Customary and Traditional Use Worksheet, Wolves, Game Management Units 1, 3, 4, and 5, Southeast Alaska

Prepared by

Michael F. Turek,

Nancy C. Ratner,

and

William E. Simeone

for the November 2008 Juneau Board of Game meeting

November 2008

Alaska Department of Fish and Game

Division of Subsistence



Symbols and Abbreviations

The following symbols and abbreviations, and others approved for the Système International d'Unités (SI), are used without definition in the reports by the Division of Subsistence. All others, including deviations from definitions listed below, are noted in the text at first mention, as well as in the titles or footnotes of tables, and in figure or figure captions.

Weights and measures (metri	ic)	General	Measures (fisheries)
centimeter	cm	all commonly-accepted abbreviations	fork length FL
deciliter	dL	e.g., Mr., Mrs., AM, PM, etc.	mideye-to-fork MEF
gram	g	all commonly-accepted professional	mideye-to-tail-fork METF
hectare	ha	titles e.g., Dr., Ph.D., R.N., etc.	standard length SL
kilogram	kg	Alaska Administrative Code AAC	total length TL
kilometer	km	at @	
liter	L	compass directions:	Mathematics, statistics
meter	m	east E	all standard mathematical signs, symbols
milliliter	mL	north N	and abbreviations
millimeter	mm	south S	alternate hypothesis H _A
	******	west W	base of natural logarithm e
Weights and measures (Engli	ish)	copyright ©	catch per unit effort CPUE
cubic feet per second	ft ³ /s	corporate suffixes:	coefficient of variation CV
foot	ft	Company Co.	common test statistics (F, t, χ^2 , etc.)
gallon	gal	Corporation Corp.	confidence interval CI
inch	in	Incorporated Inc.	correlation coefficient (multiple) R
mile	mi	Limited Ltd.	correlation coefficient (simple)
nautical mile	nmi	District of Columbia D.C.	covariance cov
		et alii (and others) et al.	degree (angular)
ounce	oz lb	et cetera (and so forth) etc.	degrees of freedom df
pound		exempli gratia (for example) e.g.	expected value E
quart	qt	Federal Information Code FIC	greater than >
yard	yd	id est (that is) i.e.	•
		latitude or longitude lat. or long.	ž i
Time and temperature		monetary symbols (U.S.) \$, ¢	1
day	d	.,,	less than
degrees Celsius	°C	months (tables and figures): first three letters (Jan,,Dec)	less than or equal to ≤
degrees Fahrenheit	°F	registered trademark ®	logarithm (natural) ln
degrees kelvin	K	trademark TM	logarithm (base 10) log
hour	h	United States (adjective) U.S.	logarithm (specify base) log ₂ , etc.
minute	min	United States of America (noun) USA	minute (angular)
second	S	U.S.C. United States Code	not significant NS
			null hypothesis H _o
Physics and chemistry			percent %
all atomic symbols		(e.g., AK, WA)	probability P
alternating current	AC		probability of a type I error (rejection of the
ampere	A		null hypothesis when true) α
calorie	cal		probability of a type II error (acceptance of
direct current	DC		the null hypothesis when false) β
hertz	Hz		second (angular)
horsepower	hp		standard deviation SD
hydrogen ion activity (negative	e log of) pH		standard error SE
parts per million	ppm		variance
parts per thousand	ppt, ‰		population Var
volts	V		sample var
watts	W		

SPECIAL PUBLICATION NO. BOG 2008-09

CUSTOMARY AND TRADITIONAL USE WORKSHEET, WOLVES, GAME MANAGEMENT UNITS 1, 3, 4, AND 5, SOUTHEAST ALASKA

by

Michael F. Turek, Alaska Department of Fish and Game, Division of Subsistence, Juneau

Nancy C. Ratner, Alaska Department of Fish and Game, Division of Subsistence, Juneau

and

William E. Simeone Alaska Department of Fish and Game, Division of Subsistence, Anchorage

> Alaska Department of Fish and Game Division of Subsistence P.O. Box 115526, Juneau, AK 99811-5526

The Division of Subsistence Special Publications series was established for the publication of techniques and procedure manuals, informational pamphlets, special subject reports to decision-making bodies, symposia and workshop proceedings, application software documentation, in-house lectures, and other documents that do not fit in another publications series of the Division of Subsistence. Most Special Publications are intended for readers generally interested in fisheries, wildlife, and the social sciences; for natural resource technical professionals and managers; and for readers generally interested the subsistence uses of fish and wildlife resources in Alaska.

Special Publications are available through the Alaska State Library and on the Internet: http://www.subsistence.adfg.state.ak.us. This publication has undergone editorial and professional review.

Michael F. Turek and Nancy C. Ratner Alaska Department of Fish and Game, Division of Subsistence, P.O. Box 115526, Juneau, AK, 99811-5526, USA

and
William E. Simeone
Alaska Department of Fish and Game, Division of Subsistence,
333 Raspberry Road, Anchorage, AK, 99518-1565, USA

This document should be cited as:

Turek, M. F., N. C. Ratner, and W. E. Simeone. 2008. Customary and traditional use worksheet, wolves, Game Management Units 1, 3, 4, and 5, Southeast Alaska. Alaska Department of Fish and Game Division of Subsistence Special Publication No. BOG 2008-09, Juneau.

The Alaska Department of Fish and Game (ADF&G) administers all programs and activities free from discrimination based on race, color, national origin, age, sex, religion, marital status, pregnancy, parenthood, or disability. The department administers all programs and activities in compliance with Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title II of the Americans with Disabilities Act (ADA) of 1990, the Age Discrimination Act of 1975, and Title IX of the Education Amendments of 1972.

If you believe you have been discriminated against in any program, activity, or facility please write:

ADF&G ADA Coordinator, P.O. Box 115526, Juneau AK 99811-5526

U.S. Fish and Wildlife Service, 4040 N. Fairfax Drive, Suite 300 Webb, Arlington VA 22203

Office of Equal Opportunity, U.S. Department of the Interior, Washington DC 20240

The department's ADA Coordinator can be reached via phone at the following numbers:

(VOICE) 907-465-6077, (Statewide Telecommunication Device for the Deaf) 1-800-478-3648, (Juneau TDD) 907-465-3646, or (FAX) 907-465-6078

For information on alternative formats and questions on this publication, please contact:

ADF&G Division of Subsistence at www.subsistence.state.ak.us.

TABLE OF CONTENTS

	Page
LIST OF TABLES	ii
LIST OF FIGURES	ii
INTRODUCTION	1
THE EIGHT CRITERIA	1
Criterion 1: Length and Consistency of Use	1
Historical Use Patterns Contemporary Use Patterns	1
Criterion 2: Seasonality	2
Criterion 3: Means and Methods of Harvest	3
Criterion 4: Geographic Areas	4
Criterion 5: Means of Handling, Preparing, Preserving, and Storing	5
Criterion 6: Intergenerational Transmission of Knowledge, Skills, Values, and Lore	6
Criterion 7: Distribution and Exchange	
Criterion 8: Diversity of Resources in an Area; Economic, Cultural, Social, and Nutritional Elements	7
REFERENCES CITED	8
TABLES AND FIGURES	9

LIST OF TABLES

Table	Page
1.	Wolf harvests and uses in Unit 1, 3, and 5 communities, ADF&G Division of Subsistence surveys,
	1983, 1984, 1996, and 2000
2.	Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, subunits 1A, 1B, and
	1C, by method.
3.	Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, GMU 3, by method14
4.	Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, GMU 5, by method14
5.	Method of wolf harvest by Alaska residents in regulatory years 1997-2007, subunits 1A, 1B, and 1C15
6.	Method of wolf harvest by Alaska residents in regulatory years 1997-2007, GMU 3
7.	Method of wolf harvest by Alaska residents in regulatory years 1997-2007, GMU 5
8.	Number of wolves shot by Alaska residents in regulatory years 1997-2007, GMUs 1, 3, and 516
9.	Transportation used by Alaska residents to harvest wolves, subunits 1A, 1B, and 1C, regulatory years
10	1997-2007.
10.	Transportation used by Alaska residents to harvest wolves, GMU 3, regulatory years 1997-2007
11.	Transportation used by Alaska residents to harvest wolves, GMU 5, regulatory years 1997-2007
12.	Wolf harvest chronology, by community, subunits 1A, 1B, and 1C, 1997-2007
13.	Wolf harvest chronology, by community, GMU 3, 1997-2007
14.	Wolf harvest chronology, by community, GMU 5, 1997-2007
	LIST OF FIGURES
Figure	Page
1.	Seasonal pattern in subunits 1A, 1B, and 1C and methods of harvest by Alaska residents, by month,
2.	1997–2007
۷.	1997–2007
3.	Seasonal pattern in Game Management Unit 5 and methods of harvest by Alaska residents, by month,
	1997–2007

INTRODUCTION

This worksheet has been prepared to address issues raised by a proposal submitted to the Alaska Board of Game for their consideration during their November 2008 deliberations in Juneau. If adopted as submitted, Proposal 46 would shorten the wolf *Canus lupus* hunting seasons in Game Management Units (GMUs) 1, 3, 4, and 5 by 60 days. The Alaska Board of Game made a positive customary and traditional use finding for wolves in subunit 1D in November 2006 (5 AAC 99.025 (11)), but no findings have been made for wolves in subunits 1A, 1B, 1C, or GMUs 3 or 5. Wolves occur rarely, if at all, in GMU 4. Pursuant to Alaska Statute 16.05.258 (Subsistence use and allocation of fish and game) and Alaska regulation 5 AAC 99.010 (Boards of fisheries and game subsistence procedures), a customary and traditional use finding is the first step in the regulatory process.

The following communities show a history of use of the population area:

Subunit 1A: Ketchikan, Saxman, Metlakatla, Meyers Chuck.

Subunit 1B: Petersburg, Wrangell, Meyers Chuck.

Subunit 1C: Juneau, Gustavus, Hoonah, Petersburg.

GMU 3: Petersburg, Wrangell, Kake.

GMU 5: Yakutat, Juneau.

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.

Historical Use Patterns

Where they occurred in Southeast Alaska, wolves were traditionally harvested as a source of furs and hides. During pre-contact times, wolf fur was used to trim ceremonial masks and blankets and to make robes and outer clothing. Trade in wolf furs and hides existed not only between Southeast groups but also between Southeast groups and Interior Natives (De Laguna 1972; Oberg 1973; Petroff 1884).

In addition to its utilitarian use as hide and fur, the wolf occupied an important symbolic role in Tlingit society. Tlingit society is divided into 2 groups or moieties: the Raven and the Wolf/Eagle. The moieties define traditional social responsibilities and obligations, particularly those concerning marriage, death, and house building. Clans on the Raven side generally have prey species as their clan emblem. Clans on the Wolf/Eagle side generally have predator species as their clan emblem (Kamenskii 1985).

Several Southeast Alaskan clans have adopted the wolf as their symbol or crest (Swanton 1909). Tlingits of the Wolf Clan have traditionally ceremonially addressed wolves as

relatives because they believed the wolves to be their ancestors; this practice continues to this day. In 1946, a member of the Kaagwaantaan (wolf) Clan reported that he was the caretaker of 2 wolf heads which originally came from an ancient village near the mouth of Excursion Inlet and which had been passed down to him from his forefathers (Goldschmidt and Haas 1998:138).

Historically, the clans were property-claiming or -owning organizations. Each clan held claim to defined hunting, fishing, trapping, and gathering areas, special carvings and other artwork used for totems, clan crests, house poles, as well as songs. Trappers' cabins were built in areas of high furbearer abundance according to the clans' possessory rights; however, by the mid-1900s, Tlingit people in the region could not use their former trapping territories due to government land use policies, fur farmers, and homesteaders. In 1946, Henry Denny Sr. testified in Saxman:

My people owned the area at the mouth of the Unuk River. I have used that area all my life, and before me, my father and uncles hunted and trapped and fished in that area. Now, however, it is closed to me because there are homesteaders in there. This homesteader tells me he has wolf traps out, and makes me go away. I have four boys, and they don't go there either. The cabin I have there is deteriorating, and I haven't been there for about five years because this homesteader won't let me. (Goldschmidt and Haas 1998:162)

Fur prices fell in the 1950s, but trappers continued to earn money from the furs and bounties placed on wolves (Smythe 1988). The bounty was discontinued in the 1970s (Lowell 2006a) and wolf trapping ceased in some areas (Smythe 1988).

Contemporary Use Patterns

In subunit 1A, the management objective of the Alaska Department of Fish and Game (ADF&G) is to "maintain an annual harvest of at least 20 wolves" (Porter 2006). In units 3 and 5 and the remainder of Unit 1, there are no formal management goals, but general objectives are to maintain healthy wolf populations in their historical ranges for viewing and harvest (Barten 2006a, 2006b; Lowell 2006a, 2006b; Porter 2006). Wolf harvest is monitored through a mandatory pelt-sealing program.

The ADF&G Division of Subsistence household surveys conducted in 1983, 1984, 1996, and 2000 reported wolf harvests in communities in units 1, 3 and 5 (Table 1). In addition to these household surveys, harvest data in this report are from the pelt sealing records maintained by the ADF&G Division of Wildlife Conservation. The years presented in this worksheet represent regulatory years, which begin July 1 and end the following June 30. The data are from 11 regulatory years, 1997 through 2007 (July 1, 1997, through June 30, 2008). In the following discussion, "area" refers to subunits 1A, 1B, and 1C, GMU 3, and GMU 5, combined.

CRITERION 2: SEASONALITY

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

¹ ADF&G Division of Wildlife Conservation WinfoNet 2008.

Traditionally, the Tlingit harvested wolves in late fall and early winter because wolf fur was at its prime during these seasons, and there was no deep snow to restrict travel. Although wolves were probably harvested at other times of the year, when they were available and if they possessed quality fur, the annual subsistence trapping cycle usually began in November and continued through December (De Laguna 1972; Goldschmidt and Haas 1998). In the early to mid-1900s, trapping was a source of winter income for salmon *Oncorhynchus* fishers in the area (Smythe 1988).

In Region I in 1991, the wolf hunting season and bag limit was reduced from year-round and no limit to August 1 through April 30, with a limit of 5 wolves. In regulatory year 2003-2004, the season was further reduced to September through March, then restored to the August 1 through April 30 season in 2004.

Figure 1 shows the seasonal pattern in subunits 1A, 1B, and 1C, based on the number of wolves taken by shooting, trapping, or snaring by Alaska residents each month for the 11 years from 1997 to 2007. Most wolves were trapped during the winter and spring, December through April. Most wolves were shot in the fall, especially in September and October (Table 2). Lowell (2006) suggests that wolf harvest in the fall generally happened opportunistically, when hunters were targeting other species.

In GMU 3 during the 11-year period from 1997 to 2007, most wolves were shot in October, followed by November, and few wolves were shot in the spring (Table 3, Figure 2). In GMU 5, most wolves were also shot in October, but more wolves were shot in September than in November, a pattern similar to that in subunits 1A, 1B, and 1C (Table 4, Figure 3). Anecdotal evidence gathered by ADF&G area management biologists suggests that most wolves were shot by harvesters incidental to their big game hunting, especially when deer and moose hunting in the fall, and occasionally when bear hunting in the spring.

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.

Traditionally, wolves were harvested by snares and deadfalls that were set across game trails frequently traveled by wolves (De Laguna 1972; Goldschmidt and Haas n.d. [1946]; Hessing 2003; Oberg 1973). Currently, with the exception of GMU 5, more wolves were shot or trapped in the area from 1997 to 2007 than were snared (Tables 5, 6, and 7).

In subunits 1A, 1B and 1C, nearly half the wolves (244, 48%) were trapped during the 11-year period. Hunters shot 131 wolves, 26% of the total harvest. Fewer wolves were snared (109, 21%) than trapped or shot (Table 5).

In GMU 3, trappers harvested the most wolves during the 11-year period. Over half of the wolves (239, 53%) were trapped from 1997 to 2007. Hunters shot 132 wolves, 29% of the total harvest, while fewer wolves were snared: 73 or 16% of the total harvest (Table 6)

The pattern shifted in GMU 5, where the highest number of wolves were shot (21 wolves or 40% of the total 52 wolves taken during the 11-year period), followed by snaring (19 wolves, 37%). Fewer wolves were trapped (12, 23%) than the other 2 methods of

harvest (Table 7). However, of the 21 wolves shot by Alaskan residents, only 7 were harvested by Yakutat residents, which suggests that Yakutat residents follow more traditional methods, or that they trap, and that the shooting of wolves is conducted largely by Alaskan residents from other communities, such as Juneau or several communities in Southcentral and Interior Alaska.

Table 8 summarizes the numbers of wolves shot from 1997 to 2007 in GMUs 1, 3, and 5. It includes the number of wolves shot in 1D, a subunit in which the Alaska Board of Game has made a customary and traditional use finding for wolves and which encompasses the communities of Haines and Klukwan. A total of 306 wolves were shot in the 3 GMUs during the 11-year period. In GMU 1, most wolves were shot in 1A, the subunit encompassing Ketchikan. Few wolves were shot in GMU 5 (21 wolves) compared with GMU 1 (153 wolves) and GMU 3 (132 wolves). Only 22 wolves were shot in subunit 1D, the subunit of GMU 1 not addressed in this worksheet.

In subunits 1A, 1B, and 1C, and in GMU 3 from 1997 to 2007, most wolves (83% and 72%) were taken by residents using boats for transportation (Tables 9 and 10). In GMU 5, most wolves were taken using aircraft as well as highway vehicles, with only 10% taken using boats (Table 11). The construction of new logging roads near Yakutat opened access to hunting areas and resulted in a decline of the use of boats (Mills and Firman 1986). Other transport methods used to harvest wolves during the 11-year period were 3-and 4-wheeled vehicles, off-road-vehicles, snowmachines, and skis or snowshoes.

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.

Tlingit families traditionally built and maintained trapping cabins in the remote areas of high furbearer abundance, and placed them in accordance with clan ownership rights (Goldschmidt and Haas 1998).

Ketchikan residents harvested the majority of wolves (62% of resident harvest and 60% of total harvest) taken in subunits 1A, 1B, and 1C during the 11-year period, followed by Petersburg residents (11%) and Juneau residents (8%) (Table 12). The number of wolves harvested in Juneau and Ketchikan nonsubsistence areas is unknown. The pelt sealing records provide location of harvest only to the subunit level, which encompasses a larger area than the Juneau nonsubsistence² area in subunit 1C and the Ketchikan nonsubsistence area in subunit 1A.

Historically, the area encompassed by subunit 1A was hunted and fished by the Tongass Tlingits, many of whom now live in Ketchikan, and the Cape Fox Tlingits, many of whom were from Saxman (Goldschmidt and Haas 1998). Tlingit testimony taken in Saxman in 1946 specified wolf harvests from the Unuk River.

Historically, the area encompassed by GMU 1B was hunted and fished by Tlingit clans from the Wrangell territory (Goldschmidt and Haas 1998).

_

At the time of publication, there are 5 geographical areas in Alaska that the Alaska Joint Board of Fisheries and Game has determined are nonsubsistence areas in which dependence on subsistence is not a principal characteristic of the economy, culture, and way of life of the community. See 5 AAC 99.015 for a description of nonsubsistence areas and 5 AAC 99.016 for activities permitted in nonsubsistence areas.

Historically, the area encompassed by GMU 1C was hunted and fished by the Auk, Taku, and Hoonah Tlingits (Goldschmidt and Haas 1998). Tlingit testimony taken in Juneau and Hoonah in 1946 specified wolf harvests from the Taku inlet and river as well as from Glacier Bay. Other general Hoonah trapping areas included Excursion Inlet and the Couverden area.

Historically, the area encompassed by GMU 3 was hunted and fished by several Tlingit groups. The Kake Tlingit hunted and fished the northwestern half of Unit 3, while the southeastern half was hunted and fished by Wrangell Tlingits (Goldschmidt and Haas 1998). Petersburg and Wrangell residents harvested the most wolves from GMU 3 between 1997 and 2007 (79% of the resident harvest and 67% of the total harvest) (Table 13)

In GMU 5, the harvest of wolves traditionally took place mainly in the uplands, near remote hunting and trapping cabins along rivers and large bays. Testimony cited by Goldschmidt and Haas (1998) gave the Situk River, Ahrnklin River, Akwe River, and Dry Bay as areas where respondents reported harvesting wolves.

Mills and Firman (1986) describe areas used for trapping by Yakutat residents during their lifetimes. The areas include the eastern shore of Yakutat Bay near river outlets, the islands of Yakutat Bay, the Ankau slough system, along the Situk River and Situk Lake, near the mouth of the Seal River, off Black Sand Island, along the Akwe River and beach from Akwe Slough to Dry Bay, and the entire length of the Ahrnklin River. Trapping was also reported along the coastal areas of the Malaspina Forelands south of Sitkagi Bluffs, the southeast shoreline of Icy Bay, and south to Yana Stream.

Yakutat residents continue to be the main harvesters of wolves in GMU 5, taking 69% of the resident harvest and 47% of the total harvest. Juneau residents follow with 14% of the Alaska resident harvest (Table 14)

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.

The preparation of animal skins was done by Tlingit women. There were 2 general methods of skinning game (Emmons 1991). Heavier skins, such as those from bears, deer, goats, beavers, seals, and sea lions, were removed by making a cut on the underside of the animal from the head to the tail and along the inside of the legs. The skin was rolled off each cut and the flat "green" skin was laced to a frame and stretched. The "more valuable and delicate skins," such as those from river and sea otters, lynxes, foxes, mink, martens, muskrats, and wolves, were removed by cutting the skin on the rear of the animal and then pulling the skin off the body and over the head, which resulted in a bag-shaped green skin that had the fur on the inside. The green skin was then stretched by placing it over a flat, pointed board or 2 stout, rounded poles angled at the top. A short stick was used to hold the forepaws away from the body and the tail was straightened and then tied with cord to one of the poles. The flesh and grease were removed from the skin

and the skin was softened. Wolf skins were treated in this manner although they were not thin or tender like the other furbearers included in this group (Emmons 1991).

Great care and respect may have been shown to the living wolf as well as to the harvested wolf, because of its mythical and symbolic importance within Tlingit culture. Wolf meat was not normally eaten by Tlingits, except in time of extreme need. Presently, wolf fur is used in Native handicrafts such as blankets, ceremonial robes, and winter coat ruffs, and in works of art. Furs are also sold to commercial fur traders.

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.

Harvest areas for wolves traditionally used by Tlingit residents were "owned" in the Tlingit family-clan sense and conveyed or inherited though family lines. These customary rights were recognized and respected by those within the community. New generations of harvesters learned the skills needed to harvest, process, and prepare game and fish species by observing others and by participating, with elder relatives or community residents, in subsistence activities. Much was taught and learned in both Native and non-Native communities through stories describing game lore and hunting skills. In traditional Tlingit culture, young boys learned most of their hunting and fishing skills from their mother's brothers and other older members of their own clan (Oberg 1973). Hunting skills and locations continue to be learned from uncles, as well as from other relatives and elders in contemporary Native society.

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.

Traditionally, wolf pelts imported from Interior regions or harvested locally were traded throughout Southeast Alaska. The exchange value of wolf pelts was determined in terms of articles placed against it in barter. Before contact, the most valued furs for clothing were sea otter, wolf, beaver, and marten (De Laguna 1972). According to Oberg (1973), the most-valued furs were sea otter, followed by marten, beaver, river otter, black fox, mink, wolverine, wolf, and bear, in that order. The practice of distributing wildlife resources continues in the present time. Wolf harvest, sharing, and use was recorded in several communities during Division of Subsistence household surveys conducted in the mid-1980s and 1990s.³

In GMU 5, Mills and Firman (1986) reported 10% of Yakutat households used wolves and 10% of Yakutat households harvested wolves in 1984, suggesting there was little sharing of wolves among the residents of Yakutat in that data year. Wolf pelts were probably sold commercially.

6

³ Data are available in the ADF&G Division of Subsistence Community Subsistence Information System (CSIS) at http://www.subsistence.adfg.state.ak.us/CSIS

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.

GMUs 1, 3, and 5 are part of a region that has a diversity of resources available for harvest. These include marine and intertidal resources as well as upland game species including birds, goats, deer, and black and brown bears. Moose is an important food resource in areas where it is available. Division of Subsistence baseline harvest studies reveal a wide range of terrestrial and marine resources are used by communities in the area. Wolves are taken incidentally by hunters engaged in big game hunting, especially deer and moose hunting. The common use of boats by wolf harvesters (77%) in GMUs 1 and 3 illustrates the marine-based harvest patterns in GMUs 1 and 3 (Tables 9 and 10). In GMU 5, Yakutat households reported using 70 types of resources during a 1984 survey (Mills and Firman 1986).

-

⁴ See the CSIS.

REFERENCES CITED

- Barten, N. L. 2006a. Unit 1C wolf management report. Pages 16-22 *in* Harper, P., editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game Division of Wildlife Conservation, Project 14.0, Juneau.
- Barten, N. L. 2006b. Unit 5 wolf management report. Pages 45-51 *in* Harper, P., editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game Division of Wildlife Conservation, Project 14.0, Juneau.
- De Laguna, F. 1972. Under Mount St. Elias: The history and culture of the Yakutat Tlingit. Smithsonian Contributions to Anthropology Vol. 7 (in 3 parts). U.S. Government Printing Office, Washington D.C.
- Emmons, G. T. 1991. The Tlingit Indians. Edited with additions by F. de Laguna. The University of Washington Press, Seattle, and The American Museum of Natural History, New York.
- Goldschmidt, W. R., and T. H. Haas. 1998. Haa Aani, Our Land: Tlingit and Haida land rights and use. T. F. Thornton, editor. University of Washington Press, Seattle and Sealaska Heritage Foundation, Juneau.
- Goldschmidt, W. R., and T. H. Haas. n.d. [1946]. Possessory rights of the natives of southeastern Alaska; a detailed analysis of the early and present territory used and occupied by the natives of southeastern Alaska, except the natives of the village of Kake (partially treated), Hydaburg, and Klawock. A report to the Commissioner of Indian Affairs. Bureau of Indian Affairs, Washington, D.C.
- Hessing, P. 2003. Unit 1D wolf management report. Pages 22-27 *in* Healey, C., editor. Wolf management report of survey and inventory activities 1 July 1999-30 June 2002. Alaska Department of Fish and Game Division of Wildlife Conservation, Juneau.
- Kamenskii, A. 1985. Tlingit Indians of Alaska. S. Kan, translator. University of Alaska Press, Fairbanks.
- Lowell, R. E. 2006a. Unit 1B wolf management report. Pages 9-15 *in* Harper, P., editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game Division of Wildlife Conservation Project 14.0, Juneau.
- Lowell, R. E. 2006b. Unit 3 wolf management report. Pages 38-44 *in* Harper, P., editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game Division of Wildlife Conservation, Project 14.0, Juneau.
- Mills, D. D., and A. S. Firman. 1986. Fish and wildlife use in Yakutat Alaska: Contemporary patterns and changes. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 131, Douglas, Alaska. http://www.subsistence.adfg.state.ak.us/TechPap/tp131.pdf
- Oberg, K. 1973. The social economy of the Tlingit Indians. University of Washington Press, Seattle.
- Petroff, I. 1884. Report on the population, industries, and resources of Alaska. Government Printing Office, Washington, D.C.
- Porter, B. 2006. Unit 1A wolf management report. Pages 1-8 *in* Harper, P., editor. Wolf management report of survey and inventory activities 1 July 2002-30 June 2005. Alaska Department of Fish and Game Division of Wildlife Conservation, Project 14.0, Juneau.
- Smythe, C. W. 1988. Harvest and use of fish and wildlife resources by residents of Petersburg, Alaska. Alaska Department of Fish and Game Division of Subsistence Technical Paper No. 164 and the Chilkat Institute, Juneau. http://www.subsistence.adfg.state.ak.us/TechPap/tp164.pdf
- Swanton, J. R. 1909. Tlingit myths and texts. Government Printing Office, Washington, D.C.

TABLES AND FIGURES

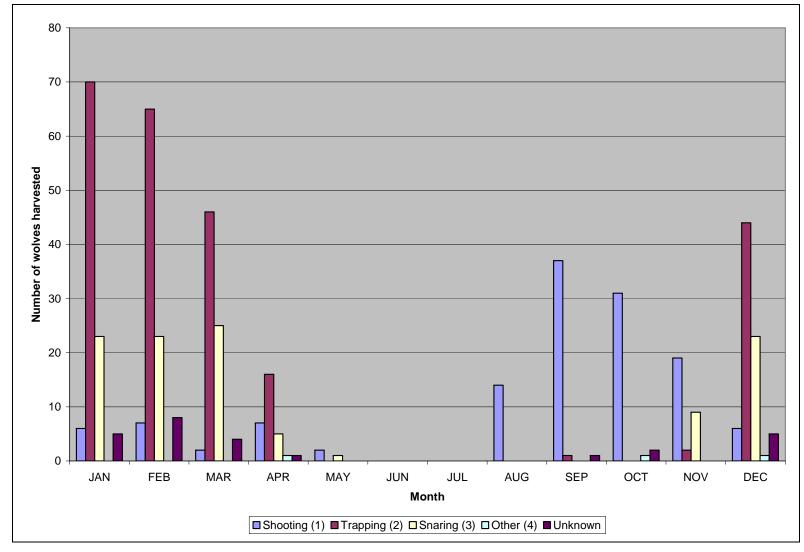


Figure 1.–Seasonal pattern in subunits 1A, 1B, and 1C and methods of harvest by Alaska residents, by month, 1997–2007.

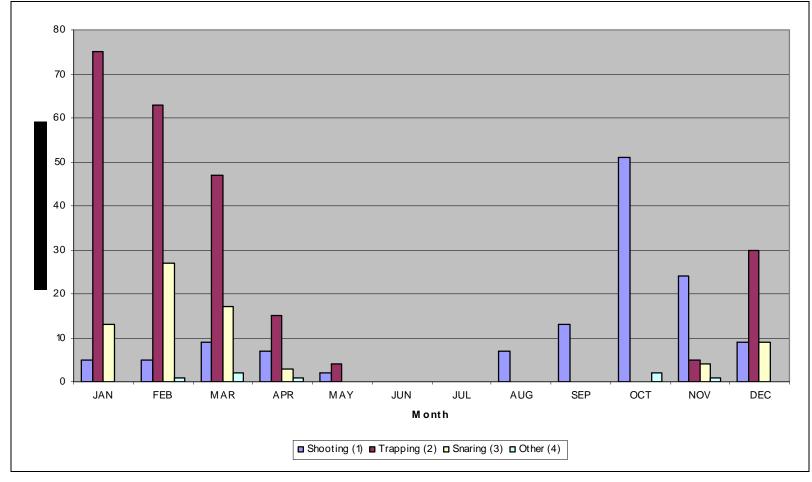


Figure 2.–Seasonal pattern in Game Management Unit 3 and methods of harvest by Alaska residents, by month, 1997–2007.

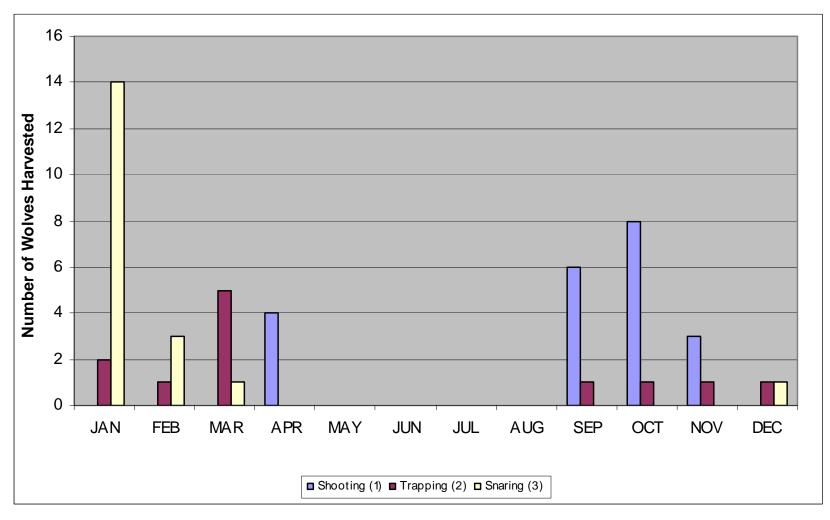


Figure 3.-Seasonal pattern in Game Management Unit 5 and methods of harvest by Alaska residents, by month, 1997–2007.

Table 1.-Wolf harvests and uses in Unit 1, 3, and 5 communities, ADF&G Division of Subsistence surveys, 1983, 1984, 1996, and 2000.

		Pe	ercentag	e of hou	S	Amoun	t harvested	
GMU	Community, year	Use	Att	Harv	Recd	Give	Total	Mean HH
1D	Haines, 1983	0.70%	6.80%	0.70%	0.0%		9	
1D	Haines, 1996	2.2%	2.2%	2.2%	0.0%	0.0%	17	0.02
3	Wrangell, 2000	3.1%	2.0%	2.0%	1.0%	1.0%	46	0.06
3	Petersburg, 2000	1.6%	2.4%	1.6%	0.0%	0.8%	86	0.08
5	Yakutat, 1984	10.0%	10.0%	10.0%	0.0%	2.0%	69	
5	Yakutat, 2000	2.2%	5.0%	2.2%	0.0%	0.7%	10	0.04

Table 2.—Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, subunits 1A, 1B, and 1C, by method.

Harvest method	JAN ^a	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	Percentage
Shooting (1)	13	12	5	15	8	0	0	24	50	55	41	13	236	28%
Trapping (2)	104	110	94	42	0	0	0	0	1	0	7	73	431	50%
Snaring (3)	31	29	42	9	1	0	0	0	0	0	10	31	153	18%
Other (4) ^b	0	0	0	1	0	0	0	0	0	1	3	1	6	1%
Unknown	5	8	7	1	0	0	0	0	1	2	0	5	29	3%
Total	153	159	148	68	9	0	0	24	52	58	61	123	855	100%

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

Table 3.—Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, GMU 3, by method.

Harvest method	JAN ^a	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	Percentage
Shooting (1)	5	5	9	7	2	0	0	7	13	51	24	9	132	29%
Trapping (2)	75	63	47	15	4	0	0	0	0	0	5	30	239	53%
Snaring (3)	13	27	17	3	0	0	0	0	0	0	4	9	73	16%
Other (4) ^b	0	1	2	1	0	0	0	0	0	2	1	0	7	2%
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Total	93	96	75	26	6	0	0	7	13	53	34	48	451	100%

Table 4.– Calendar of wolf harvests by Alaska residents in all regulatory years 1997-2007, GMU 5, by method.

Harvest method	JAN ^a	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL	Percentage
Shooting (1)	0	0	0	4	0	0	0	0	6	8	3	0	21	40%
Trapping (2)	2	1	5	0	0	0	0	0	1	1	1	1	12	23%
Snaring (3)	14	3	1	0	0	0	0	0	0	0	0	1	19	37%
Other (4) ^b	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0%
Total	16	4	6	4	0	0	0	0	7	9	4	2	52	100%

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

Table 5.-Method of wolf harvest by Alaska residents in regulatory years 1997-2007, subunits 1A, 1B, and 1C.

Harvest method	1997 ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Shooting (1)	7	17	19	12	16	12	14	9	8	4	13	131	25.5%
Trapping (2)	22	16	20	35	42	22	26	15	15	12	19	244	47.6%
Snaring (3)	12	7	20	21	14	8	13	4	3	3	4	109	21.2%
Other (4) ^b	0	0	1	0	1	1	0	0	0	0	0	3	0.6%
Unknown	1	0	0	0	1	0	0	0	0	24	0	26	5.1%
Total	42	40	60	68	74	43	53	28	26	43	36	513	100%

Table 6.-Method of wolf harvest by Alaska residents in regulatory years 1997-2007, GMU 3.

Harvest method	1997 ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Shooting (1)	7	14	18	9	13	18	17	8	14	6	8	132	29.3%
Trapping (2)	22	15	28	30	28	37	12	14	24	23	6	239	53.0%
Snaring (3)	7	1	6	8	5	2	7	15	12	10	0	73	16.2%
Other (4) ^b	0	0	0	1	2	3	0	1	0	0	0	7	1.6%
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0.0%
Total	36	30	52	48	48	60	36	38	50	39	14	451	100%

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

Table 7.– Method of wolf harvest by Alaska residents in regulatory years 1997-2007, GMU 5.

Harvest method ^a	1997 ^b	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Shooting (1)	2	0	1	3	2	3	1	3	3	0	3	21	40%
Trapping (2)	0	0	1	3	2	1	0	1	1	3	0	12	23%
Snaring (3)	1	0	0	2	0	6	2	4	0	2	2	19	37%
Other (4) ^c	0	0	0	0	0	0	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0%
Total	3	0	2	8	4	10	3	8	4	5	5	52	100%

Table 8.–Number of wolves shot by Alaska residents in regulatory years 1997-2007, GMUs 1, 3, and 5.

Game Management Unit	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL
1a	6	12	11	7	9	6	12	1	6	0	6	76
1b	0	5	6	4	4	3	0	6	0	1	3	32
1c	1	0	2	1	3	3	2	2	2	3	4	23
1d	3	3	4	1	2	2	2	2	1	2	0	22
GMU-1	10	20	23	13	18	14	16	11	9	6	13	153
GMU-3	7	14	18	9	13	18	17	8	14	6	8	132
GMU-5	2	0	1	3	2	3	1	3	3	0	3	21
Total	19	34	42	25	33	35	34	22	26	12	24	306

^a All wolves were trapped and snared by Yakutat residents, except one trapped wolf and one snared wolf. Yakutat residents shot 7 of the 21 wolves shot by hunters. The others were shot by residents of Fort Richardson, Juneau, North Pole, Soldotna, and Wasilla.

^b For all columns, regulatory year = July 1 through June 30.

^c Such as hit by a vehicle.

^a Regulatory year = July 1 through June 30.

^b Such as hit by a vehicle.

Table 9.—Transportation used by Alaska residents to harvest wolves, subunits 1A, 1B, and 1C, regulatory years 1997-2007.

Transportation method	1997 ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Aircraft (1)	0	3	0	0	0	0	0	1	0	1	3	8	2%
Horse or dog team (2)	0	0	0	0	0	0	0	0	0	0	0	0	0%
Boat (3)	40	34	50	52	63	34	45	19	21	40	28	426	83%
3- or 4-wheeler (4)	0	1	0	1	7	2	1	4	2	1	1	20	4%
Snowmachine (5)	0	0	0	3	0	0	0	0	0	0	2	5	1%
Off-road vehicle (6)	0	0	5	3	0	4	0	0	0	0	0	12	2%
Highway vehicle (7)	2	2	2	5	3	2	7	2	3	1	2	31	6%
Skis or snowshoes (8)	0	0	3	4	0	0	0	1	0	0	0	8	2%
Other (9)	0	0	0	0	0	0	0	1	0	0	0	1	0%
Unknown	0	0	0	0	1	1	0	0	0	0	0	2	0%
Total	42	40	60	68	74	43	53	28	26	43	36	513	100%

Table 10.-Transportation used by Alaska residents to harvest wolves, GMU 3, regulatory years 1997-2007.

Transportation method	1997 ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Aircraft (1)	0	0	2	1	0	0	0	0	0	0	0	3	1%
Horse or dog team (2)	0	0	0	0	0	0	0	0	0	0	0	0	0%
Boat (3)	30	23	37	32	33	40	17	27	37	36	11	323	72%
3- or 4-wheeler (4)	1	0	0	3	1	0	1	0	3	1	0	10	2%
Snowmachine (5)	0	0	0	0	0	0	0	0	0	0	0	0	0%
Off-road vehicle (6)	1	0	3	1	0	2	0	0	2	0	0	9	2%
Highway vehicle (7)	4	7	10	10	13	14	18	11	7	2	1	97	22%
Skis or snowshoes (8)	0	0	0	0	0	2	0	0	0	0	1	3	1%
Other (9)	0		0	0	1	1	0	0	1	0	1	4	1%
Unknown	0	0	0	1	0	1	0	0	0	0	0	2	0%
Total	36	30	52	48	48	60	36	38	50	39	14	451	100%

^a Regulatory year = July 1 through June 30.

^a Regulatory year = July 1 through June 30.

Table 11.- Transportation used by Alaska residents to harvest wolves, GMU 5, regulatory years 1997-2007.

Transportation method	1997 ^a	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage
Aircraft (1)	1	0	1	3	1	2	1	3	3	1	4	20	38%
Horse or dog team (2)	0	0	0	0	0	0	0	0	0	0	0	0	0%
Boat (3)	1	0	0	0	2	0	0	1	0	0	1	5	10%
3- or 4-wheeler (4)	0	0	0	1	1	0	1	0	0	0	0	3	6%
Snowmachine (5)	0	0	0	0	0	0	0	0	0	3	0	3	6%
Off-road vehicle (6)	0	0	0	1	0	0	0	0	0	0	0	1	2%
Highway vehicle (7)	1	0	1	2	0	8	1	4	1	1	0	19	37%
Skis or snowshoes (8)	0	0	0	1	0	0	0	0	0	0	0	1	2%
Other (9)	0	0	0	0	0	0	0	0	0	0	0	0	0%
Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0%
Total	3	0	2	8	4	10	3	8	4	5	5	52	100%

^a Regulatory year = July 1 through June 30.

Table 12.-Wolf harvest chronology, by community, subunits 1A, 1B, and 1C, 1997-2007.

						Year								Percentage of
Alaskan community	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage	total harvest
Ketchikan - Ward Cove	21	20	36	32	32	18	27	5	5	21	20	440	61.5%	59.6%
Petersburg	5	10	10	3	14	8	4	9	10	3	2	78	10.9%	10.6%
Juneau - Auke B Douglas	7	4	3	8	11	5	6	4	0	3	5	56	7.8%	7.6%
Wrangell	2	1	1	3	6	8	5	4	1	4	3	38	5.3%	5.1%
Tok	0	0	4	7	10	4	1	3	4	3	0	36	5.0%	4.9%
Metlakatla	1	1	4	7	0	0	2	2	1	0	2	20	2.8%	2.7%
Meyers Chuck	2	1	0	3	0	0	3	0	2	3	0	14	2.0%	1.9%
Hoonah	0	0	0	0	1	0	2	0	0	5	4	12	1.7%	1.6%
Gustavus	0	1	1	4	0	0	1	1	1	0	0	9	1.3%	1.2%
Sitka	0	1	1	0	0	0	2	0	1	1	0	6	0.8%	0.8%
Haines	2	0	0	0	0	0	0	0	0	0	0	2	0.3%	0.3%
Anchorage	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%
Coffman Cove	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%
Excursion Inlet	0	0	0	0	0	0	0	0	1	0	0	1	0.1%	0.1%
Fairbanks	0	0	0	0	0	0	0	0	0	0	0	0	0.0%	0.0%
Homer	0	0	0	1	0	0	0	0	0	0	0	1	0.1%	0.1%
Hyder	1	0	0	0	0	0	0	0	0	0	0	1	0.1%	0.1%
Soldotna	1	0	0	0	0	0	0	0	0	0	0	1	0.1%	0.1%
Thorne Bay	0	1	0	0	0	0	0	0	0	0	0	1	0.1%	0.1%
Subtotal	42	40	60	68	74	43	53	28	26	43	36	716	100.0%	97.0%
Unknown	0	0	1	0	0	0	0	0	0	1	0	2	0.3%	
Nonresident	1	0	1	2	2	3	1	2	1	6	1	20	2.7%	
Total subunit 1A, 1B, and 1C wolf harvest	43	40	62	70	76	46	54	30	27	50	37	738	100%	

Table 13.– Wolf harvest chronology, by community, GMU 3, 1997-2007.

						Year								Percentage of
Alaskan community	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage	total harvest
Petersburg	22	17	28	26	27	28	6	18	21	27	7	227	50.3%	43%
Wrangell	11	7	12	15	13	19	11	18	10	5	6	127	28.2%	24%
Kake	2	1	3	3	6	5	14	1	4	1		40	8.9%	8%
Ketchikan/ Ward Cove	0	1	3	0	1	0	0	1	4	1	1	12	2.7%	2%
Juneau/ Douglas	0	1	3	3	0	3	1	0	0	0	0	11	2.4%	2%
Hydaburg	0	0	0	0	0	0	0	0	8	0	0	8	1.8%	2%
Tok	0	0	0	1	1	1	3	0	0	2	0	8	1.8%	2%
Klawock	0	0	0	0	0	2	0	0	0	2	0	4	0.9%	1%
Thorne Bay	1	1	0	0	0	0	0	0	2	0	0	4	0.9%	1%
Point Baker	0	1	1	0	0	1	0	0	0	0	0	3	0.7%	1%
Sitka	0	0	1	0	0	0	0	0	1	1	0	3	0.7%	1%
Anchorage	0	0	0	0	0	1	1	0	0	0	0	2	0.4%	0%
Port Alexander	0	0	1	0	0	0	0	0	0	0	0	1	0.2%	0%
Prudhoe Bay	0	1	0	0	0	0	0	0	0	0	0	1	0.2%	0%
Subtotal	36	30	52	48	48	60	36	38	50	39	14	451	100.0%	86%
Total resident													86.4%	
Nonresident	7	4	5	11	5	13	3	3	10	5	5	71	13.6%	
Total GMU 3														
wolf harvest	43	34	57	59	53	73	39	41	60	44	19	522	100%	

21

Table 14.– Wolf harvest chronology, by community, GMU 5, 1997-2007.

						Year								
Alaskan community	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	TOTAL	Percentage	Percentage of total harvest
Yakutat	1	0	0	5	3	9	2	5	3	5	3	36	69.2%	47%
Juneau	1	0	2	0	0	0	1	2	0	0	1	7	13.5%	9%
Wasilla	1	0	0	2	0	1	0	0	0	0	0	4	7.7%	5%
North Pole	0	0	0	0	0	0	0	0	1	0	1	2	3.8%	3%
Soldotna	0	0	0	1	1	0	0	0	0	0	0	2	3.8%	3%
Anchorage/Fort Richardson	0	0	0	0	0	0	0	1	0	0	0	1	1.9%	1%
Subtotal	3	0	2	8	4	10	3	8	4	5	5	52	100.0%	68%
Total resident												52	67.5%	
Nonresident	0	7	1	3	2	3	2	0	3	3	1	25	32.5%	
Total GMU 5														
wolf harvest	3	7	3	11	6	13	5	8	7	8	6	77	100%	