.	5.9	23	12	0.6	0.3
	Slana Homestead South	87	41.2	41.2	41.2	5.9	23.5	524	262	3.9	1.4
	South Wrangell Mountains	82	33.3		33.3			54	27	1.7	0.7
	South Wrangell Mountains	87	42.9	42.9	42.9	0.	7.1	110	55	2.3	1.1
11,12	Nabesna Road	82	50.		37.5			70	35	3.5	0.8
	Nabesna Road	87	50.	50.	50.	8.3	8.3	157	79	6.0	2.1
13A	Lake Louise	82	38.5		30.8			85	43	2.8	1.1
	Lake Louise	87	11.8	11.8	11.8	5.9	5.9	25	12	0.6	0.3
13A,13D											

TABLE 3. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Ptarmigan

GMI	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Per Capita
138	East Glenn Highway	82	40.		46.7			260	130	2.0	0.
	East Glenn Highway	87	20.1	10.1	10.1	10.	0.	92	46	0.6	0.
	Glennallen	82	11.8		11.8			517	258	0.9	0.
	Glennallen	87	6.2	8.2	5.1	2.1	1.	119	59	0.3	0.
	Matanuska Glacier	82	33.3		30.			305	152	2.3	0.
	Sheep Mountain	82	44.4		33.3			171	86	4.5	1.
	West Glenn Highway	87	20.1	12.6	12.6	7.5	2.5	133	66	0.6	0.
	Gakona	82	26.1		26.1			154	77	2.2	0.
	Gakona	87	17.4	18.8	17.4	7.3	8.7	290	145	2.0	0.
	Gulkana	82	11.1		11.1			70	35	0.8	0.
13C	Gulkana	87	10.	10.	10.	0.	5.	25	13	0.5	0.
	Paxson	87	64.3	64.3	64.3	0.	14.3	200	100	5.8	2.
	Paxson-Sourdough	82	80.		70.			383	191	8.7	3.4
	Sourdough	87	22.2	33.3	22.2	11.1	0.	47	23	2.3	0.5
	Mentasta	82	10.5		15.8			34	17	0.6	0.1
	Mentasta	87	20.8	16.7	16.7	4.2	12.5	32	16	0.6	0.2
	Mentasta Pass	87	30.	30.	30.	0.	0.	130	65	5.9	2.4
	Slana	82	25.		37.5			133	67	2.5	0.9
	Slana	87	22.7	22.7	22.7	0.	0.	63	31	1.2	0.5
	Slana Homestead North	87	25.	25.	25.	0.	12.5	683	341	9.7	5.5
13D	Chitina	82	13.		13.			20	10	0.4	0.2
	Chitina	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Copper Center	82	3.7		3.7			48	25	0.1	0.0
	Copper Center	87	20.1	17.7	12.3	7.8	1.6	156	78	0.4	0.1
	Kenny Lake	82	16.7		16.7			93	47	0.6	0.2
	Kenny Lake	87	19.4	19.4	19.4	1.3	7.5	549	274	2.9	0.8
	Lower Tonsina	82	0.		0.			0	0	0.0	0.0
	Tazlina	87	20.6	22.5	20.6	2.9	1.9	145	72	0.6	0.2
	Tonsina	82	33.3		26.7			182	91	1.2	0.4
	Tonsina	87	10.6	10.6	10.6	0.	2.7	187	93	0.9	0.3
13E	Cantwell	82	69.8		72.1			888	444	9.4	3.2
	Chase	86	47.1	47.1	41.2	11.8	5.9	136	68	2.2	0.8
	Gold Creek	86	80.	60.	60.	20.	40.	84	42	7.0	3.5
	Hurricane-Broad Pass	86	37.5	37.5	37.5	0.	12.5	80	40	3.3	0.9
14A	Chickaloon	82	27.8		27.8			253	127	4.2	1.8
148	Parks Highway South	85	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Talkeetna	85	13.2	17.6	11.8	2.9	1.5	173	86	0.4	0.1
15A											

TABLE 3. HARVEST SUMMARY FROM DIVISION OF SUBSISTENCE HOUSEHOLD SURVEYS
RESOURCE: Ptarmigan

GMU	Community	Year	Percentage of Households					Estimated Number Harvested	Estimated Pounds Harvested	Pounds Harvested	
			Used	Attempt	Harvested	Received	Gaveaway			Household	Percapita
15C	Kenai	82			2.1			95	93	0.0	0.0
	English Bay	87	0.	0.	0.	0.	0.	0	0	0.0	0.0
	English Bay	89	12.1	12.1	12.1	0.	12.1	25	17	0.4	0.1
	English Bay	90	2.9	2.9	2.9	0.	0.	2	2	0.0	0.0
	Homer	82			3.5			925	917	0.5	0.1
	Minilchik	82			0.			0	0	0.0	0.0
	Port Graham	87	0.	1.9	0.	0.	0.	0	0	0.0	0.0
	Port Graham	89	0.	0.	0.	0.	0.	0	0	0.0	0.0
	Port Graham	90	0.	4.3	0.	0.	0.	0	0	0.0	0.0
	Seldovia	82			2.9			369	368	2.1	0.6
16A	Petersville Road	85	35.3	29.4	23.5	11.8	5.9	137	68	2.8	1.1
	Trapper Creek	85	15.8	21.1	10.5	5.3	0.	22	11	0.1	0.0
16B	Alexander Creek	82			27.3			0	0	1.3	0.5
	Alexander Creek	84		30.	30.			0	0	2.2	0.8
	Beluga	82			66.7			0	0	7.0	1.5
	Beluga	84		100.	100.			0	0	21.7	4.8
	Lake Creek	82			23.5			0	0	3.5	1.0
	Lake Creek	84		8.3	8.3			0	0	0.0	0.0
	Skwentna	82			22.7			0	0	2.2	0.6
	Skwentna	84		30.	25.			0	0	2.0	0.7
	Tyonek	83			11.3	2.5	3.8	54	27	0.3	0.1
17B	Koliganek	87	73.8	54.8	54.8	35.7	40.5	701	491	10.2	2.6
17C	Clark's Point	89	76.5	58.8	58.8	52.9	47.1	462	323	19.0	5.7
	Dillingham	84	31.4	19.6	19.	19.6	7.2	2466	1728	2.5	0.8
	Ekwok	87	27.6	27.6	20.7	6.9	0.	35	25	0.7	0.2
	Manokotak	85	74.1	72.2	68.5	25.9	46.3	1538	1077	18.2	3.5
	New Stuyahok	87	32.5	27.5	27.5	5.	10.	135	95	1.2	0.2



GROUSE HUNTING AND PER CAPITA HARVESTS FOR COMMUNITIES USING GMU 11.

Communities	Per Capita Harvest, All Resources 1987	Percent Households Hunting Grouse 1987	Extrapolated 1982 Grouse Harvest	Extrapolated 1987 Grouse Harvest
Chistochina	262.2	35.7	39	115
Chitina	341.7	38.9	82	83
Copper Center	173.4	34.0	67	607
East Glenn Highway	132.4	11.6	152	172
*Gakona	95.3	50.8	109	359
Glennallen	99.4	20.1	374	180
Gulkana	152.1	20.0	74	33
Kenny Lake	136.2	34.7	216	418
Lake Louise	179.0	41.2	37	40
McCarthy Road	230.2	64.7	94	501
Mentasta	125.4	45.8	41	143
Mentasta Pass	188.0	40.0	ni	83
Nabesna Road	250.0	33.3	9	55
Paxson	288.4	50.0	ni	151
*Slana	249.3	31.8	89	145
*Slana Homestead North	173.7	62.5	ni	258
*Slana Homestead South	121.2	47.1	ni	765
Sourdough	117.2	55.6	ni	90
South Wrangells	138.9	64.3	189	97 ^a
Tazlina	107.0	29.7	ni	261
Tonsina	155.7	41.8	147	762
West Glenn Highway ^b	91.8	11.0	170	50

^a Actual harvest, 60.9 percent sample.

^b Includes GMU boundary at Chickaloon east to the Matanuska-Susitna Borough boundary on the Glenn Highway.

Source: Division of Subsistence Survey, 1988 in AEIDC 1988

$\frac{1}{2} \frac{d}{dt} \int_{\mathbb{R}^n} |u|^2 dx = \int_{\mathbb{R}^n} u \Delta u dx$
 $= - \int_{\mathbb{R}^n} |\nabla u|^2 dx$



EIGHT CRITERIA WORKSHEET, BOARD OF GAME, NOVEMBER 1989

PROPOSAL NO. 7
AREA GMU 13
SPECIES GROUSE

RURAL COMMUNITIES USING THE SPECIES

Cantwell, Chistochina, Chitina, Copper Center, East Glenn Highway, Gakona, Glennallen, Gulkana, Kenny Lake, Lake Louise, McCarthy Road, Mentasta, Mentasta Pass, Nabesna Road, Paxson, Slana, Slana Homestead North, Slana Homestead South, Sourdough, Tazlina, Tonsina, West Glenn Highway, and other rural residents of GMU 11, 13, and 12 along the Nabesna Road.

1. LENGTH AND CONSISTENCY OF USE (long-term, consistent, excluding interruptions by circumstances beyond the user's control)

Historically, grouse were part of the Ahtna peoples' seasonal round of resource harvesting. Interviews with residents throughout the region in 1977 documented the continued use of grouse by local residents (Reckord 1983a). Surveys in 1983 and 1988 verified the ongoing use (see attached table).

2. SEASONALITY (recurring in specific seasons of each year)

Grouse are most commonly mentioned as being taken in winter, in conjunction with trapping activities. However, many people hunt them in the fall and spring, as well. Current open season is August 10 through April 30.

3. MEANS AND METHODS OF HARVEST (efficient, economic, conditioned by local circumstances)

Grouse are often an opportunistic harvest, taken at the same time other resources are being hunted or fished. Some households hunted grouse in the winter, while icefishing. Some hunters walked off the road, looking for grouse. A few flew into lakes in the winter and harvested grouse.

4. GEOGRAPHIC AREAS (near or reasonably accessible from the user's residence)

Grouse were not included in the resource areas mapped with GMU 11 and 13 communities. Most grouse hunting occurs in conjunction with other harvesting activities, and other mapped information indicates that Copper River Basin residents hunt and fish in the GMU where they live, and often the adjacent GMU.

5. MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING (traditionally used by past generations, but not excluding recent technological advances)

Grouse are shot and occasionally snared, and are often frozen for later use. When taken in the winter, grouse can be frozen out of doors.

6. ~~INTERGENERATIONAL~~ TRANSMISSION OF KNOWLEDGE, SKILLS, VALUES, AND LORE (handed down between generations)

Most of the communities hunting in GMU 13 have origins in Native villages or camps. Average length of residency varies from community to community from 4 to 20.6 years for household heads, as does the percentage of the community populations which are Native, from 0 to 98.4 percent of the population. Bird hunting is typically, and traditionally, done with other family members, often a father or uncle instructing a younger person.

7. DISTRIBUTION AND EXCHANGE (customary trade, barter, sharing, and gift-giving within a definable community of persons)

Sharing is widespread among the households within each community and among the communities in the Copper River Basin and Wrangell Mountain area.

8. DIVERSITY OF RESOURCES IN AN AREA: ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS (wide diversity, substantial elements in a subsistence user's life)

See the attached table for the per capita harvests of resources for each community. The Copper Basin has a history of boom and bust economies, beginning with the gold rush at the turn of the century, including road construction related growth, and most recently the pipeline. The local economy is largely seasonal, except for government jobs. Tourism is largely a summer and fall industry. Wild resources still constitute an important part of many households' diet.

9. INFORMATION SOURCES:

Alaska Department of Fish and Game, Division of Subsistence Community Profile Database.

McMillan, Patricia O. and Sal V. Cuccarese

1988 Alaska Over-the-Horizon Backscatter Radar System: Characteristics of Contemporary Subsistence Use Patterns in the Copper River Basin and Upper Tanana Area. Volume 1: Synthesis. Arctic Environmental Information and Data Center, University of Alaska, Anchorage.

Reckord, Holly

1983 That's the Way We Live, Subsistence in the Wrangell-St. Elias National Park and Preserve. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 34, University of Alaska, Fairbanks.

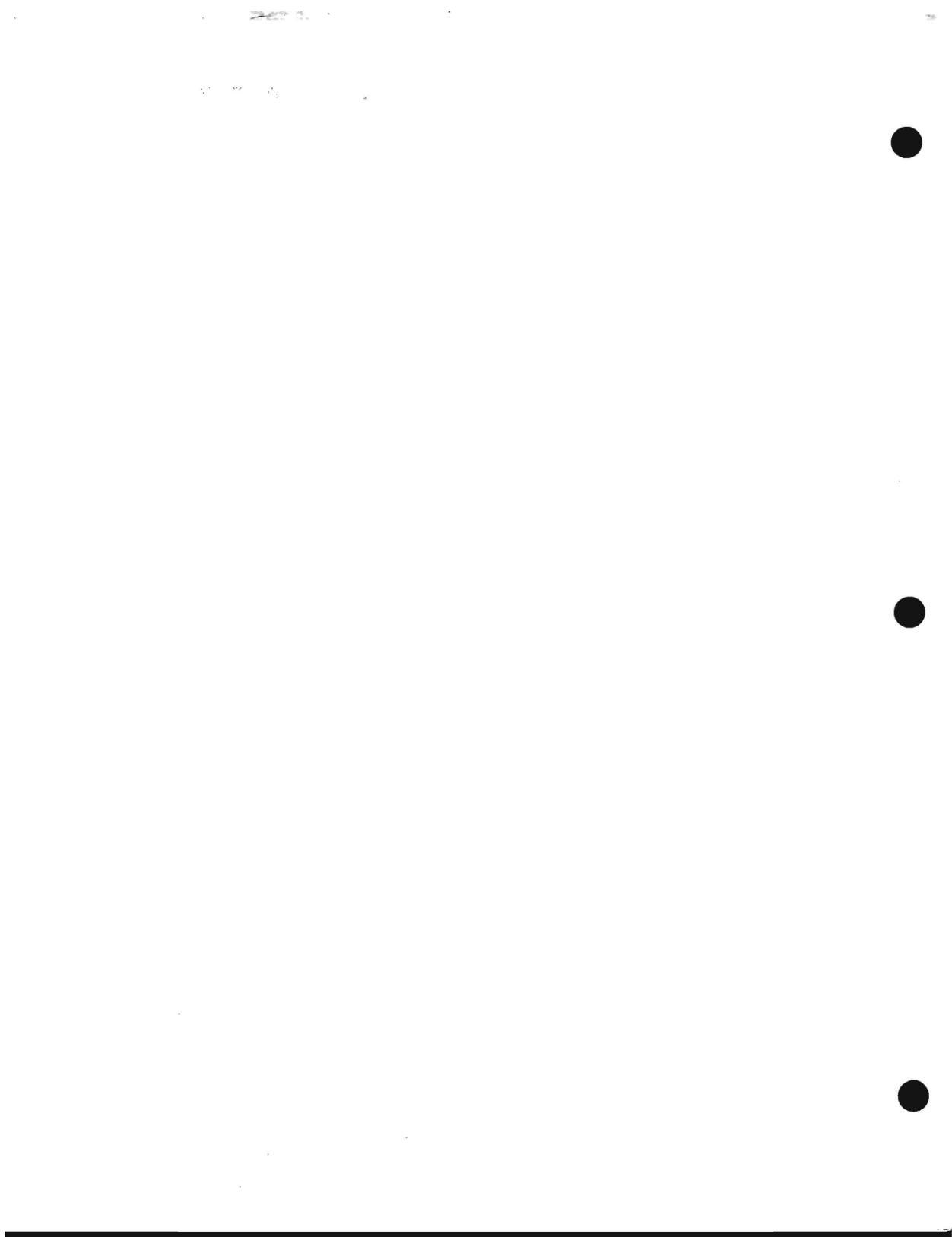
1983 Where Raven Stood, Cultural Resources of the Ahtna Region. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 335, University of Alaska, Fairbanks.

GROUSE HUNTING AND PER CAPITA HARVESTS FOR COMMUNITIES USING GMU 13.

Communities	Per Capita Harvest, All Resources 1987	Percent Households Hunting Grouse 1987	Extrapolated 1982 Grouse Harvest	Extrapolated 1987 Grouse Harvest
Cantwell	130.0 (1982)	20.9 (1982)	39	ni
Chistochina	262.2	35.7	39	115
Chitina	341.7	38.9	82	83
Copper Center	173.4	34.0	67	607
East Glenn Highway	132.4	11.6	152	172
Gakona	95.3	50.8	109	359
Glennallen	99.4	20.1	374	180
Gulkana	152.1	20.0	74	33
Kenny Lake	136.2	34.7	216	418
Lake Louise	179.0	41.2	37	40
McCarthy Road	230.2	64.7	94	501
Mentasta	125.4	45.8	41	143
Mentasta Pass	188.0	40.0	ni	83
Nabesna Road	250.0	33.3	9	55
Paxson	288.4	50.0	ni	151
Slana	249.3	31.8	89	145
Slana Homestead North	173.7	62.5	ni	258
Slana Homestead South	121.2	47.1	ni	765
Sourdough	117.2	55.6	ni	90
Tazlina	107.0	29.7	ni	261
Tonsina	155.7	41.8	147	762
West Glenn Highway ^a	91.8	11.0	170	50

^a Includes GMU boundary at Chickaloon east to the Matanuska-Susitna Borough boundary on the Glenn Highway.

Source: Division of Subsistence Survey, 1988 in AEIDC 1988



EIGHT CRITERIA WORKSHEET. BOARD OF GAME, NOVEMBER 1989

PROPOSAL NO. 9
AREA GMU 11
SPECIES PTARMIGAN

RURAL COMMUNITIES USING THE SPECIES

Chistochina, Chitina, Copper Center, East Glenn Highway, Gakona, Glennallen, Gulkana, Kenny Lake, Lake Louise, McCarthy Road, Mentasta, Mentasta Pass, Nabesna Road, Paxson, Slana, Slana Homestead North, Slana Homestead South, Sourdough, South Wrangells, Tazlina, Tonsina, West Glenn Highway, and other rural residents of GMU 11, 13, and 12 along the Nabesna Road.

1. LENGTH AND CONSISTENCY OF USE (long-term, consistent, excluding interruptions by circumstances beyond the user's control)

Historically, ptarmigan were part of the Ahtna peoples' seasonal round of resource harvesting. Interviews with residents throughout the region in 1977 documented the continued use of ptarmigan by local residents (Reckord 1983a). Surveys in 1983 and 1988 verified the ongoing use (see attached table).

2. SEASONALITY (recurring in specific seasons of each year)

Ptarmigan today are most commonly mentioned as being taken in winter, in conjunction with trapping activities. However, many people hunt them in the fall and spring, as well. The current open season is August 10 through April 30.

3. MEANS AND METHODS OF HARVEST (efficient, economic, conditioned by local circumstances)

Ptarmigan are often an opportunistic harvest, taken at the same time other resources are being hunted or fished. Some households hunted ptarmigan in the winter, while icefishing in the Wrangell Mountains. Some hunters walked off the road, looking for ptarmigan. A few flew into lakes in the Wrangells in the winter and harvested ptarmigan.

4. GEOGRAPHIC AREAS (near or reasonably accessible from the user's residence)

Ptarmigan were ~~not~~ included in the resource areas mapped with GMU 11 and 13 communities. ~~Most~~ ptarmigan hunting occurs in conjunction with other harvesting activities, and other mapped information indicates that Copper River Basin residents hunt and fish in the GMU where they live, and often the adjacent GMU.

5. MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING (traditionally used by past generations, but not excluding recent technological advances)

Ptarmigan are shot and occasionally snared, and are often frozen for later use. When taken in the winter, ptarmigan can be frozen out doors.

6. INTERGENERATIONAL TRANSFER OF KNOWLEDGE, SKILLS, VALUES, AND LORE (handed down between generations)

Most of the communities hunting in GMU 11 have origins in Native villages or camps. Average length of residency varies from community to community from 4 to 20.6 years for household heads, as does the percentage of the community populations which are Native, from 0 to 98.4 percent of the population. Bird hunting is typically, and traditionally, done with other family members, often a father or uncle instructing a younger person.

7. DISTRIBUTION AND EXCHANGE (customary trade, barter, sharing, and gift-giving within a definable community of persons)

Sharing is widespread among the households within each community and among the communities in the Copper River Basin and Wrangell Mountain area.

8. DIVERSITY OF RESOURCES IN AN AREA: ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS (wide diversity, substantial elements in a subsistence user's life)

See the attached table for the per capita harvests of resources for each community. The Copper Basin has a history of boom and bust economies, beginning with the gold rush at the turn of the century, including road construction related growth, and most recently the pipeline. The local economy is largely seasonal, except for government jobs. Tourism is largely a summer and fall industry. Wild resources still constitute an important part of many households' diet.

9. INFORMATION SOURCES:

Alaska Department of Fish and Game, Division of Subsistence Community Profile Database.

McMillan, Patricia O. and Sal V. Cuccarese

1988 Alaska Over-the-Horizon Backscatter Radar System: Characteristics of Contemporary Subsistence Use Patterns in the Copper River Basin and Upper Tanana Area. Volume 1: Synthesis. Arctic Environmental Information and Data Center, University of Alaska, Anchorage.

Reckord, Holly

1983 That's the Way We Live, Subsistence in the Wrangell-St. Elias National Park and Preserve. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 34, University of Alaska, Fairbanks.

1983 Where Raven Stood, Cultural Resources of the Ahtna Region. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 335, University of Alaska, Fairbanks.

PTARMIGAN HUNTING AND PER CAPITA HARVESTS FOR COMMUNITIES USING GMU 11.

Communities	Per Capita Harvest, All Resources 1987	Percent Households Hunting Ptarmigan 1987	Extrapolated 1982 Ptarmigan Harvest	Extrapolated 1987 Ptarmigan Harvest
Chistochina	262.2	14.3	54	54
Chitina	341.7	0	20	0
Copper Center	173.4	17.7	48	156
East Glenn Highway	132.4	10.1	260	92
Gakona	95.3	18.8	154	291
Glennallen	99.4	8.2	517	119
Gulkana	152.1	10.0	70	25
Kenny Lake	136.2	19.4	93	550
Lake Louise	179.0	17.6	85	25
McCarthy Road	230.2	29.4	30	23
Mentasta	125.4	16.7	11	32
Mentasta Pass	188.0	30.0	ni	130
Nabesna Road	250.0	50.0	70	157
Paxson	288.4	64.3	ni	200
Slana	249.3	22.7	133	63
Slana Homestead North	173.7	25.0	ni	683
Slana Homestead South	121.2	41.2	ni	524
Sourdough	117.2	33.3	ni	47
South Wrangells	138.9	64.3	189	97 ^a
Tazlina	107.0	22.5	ni	145
Tonsina	155.7	10.6	182	187
West Glenn Highway ^b	91.8	12.6	476	133

^a Actual harvest, 60.9 percent sample.

^b Includes GMU boundary at Chickaloon east to the Matanuska-Susitna Borough boundary on the Glenn Highway.

Source: Division of Subsistence Survey, 1988 in AEIDC 1988



EIGHT CRITERIA WORKSHEET, BOARD OF GAME, NOVEMBER 1989

PROPOSAL NO. 7
AREA GMU 11
SPECIES GROUSE

RURAL COMMUNITIES USING THE SPECIES

Chistochina, Chitina, Copper Center, East Glenn Highway, Gakona, Glennallen, Gulkana, Kenny Lake, Lake Louise, McCarthy Road, Mentasta, Mentasta Pass, Nabesna Road, Paxson, Slana, Slana Homestead North, Slana Homestead South, Sourdough, South Wrangells, Tazlina, Tonsina, West Glenn Highway, and other rural residents of GMU 11, 13, and 12 along the Nabesna Road.

1. LENGTH AND CONSISTENCY OF USE (long-term, consistent, excluding interruptions by circumstances beyond the user's control)

Historically, grouse were part of the Ahtna peoples' seasonal round of resource harvesting. Interviews with residents throughout the region in 1977 documented the continued use of grouse by local residents (Reckord 1983a). Surveys in 1983 and 1988 verified the ongoing use (see attached table).

2. SEASONALITY (recurring in specific seasons of each year)

Grouse are most commonly mentioned as being taken in winter, in conjunction with trapping activities. However, many people hunt them in the fall and spring, as well. The current open season is August 10 through April 30.

3. MEANS AND METHODS OF HARVEST (efficient, economic, conditioned by local circumstances)

Grouse are often an opportunistic harvest, taken at the same time other resources are being hunted or fished. Some households hunted grouse in the winter, while icefishing in the Wrangell Mountains. Some hunters walked off the road, looking for grouse. A few flew into lakes in the Wrangells in the winter and harvested grouse.

4. GEOGRAPHIC AREAS (near or reasonably accessible from the user's residence)

Grouse were not included in the resource areas mapped with GMU 11 and 13 communities. Most grouse hunting occurs in conjunction with other harvesting activities, and other mapped information indicates that Copper River Basin residents hunt and fish in the GMU where they live, and often the adjacent GMU.

5. MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING (traditionally used by past generations, but not excluding recent technological advances)

Grouse are shot and occasionally snared, and are often frozen for later use. When taken in the winter, grouse can be frozen out of doors.

6. INTERGENERATIONAL TRANSMISSION OF KNOWLEDGE, SKILLS, VALUES, AND LORE (handed down between generations)

Most of the communities hunting in GMU 11 have origins in Native villages or camps. Average length of residency varies from community to community from 4 to 20.6 years for household heads, as does the percentage of the community populations which are Native, from 0 to 98.4 percent of the population. Bird hunting is typically, and traditionally, done with other family members, often a father or uncle instructing a younger person.

7. DISTRIBUTION AND EXCHANGE (customary trade, barter, sharing, and gift-giving within a definable community of persons)

Sharing is widespread among the households within each community and among the communities in the Copper River Basin and Wrangell Mountain area.

8. DIVERSITY OF RESOURCES IN AN AREA: ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS (wide diversity, substantial elements in a subsistence user's life)

See the attached table for the per capita harvests of resources for each community. The Copper Basin has a history of boom and bust economies, beginning with the gold rush at the turn of the century, including road construction related growth, and most recently the pipeline. The local economy is largely seasonal, except for government jobs. Tourism is largely a summer and fall industry. Wild resources still constitute an important part of many households' diet.

9. INFORMATION SOURCES:

Alaska Department of Fish and Game, Division of Subsistence Community Profile Database.

McMillan, Patricia O. and Sal V. Cuccarese

1988 Alaska Over-the-Horizon Backscatter Radar System: Characteristics of Contemporary Subsistence Use Patterns in the Copper River Basin and Upper Tanana Area. Volume 1: Synthesis. Arctic Environmental Information and Data Center, University of Alaska, Anchorage.

Reckord, Holly

1983 That's the Way We Live, Subsistence in the Wrangell-St. Elias National Park and Preserve. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 34, University of Alaska, Fairbanks.

1983 Where Raven Stood, Cultural Resources of the Ahtna Region. Anthropology and Historic Preservation Cooperative Park Studies Unit Occasional Paper No. 335, University of Alaska, Fairbanks.

EIGHT CRITERIA WORKSHEET, BOARD OF GAME NOVEMBER 1989

PROPOSAL NO. 7 & 9

AREA: GMU-15

SPECIES: Grouse and Ptarmigan

RURAL COMMUNITIES USING THE SPECIES

Port Graham and English Bay

1. LENGTH AND CONSISTENCY OF USE (long-term, consistent, excluding interruptions by circumstances beyond user's control)

Historically, grouse and ptarmigan were taken by the native peoples (Chugach Eskimo) of the Kenai Peninsula for use as food, clothing, and decoration (Stanek Field Notes).

The use of these species for food continues to the present as documented by the Division of Subsistence studies (Stanek 1985 and Division Data Files 1987). According to division studies the percentages of households which attempted to harvest grouse and ptarmigan in 1987 was: Port Graham 18.2 percent for grouse and none for ptarmigan; English Bay 14.9 percent for grouse and 1.9 percent for ptarmigan.

Reported grouse and ptarmigan harvests for Port Graham and English Bay residents:

1987: Port Graham grouse 12, ptarmigan 0.

1987: English Bay grouse 35, ptarmigan 0.

2. SEASONALITY (recurring in specific season of each year)

Historically, grouse were taken in the fall months in conjunction with hunting and fishing activities in local river drainages. Ptarmigan were taken during fall bear hunts which took place in alpine areas. The present hunting season is August 10 through April 30 for both species.

3. MEANS AND METHODS OF HARVEST (efficient, economic, conditioned local circumstances)

Historically, grouse and ptarmigan were taken with snares, nets, and arrows. ~~Currently~~ they are taken with rifles and shotguns.

4. GEOGRAPHIC AREAS (near or reasonably accessible from the user's residence)

The division has mapped small game harvest areas, and they are entirely within the GMU.

5. MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING (traditionally used by past generations, but not excluding recent technological advances)

Historically, Grouse and ptarmigan were used as food and the feathers were used for decorations. Today their use is for food.

6. INTERGENERATIONAL TRANSMISSION OF KNOWLEDGE, SKILLS, VALUES, AND LORE
(handed down between generations)

Most residents of Port Graham and English Bay are of Alaska Native heritage and are life long residents of the unit.

7. DISTRIBUTION AND EXCHANGE (customary trade, barter, sharing, and gift-giving within a definable community of persons)

Historically, grouse and ptarmigan were part of the annual harvests of aboriginal peoples living on the lower Kenai Peninsula.

In 1987, the harvest of grouse and ptarmigan was one of several hunting activities which made up the annual cycle of subsistence activities of the two communities. There were no ptarmigan taken in either of the two communities. In Port Graham hunters took 12 grouse while in English Bay there were 34 grouse taken. Grouse hunting was done primarily during the fall months while hunters were in the woods looking for bear and moose, or while fishermen were moving along trails. Although no ptarmigan were taken in 1987, there is often some harvest during winter months when the birds move down from the mountains to lower elevations along river bottoms.

8. DIVERSITY OF RESOURCES IN THE AREA: ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS (wide diversity, substantial elements in a subsistence user's life)

In 1987, taking of grouse and ptarmigan was part of the mixed, subsistence based economy of this portion of the lower Cook Inlet area. Subsistence harvests documented by division studies, measured in pounds edible weight, were relatively high at 719.5 pounds per household for Port Graham and 1,138.7 pounds for English Bay. Salmon and other fish made up the bulk of the harvest invertebrates, marine mammals, plants, and birds adding to the diversity of resources taken for food.

9. INFORMATION SOURCES:

Stanek, Ronald T.

1984 Patterns of Wild Resource Use in English Bay and Port Graham, Alaska. TP 134.

Division of Subsistence

1987 English Bay and Port Graham Community Resource Harvest Update, Data files.

EIGHT CRITERIA WORKSHEET, BOARD OF GAME NOVEMBER 1989

PROPOSAL NO. 7 & 9

AREA: GMU - 16

SPECIES: Grouse and Ptarmigan

RURAL COMMUNITIES USING THE SPECIES

Tyonek, Beluga, Alexander Creek, Skwentna, and other residents of GMU-16B

1. LENGTH AND CONSISTENCY OF USE (long-term, consistent, excluding interruptions by circumstances beyond user's control)

Before the arrival of European and Americans, grouse and ptarmigan were taken by the native peoples (Dena'ina Indians) of the Upper Cook Inlet and Susitna Basin areas for use as food and decoration (Osgood 1937).

The use of these species for food continues to the present as documented by Division of Subsistence Studies (Stanek 1987; Fall, Foster, and Stanek 1984 and 1983). According to division studies the percentage of households which attempted to harvest grouse and ptarmigan was: Western Susitna Basin 36 and 27 percent respectively (1984); Tyonek 26 and 10 percent respectively (1983).

Reported grouse and ptarmigan harvests for GMU-16B residents

1983: Tyonek, Grouse 79, Ptarmigan 19

1982: Western Susitna Basin, Grouse 280, Ptarmigan 289

1984: Western Susitna Basin, Grouse 215, Ptarmigan 216

2. SEASONALITY (recurring in specific season of each year)

Aboriginally, grouse and ptarmigan were taken during the fall and winter months. The present hunting season is August 10 through April 30. Grouse are taken in the fall during moose hunts, and specific hunts along trails and roads. Ptarmigan are taken primarily in the winter when deep snowfall at high elevations drives the birds to river bottoms and clearings accessible to area residents.

3. MEANS AND METHODS OF HARVEST (efficient, economic, conditioned local circumstances)

The primary means which unit residents used to take grouse and ptarmigan aboriginally was snares and deadfalls. Today these birds are shot with rifles and shotguns.

4. GEOGRAPHIC AREAS (near or reasonably accessible from the user's residence)

The division has mapped small game harvest areas for the communities in GMU-16B, and these harvest areas fall within the GMU.

5. MEANS OF HANDLING, PREPARING, PRESERVING, AND STORING (traditionally used by past generations, but not excluding recent technological advances)

Grouse and ptarmigan taken for food and decoration.

6. INTERGENERATIONAL TRANSMISSION OF KNOWLEDGE, SKILLS, VALUES, AND LORE (handed down between generations)

Most of residents of Tyonek are of Alaska Native heritage and are life long residents of the unit. Residents of the Western Susitna Basin surveyed in 1985 were mostly non-native and had resided in the area between zero and 48 years. In 1982 the average length of residency was 7.9 years.

7. DISTRIBUTION AND EXCHANGE (customary trade, barter, sharing, and gift-giving within a definable community of persons)

Throughout the GMU, grouse and ptarmigan are used mostly for their meat which is distributed by hunters among households in their communities.

8. DIVERSITY OF RESOURCES IN THE AREA: ECONOMIC, CULTURAL, SOCIAL, AND NUTRITIONAL ELEMENTS (wide diversity, substantial elements in a subsistence user's life)

Bird hunting, including the taking of grouse and ptarmigan, is presently part of the mixed, subsistence based economy of this portion of the upper Cook Inlet area. Subsistence harvests documented by division studies, measured in pounds edible weight, are relatively high and range from 872.1 pounds per household for western Susitna Basin households in 1982 to 964 pounds for Tyonek households in 1983. Salmon and moose made up the bulk of the harvest, with birds, freshwater fish and shellfish adding to the diversity of resources taken for food.

9. INFORMATION SOURCES:

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