

# **Subsistence Wildlife Harvests in Five Northwest Alaska Communities, 2001-2003**

**Results of a household survey by Kawerak, Inc., Maniilaq Association,  
and the Alaska Department of Fish and Game**

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## **Introduction**

Caribou and other large game are important sources of food and material for families in northwest Alaska. Information on the local uses of these animals is important for effectively managing wildlife and for fully providing for the subsistence priority as required by law. In 1999, the Alaska Department of Fish and Game, Maniilaq Association, and Kawerak, Inc. began a cooperative project to gather big game harvest information from households in northwest Alaska.

In the first year, harvest information was collected from three villages (Shungnak, Koyuk, and Shaktoolik). In the following year, the project was expanded to six communities in the region, three in Norton Sound and three in Kotzebue Sound (White Mountain, Elim, Shaktoolik, Selawik, Kiana, and Noatak). In 2001, the project continued, focusing on four communities on the western Seward Peninsula (Teller, Brevig Mission, Wales, and Shishmaref).

In 2002, harvest information was collected from the Norton Sound community of Golovin (pop. 148), and in 2003 from Unalakleet (pop. 725) and Stebbins (pop. 586) in Norton Sound and from Noorvik (pop. 677) and Noatak (pop. 455) in Kotzebue Sound. This report summarizes the results of the data collection in 2002 and 2003. Golovin, Unalakleet, and Stebbins are located along the coast in Game Management Unit 22, near the southern periphery of the Western Arctic caribou herd's winter range in recent years. Noatak and Noorvik are located along major rivers in Game Management Unit 23 within the core spring and fall migration area of the Western Arctic herd.

## **Who Did the Project?**

Maniilaq Association and Kawerak, Inc., two regional Alaska Native organizations in northwest Alaska, worked cooperatively with the Alaska Department of Fish and Game (ADF&G) on this project. The village tribal councils approved the project before it began. Local residents in each community worked with ADF&G to conduct the surveys. The Division of Subsistence analyzed the data and prepared this project summary. Funding for the project came from ADF&G's Division of Wildlife Conservation and the National Park Service.

## **How Was the Project Done?**

A household survey was used to gather information on caribou, moose, bear, wolf, and wolverine hunting for a 12-month period. The survey year covered May 2001 through April 2002 in Golovin; November 2001 through October 2002 in Noatak; January 2002 through December 2002 in Noorvik; and May 2002 through April 2003 in Unalakleet and Stebbins. The survey form for the Norton Sound communities was somewhat different from the one for the Kotzebue Sound communities. Examples of the survey forms are included in the appendices. Surveys were done in person with 60-95% of the households in each of the communities (Table 1). Household identities remained confidential. The survey data were expanded to account for the households not surveyed.

**Table 1. Percent of Households Interviewed and Survey Year**

	Total Households	Surveyed Households	Percent of Total	Survey Period
Noatak	101	87	86.1%	Nov 2001-Oct 2002
Noorvik	154	101	65.6%	Jan-Dec 2002
Golovin	40	34	85.0%	May 2001-Apr 2002
Unalakleet	236	223	94.5%	May 2002-Apr 2003
Stebbins	131	79	60.3%	May 2002-Apr 2003
<b>Total</b>	<b>662</b>	<b>524</b>	<b>79.2%</b>	

## **What Were the Project Results?**

The attached tables and figures summarize the data collected in this project. For comparative purposes, several of the tables also include data from previous years' surveys in other northwest Alaska communities. Brief narrative summaries by species of the current survey results are presented below. Observations and comments of respondents on each species and on wildlife management in general are included in Appendices 1-4.

### **Caribou**

Caribou were widely used in all the study communities except Stebbins. In Golovin and Unalakleet, 78-88% of households used caribou during the 12-month period, and in Noatak and Noorvik 91-95% of households used caribou (Table 2). The number of caribou harvested included 94 in Golovin, 167 in Unalakleet, 410 in Noatak, and 988 in Noorvik.

In Golovin, the average household harvest was 2.8 caribou, similar to that in nearby communities such as Elim, Koyuk, and Shaktoolik. In Unalakleet, the average household harvest was 0.7 caribou, which was comparable to other communities on the periphery of the herd's range, such as White Mountain and Brevig Mission (Table 2). During the 2002-03 survey period, caribou did not winter as close to Unalakleet as in other recent years, so the community's harvest was likely lower than in years when caribou are more accessible.

In Noatak, the average household harvest was 4.1 caribou, and in Noorvik 6.4 caribou. These communities, along with others in GMU 23, have fairly predictable access to caribou during the spring and fall migrations, and typically harvest substantially more caribou per household than communities in GMU 22.

In Stebbins, no households reported harvesting caribou during the study year. Located at the southern edge of the herd's winter range, Stebbins did not have ready access to caribou during the survey period because the herd did not winter as far south as it does in some years. About 5% of Stebbins households used caribou, obtaining this resource through trade and sharing networks.

The caribou harvest was predominantly bulls in Noatak, Noorvik, and Unalakleet (Fig. 1). In Golovin, the opposite was the case with female caribou comprising more than one-half of the harvest.

The timing of the harvest varied among the communities, indicating the seasonal differences in caribou availability. In Noatak, the caribou harvest overwhelmingly took place in fall, while in Unalakleet nearly all the harvest took place in winter and spring (Fig. 2). Noorvik and Golovin fell between these two extremes, with Noorvik's harvest predominantly in the fall and Golovin's in the spring.

The success rate in caribou hunting was fairly high (76-99%) in all the communities except Stebbins (Fig. 3). In Stebbins, 6% of households attempted to harvest caribou, none of which were successful.

Table 3 lists the areas (by Uniform Coding Unit) used for caribou hunting by Unalakleet and Stebbins households. In Unalakleet, the area used by the most households during the study year was the upper Koyuk River, followed by the Fish River drainage. In Stebbins, no households harvested caribou, but three reported areas they used for hunting, all of them in GMU 22A (Table 3). Information on caribou hunting areas was not collected in GMU 23 communities.

Unalakleet households overwhelmingly reported that caribou were less available in the 2002-03 season than in the previous year (Fig. 6). In Stebbins, 40% of responding households reported that caribou were less available, while another 40% said availability was the same as or greater than the previous year.

Households harvesting caribou in all four of the communities said that some of the caribou they killed during the study year did not look healthy enough to eat. The number of caribou killed but not eaten ranged from 1 in Unalakleet to 52 in Noorvik, or 1-5% of the caribou harvest in each of these communities (Table 4). Respondents' comments on the health, condition, movement, and availability of caribou are included in Appendix 1.

## **Moose**

Moose were widely used by households in Unalakleet and Noorvik (67-68%), and less widely used by households in Golovin (47%), Stebbins (42%), and Noatak (22%) (Table 5). In each of these communities except Stebbins, more households used caribou than moose. In Stebbins the opposite was the case, with far more households using moose than caribou, probably due to the community's lack of access to caribou during the survey year.

In Stebbins and Unalakleet, 12-14% of households harvested moose. In Noatak, 3% of households harvested moose, while in Noorvik 28% of households harvested moose. No households in Golovin reported harvesting moose during the survey year.

A total of 108 moose were taken by the four communities during the study year: 20 in Stebbins, 29 in Unalakleet, 56 in Noorvik, and 3 in Noatak (Table 5). The average household harvests in Stebbins and Unalakleet were similar (0.1-0.2 moose), while the average household harvest in

Noorvik (0.4 moose) was similar to that in previous surveys in Selawik and Shungnak. The success rate in moose hunting ranged from 32-64% in all the communities except Golovin (Fig. 3). In Golovin, 3% of households attempted to harvest moose, none of which were successful.

In each community, bulls comprised all or nearly all of the moose harvest (Fig. 4). Only in Noorvik did households report taking cows. Overall, of the harvested moose whose sex was known, 94% were bulls (Table 6).

Moose harvests ranged from August through January (Fig. 5). Of the total harvest whose timing was known, 76% took place in August and September, 17% in December, and the remainder in October, November, and January (Table 6). In Noatak, Noorvik, and Unalakleet, all or nearly all the moose harvest took place in the fall (August-October). In Stebbins, December was the primary month for moose harvests (Fig. 5). Information on moose harvest locations by uniform coding unit (UCU) for GMU 22 communities is presented in Table 7.

Unalakleet and Stebbins had mixed responses on how the availability of moose in the survey year compared to the previous year. About one-third of the households responding in each community reported less availability of moose, while an additional one-third reported the same availability (Fig. 7). About 14-21% of households in each community thought moose availability had increased from the previous year. No households reported harvesting a moose that did not look healthy enough to eat. Respondents' comments on the health, condition, movement, and availability of moose are included in Appendix 2.

### **Brown and Black Bear**

Brown bear was used most widely in Noorvik, where 15% of households used this resource during the survey year (Table 8). In the other four communities, brown bear was used by 0-3% of households. Noorvik households took an estimated five brown bears during the survey year. Stebbins took an estimated two, Golovin and Noatak one each, and Unalakleet none (Table 8). In Unalakleet, 86% of households responding thought that brown bear availability was either similar to or greater than the previous year (Fig. 8). In Stebbins, all the households responding thought that brown bear availability was either similar to or less than the previous year.

Noorvik also had the greatest use of black bear, with 22% of households using this resource. An estimated 14 black bears were taken by Noorvik households during the survey year (Table 9). In Unalakleet, 1% of households used black bear, and one black bear was harvested. The majority (58%) of Unalakleet households reported that black bear availability during the survey year was similar to the previous year (Fig. 9). No households in Golovin and Stebbins reported using or harvesting black bear (Table 9); these communities are located on the periphery of black bear habitat. Black bear was not included on the Noatak survey because this animal is generally not available to the community. Comments from respondents on the health, condition, movement, and availability of bear are included in Appendix 3.

## Wolf and Wolverine

Wolverines were taken in all of the communities except Golovin during the 12-month survey period. Community wolverine harvests ranged from 5-38 animals with 2-4% of households harvesting them (Table 10).

Wolves were taken in all five communities with harvests ranging from 3-52 animals. About 2-6% of households harvested wolves in each of the communities (Table 10). Noorvik had the highest average household harvest of both wolves and wolverines among the study communities.

Unalakleet had mixed responses on how the availability of wolves in the survey year compared to the previous year. About one-third of respondents thought wolves were more available, one-third thought less available, and one-third thought availability was the same as the previous year (Fig. 10). About 77% of Unalakleet respondents and 75% of Stebbins respondents reported that wolverine availability was the same as or more than the previous year (Fig. 11). The majority (57%) of Stebbins respondents believed wolves were more available this year. Respondents' comments on the health, condition, movement, and availability of wolf and wolverine are included in Appendix 3.

## **Thank You!**

Kawerak, Maniilaq Association, and the Alaska Department of Fish and Game are grateful to the residents of Golovin, Unalakleet, Stebbins, Noatak, and Noorvik for their graciousness and generosity, making this project a great success. A special thanks is extended to the tribal councils for supporting the project and to Jack Fagerstrom in Golovin, Peter Nanouk, Jr. in Unalakleet, Ignatius Matthias, Sr. in Stebbins, and Arlene Moo and Jonah Walton, Jr. in Noatak for conducting surveys. In Noorvik, science teacher Mike Sellers skillfully guided several of his students through the surveying process: Darren Zibell, Francis Smith, Jon Adams, Jordan Snyder, Alvin Morris, and Alan Black. Kate Persons and Tony Gorn of ADF&G in Nome also assisted in surveying. Sandra Tahbone of Kawerak shepherded this project along by obtaining community approvals in GMU 22, keeping the work on schedule, and offering insightful suggestions. Enoch Shiedt of Maniilaq Association obtained community approvals in GMU 23 and provided excellent suggestions at critical times. Bob Walker, Ron Paciorek, and Jessie Mallery of ADF&G in Anchorage untiringly handled the data analysis process. John Trent of ADF&G and Ken Adkisson of the National Park Service provided funding as well as unflagging support. Our heartfelt thanks to everyone!

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## TABLES AND FIGURES

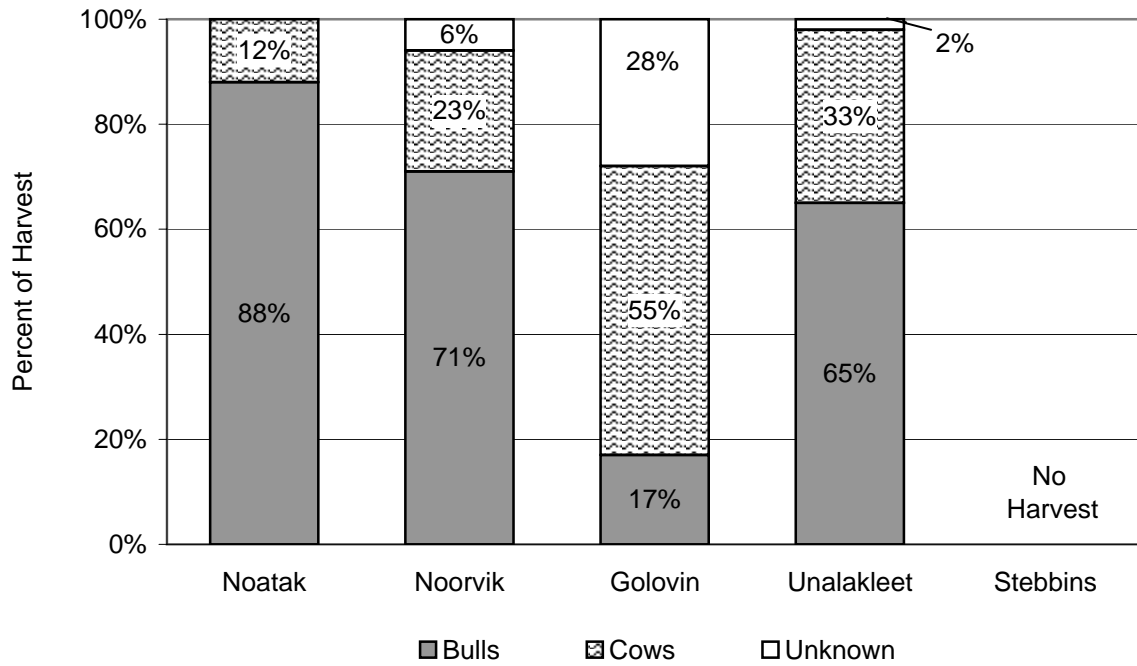


**Table 2. Western Arctic Caribou Harvests, Northwest Alaska, By Community, 1998-2003**

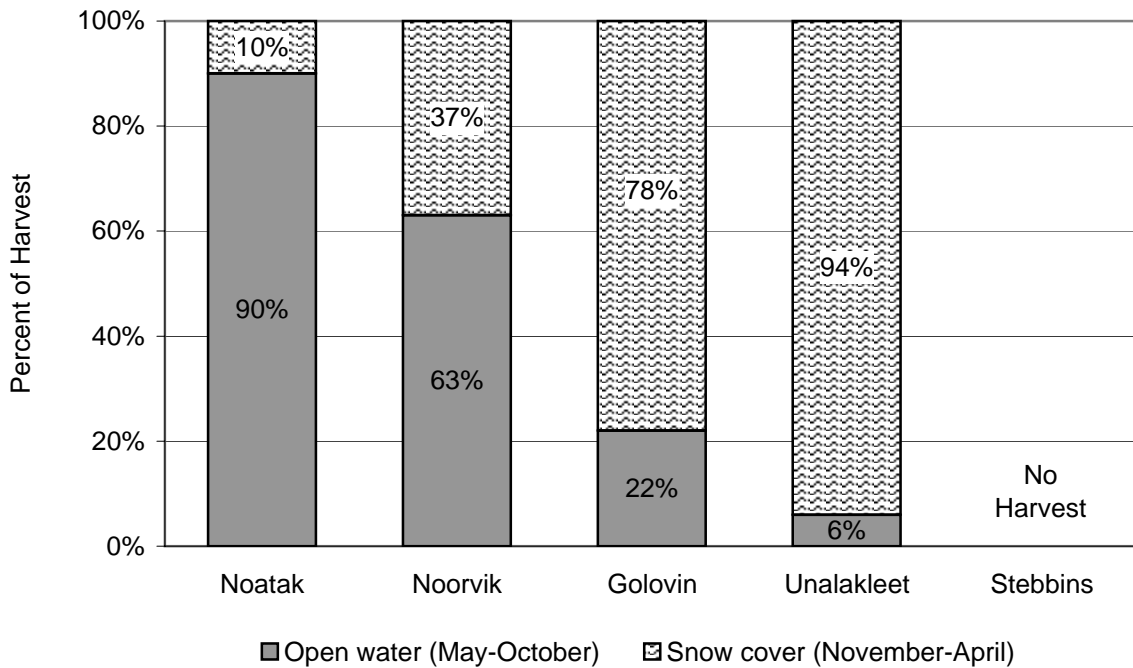
Community	Harvest Year	Community Population (in Survey Year)	Percentage of Households:					Number Harvested	Average Household Harvest
			Using Caribou	Attempting to Harvest Caribou	Harvesting Caribou	Receiving Caribou	Giving Caribou		
<b>GMU 22</b>									
Brevig Mission	2000-01	286	85%	24%	20%	71%	29%	76	1.1
Elim	1999-2000	313	96%	70%	66%	81%	60%	227	2.8
<b>Golovin</b>	<b>2001-02</b>	<b>148</b>	<b>88%</b>	<b>53%</b>	<b>44%</b>	<b>71%</b>	<b>44%</b>	<b>94</b>	<b>2.8</b>
Koyuk	1998-99	280	97%	66%	59%	64%	53%	263	3.6
Shaktolik	1998-99	218	94%	59%	53%	88%	51%	167	3.0
Shaktolik	1999-2000	230	94%	47%	45%	78%	29%	125	2.1
Shishmaref	2000-01	589	82%	38%	33%	66%	34%	286	1.9
<b>Stebbins</b>	<b>2002-03</b>	<b>586</b>	<b>5%</b>	<b>6%</b>	<b>0%</b>	<b>5%</b>	<b>0%</b>	<b>0</b>	<b>0.0</b>
Teller	2000-01	241	59%	8%	6%	54%	6%	21	0.3
<b>Unalakleet</b>	<b>2002-03</b>	<b>725</b>	<b>78%</b>	<b>20%</b>	<b>15%</b>	<b>66%</b>	<b>15%</b>	<b>167</b>	<b>0.7</b>
Wales	2000-01	159	23%	2%	0%	23%	7%	0	0.0
White Mountain	1999-2000	203	65%	36%	33%	42%	29%	93	1.3
<b>GMU 23</b>									
Kiana	1999	398	97%	68%	65%	75%	52%	488	5.1
Noatak	1999	423	96%	74%	72%	62%	61%	683	6.9
<b>Noatak</b>	<b>2001-02</b>	<b>455</b>	<b>91%</b>	<b>76%</b>	<b>71%</b>	<b>64%</b>	<b>61%</b>	<b>410</b>	<b>4.1</b>
<b>Noorvik</b>	<b>2002</b>	<b>677</b>	<b>95%</b>	<b>72%</b>	<b>71%</b>	<b>59%</b>	<b>60%</b>	<b>988</b>	<b>6.4</b>
Selawik	1999	767	97%	61%	61%	84%	75%	1,289	8.3
Shungnak	1998-99	255	100%	74%	72%	35%	56%	561	10.0

Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.

**Fig. 1. Caribou Harvests by Sex in Five Northwest Alaska Communities, 2001-03**



**Fig. 2. Caribou Harvests by Season in Five Northwest Alaska Communities, 2001-03**



Source: Kawerak, Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 2001-03.

**Table 3. Caribou Hunting Areas, Unalakleet and Stebbins, 2002-03**

Uniform Coding Unit	Unalakleet		Stebbins	
	Number of Households	% of Caribou Hunting Households Responding	Number of Households	% of Caribou Hunting Households Responding
<b>GMU 21E</b>	1	2%	0	0%
<b>GMU 22A</b>				
Nunakogok River (22A-0101)	0	0%	1	33%
Klikitarik/Golsovia (22A-0201)	0	0%	1	33%
Unalakleet River (22A-0301)	4	9%	0	0%
South River (22A-0302)	2	5%	0	0%
North River (22A-0303)	3	7%	0	0%
North Fork (22A-0305)	3	7%	0	0%
Poker Flats (22A-0307)	0	0%	1	33%
Egavik River (22A-0401)	2	5%	0	0%
Ungalik River (22A-0601)	1	2%	0	0%
Unspecified (22A-0000)	2	5%	0	0%
<b>GMU 22B</b>				0%
Inglutalik River (22B-0101)	5	12%	0	0%
Koyuk River (22B-0201)	4	9%	0	0%
Upper Koyuk R. above Peace R. (22B-0202)	18	42%	0	0%
Tubutulik River (22B-0302)	2	5%	0	0%
Kwiniuk River (22B-0303)	3	7%	0	0%
West of Darby Mt. Divide (22B-0400)	1	2%	0	0%
Fish River (22B-0402)	7	16%	0	0%
<b>GMU 22E</b>				0%
Unspecified (22E-0000)	1	2%	0	0%
<b>GMU 23</b>				0%
Upper Kobuk River (23-2301)	1	2%	0	0%

Source: Kawerak, Inc. and Alaska Department of Fish and Game, Household Surveys, 2003.

**Table 4. Reported Harvests of Unhealthy Caribou, Northwest Alaska, By Community, 1998-2003**

Community	Harvest Year	Households Harvesting Unhealthy Caribou*		Number of Unhealthy Caribou Harvested	Percent of Total Community Harvest
		Number	Percent**		
<b>GMU 22</b>					
Brevig Mission	2000-01	5	38.5%	10	13.5%
Elim	1999-2000	4	7.7%	4	1.8%
<b>Golovin</b>	<b>2001-02</b>	<b>3</b>	<b>20.0%</b>	<b>6</b>	<b>6.4%</b>
Koyuk	1998-99	7	17.1%	9	3.4%
Shaktoolik	1998-99	5	18.5%	8	4.8%
Shaktoolik	1999-2000	1	4.3%	1	0.8%
Shishmaref	2000-01	4	8.5%	8	2.8%
<b>Stebbins</b>	<b>2002-03</b>	<b>0</b>	<b>0.0%</b>	<b>0</b>	<b>0.0%</b>
Teller	2000-01	0	0.0%	0	0.0%
<b>Unalakleet</b>	<b>2002-03</b>	<b>1</b>	<b>3.2%</b>	<b>1</b>	<b>0.6%</b>
Wales	2000-01	0	0.0%	0	0.0%
White Mountain	1999-2000	1	4.5%	1	1.1%
<b>GMU 23</b>					
Kiana	1999	13	31.7%	28	5.7%
Noatak	1999	15	23.1%	22	3.2%
<b>Noatak</b>	<b>2001-02</b>	<b>13</b>	<b>21.7%</b>	<b>18</b>	<b>4.4%</b>
<b>Noorvik</b>	<b>2002</b>	<b>24</b>	<b>33.3%</b>	<b>52</b>	<b>5.3%</b>
Selawik	1999	15	17.6%	20	1.6%
Shungnak	1998-99	8	20.5%	14	2.5%

\* These are households that responded "yes" to the question: "Did anyone in your household kill but not eat caribou last year because they did not look healthy?"

\*\* This is the percentage of households that harvested caribou, not the percentage of all households.

Note: Hunters reported a variety of symptoms in unhealthy caribou including pus in joints, discolored meat and organs, lack of fat, cysts and lumps, excessive warble fly larvae, and worms in the meat.

Source: Kawerak, Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.

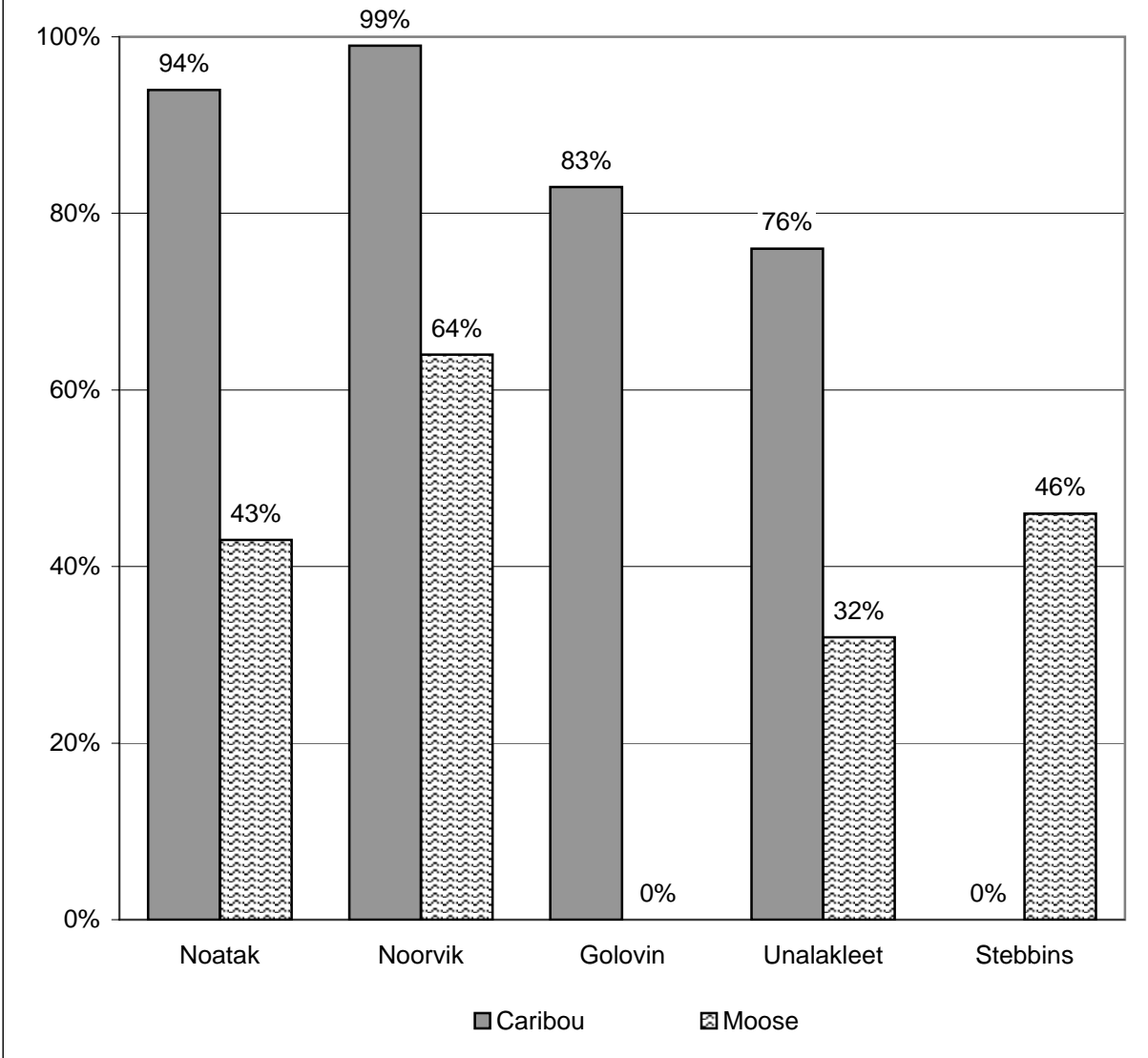
**Table 5. Moose Harvests, Northwest Alaska, By Community, 1998-2003**

Community	Harvest Year	Community Population (in Survey Year)	Percentage of Households:					Number Harvested	Average Household Harvest
			Using Moose	Attempting to Harvest Moose	Harvesting Moose	Receiving Moose	Giving Moose		
<b>GMU 22</b>									
Brevig Mission	2000-01	286	86%	36%	29%	77%	35%	24	0.4
Elim	1999-2000	313	76%	44%	19%	66%	30%	14	0.2
<b>Golovin</b>	<b>2001-02</b>	<b>148</b>	<b>47%</b>	<b>3%</b>	<b>0%</b>	<b>47%</b>	<b>0%</b>	<b>0</b>	<b>0</b>
Koyuk	1998-99	280	90%	60%	30%	73%	31%	23	0.3
Shaktoolik	1998-99	218	82%	53%	33%	69%	37%	21	0.4
Shaktoolik	1999-2000	230	69%	33%	22%	61%	20%	14	0.2
Shishmaref	2000-01	589	74%	32%	24%	65%	24%	44	0.3
<b>Stebbins</b>	<b>2002-03</b>	<b>586</b>	<b>42%</b>	<b>30%</b>	<b>14%</b>	<b>29%</b>	<b>11%</b>	<b>20</b>	<b>0.2</b>
Teller	2000-01	241	68%	29%	9%	60%	8%	7	0.1
<b>Unalakleet</b>	<b>2002-03</b>	<b>725</b>	<b>67%</b>	<b>38%</b>	<b>12%</b>	<b>60%</b>	<b>14%</b>	<b>29</b>	<b>0.1</b>
Wales	2000-01	159	61%	41%	32%	48%	27%	14	0.3
White Mountain	1999-2000	203	70%	42%	23%	52%	24%	17	0.2
<b>GMU 23</b>									
Kiana	1999	398	30%	13%	8%	22%	6%	8	*
Noatak	1999	423	18%	4%	3%	14%	4%	4	*
<b>Noatak</b>	<b>2001-02</b>	<b>455</b>	<b>22%</b>	<b>8%</b>	<b>3%</b>	<b>20%</b>	<b>6%</b>	<b>3</b>	*
<b>Noorvik</b>	<b>2002</b>	<b>677</b>	<b>68%</b>	<b>44%</b>	<b>28%</b>	<b>54%</b>	<b>29%</b>	<b>56</b>	<b>0.4</b>
Selawik	1999	767	55%	33%	29%	41%	38%	64	0.4
Shungnak	1998-99	255	50%	32%	30%	20%	28%	21	0.4

\* Less than 0.1.

Source: Kawerak, Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.

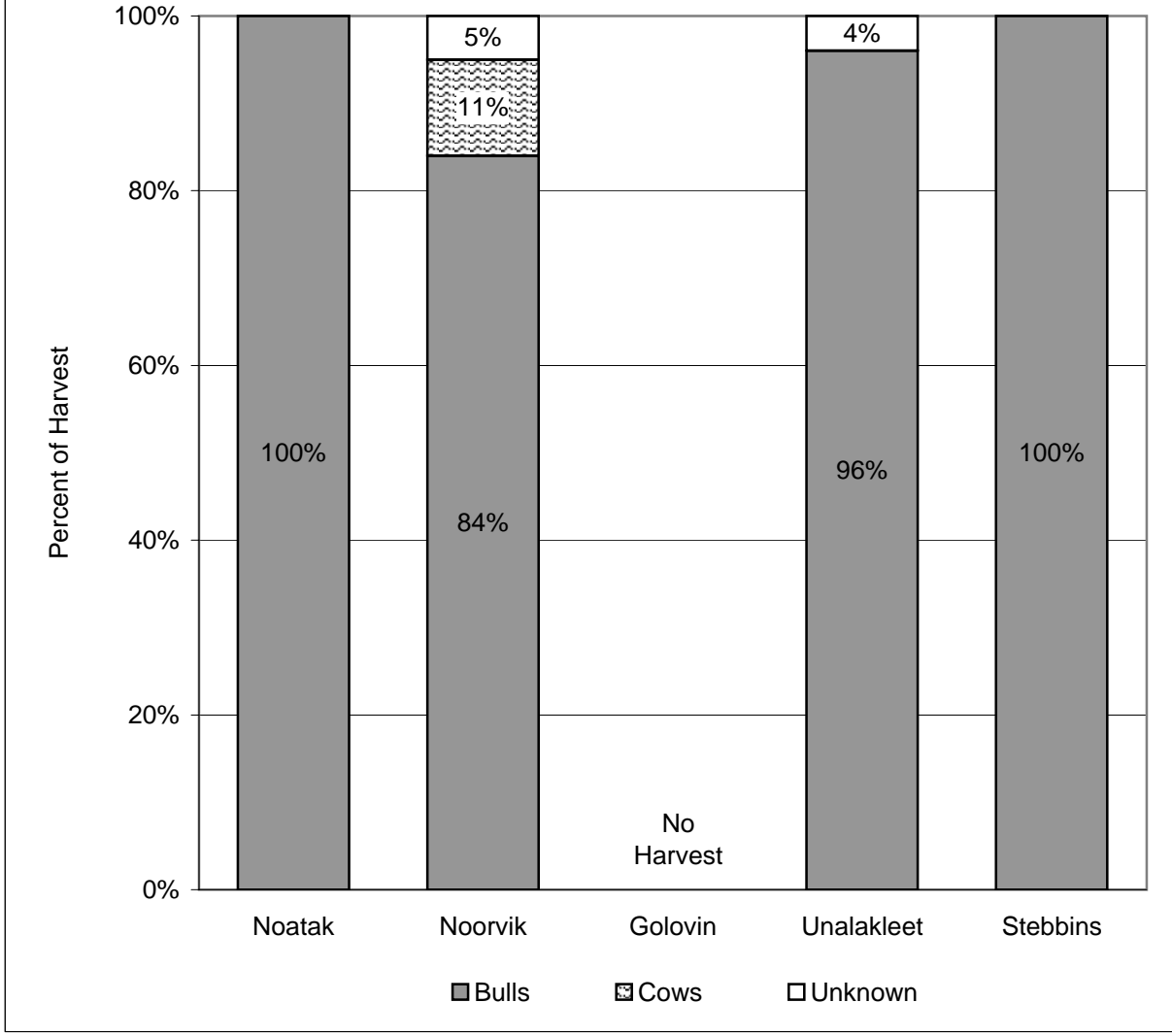
**FIG. 3. HOUSEHOLD SUCCESS RATE IN CARIBOU AND MOOSE HUNTING IN FIVE NORTHWEST ALASKA COMMUNITIES, 2001-03**



Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 2003.



**FIG. 4. MOOSE HARVESTS BY SEX IN FIVE NORTHWEST ALASKA COMMUNITIES, 2001-03**



Source: Kawerak, Inc., Maniilaq Association, and the Alaska Department of Fish and Game, Household Surveys, 2003.

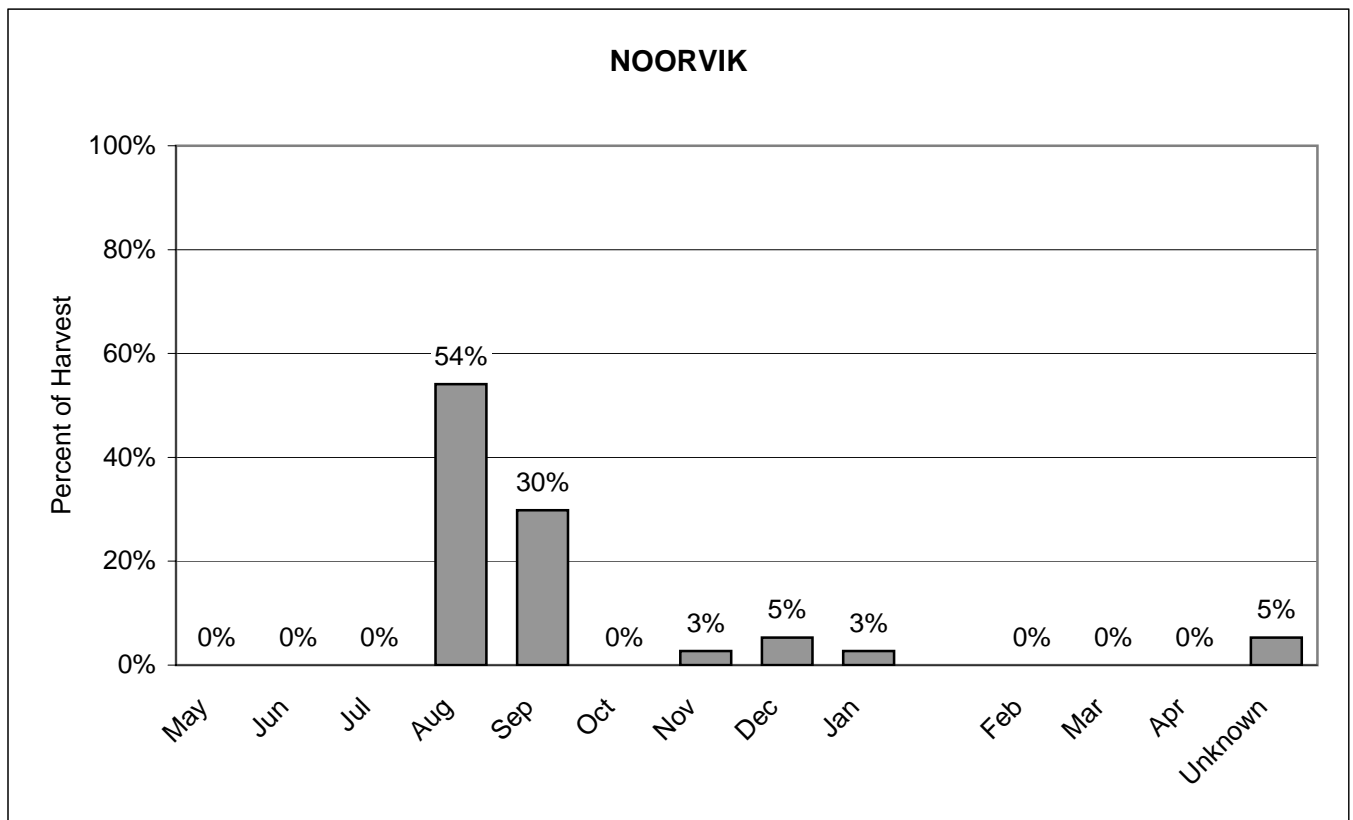
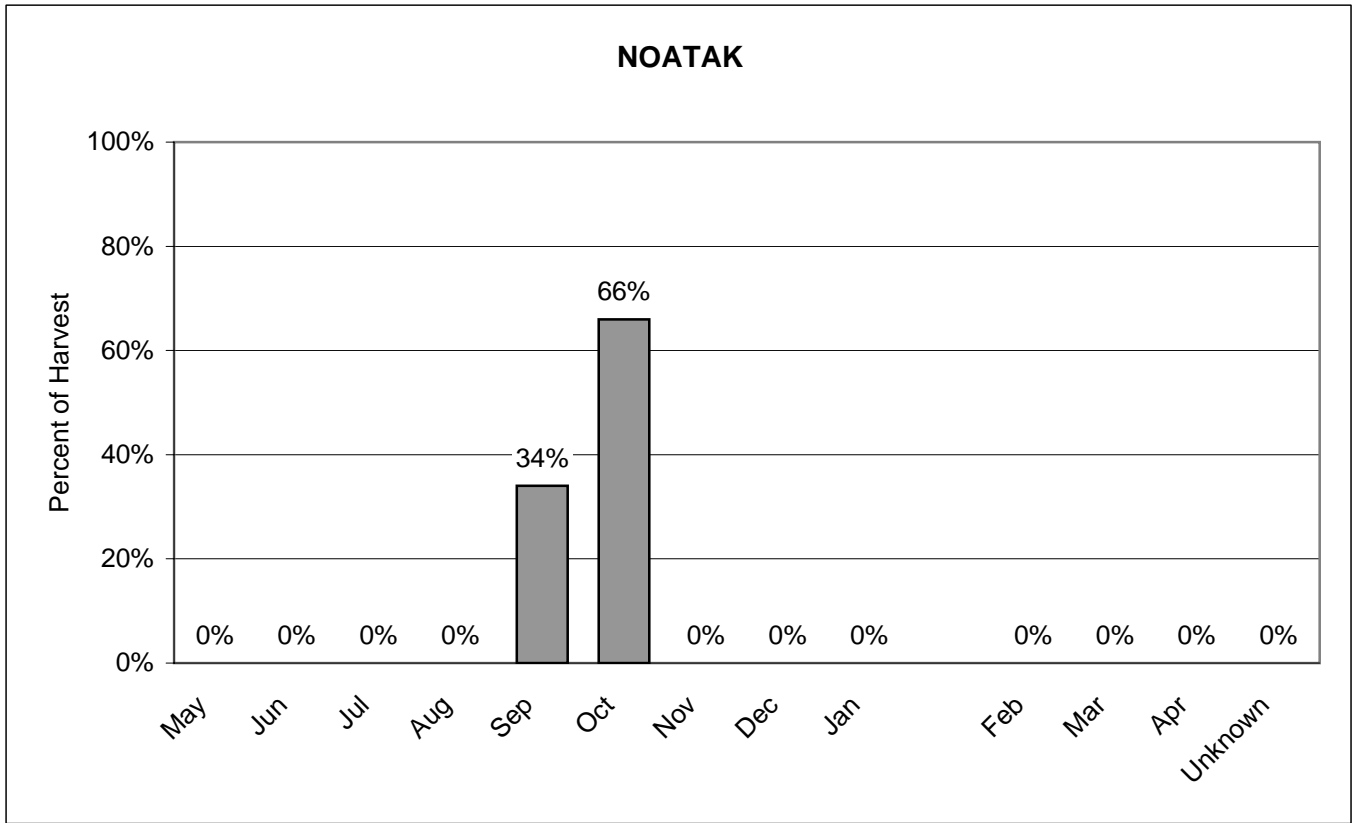
**Table 6. Moose Harvests by Sex and by Month in Five Northwest Alaska Communities, 2001-03**

Community	Sex of Moose	Number of Moose Harvested by Month*													Total
		May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Unknown	
Noatak (Nov. 2001- Oct. 2002)	Cow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bull	0	0	0	0	1	2	0	0	0	0	0	0	0	0
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Noorvik (Jan.-Dec. 2002)	Cow	0	0	0	3	2	0	0	2	0	0	0	0	0	6
	Bull	0	0	0	27	15	0	2	2	2	0	0	0	0	47
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	3	3
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>30</b>	<b>17</b>	<b>0</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>56</b>
Golovin (May 2001- Apr. 2002)	Cow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bull	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
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Unalakleet (May 2002- Apr. 2003)	Cow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bull	0	0	0	4	23	0	0	0	0	0	0	0	0	28
	Unknown	0	0	0	0	1	0	0	0	0	0	0	0	0	1
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>24</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>29</b>
Stebbins (May 2002- Apr. 2003)	Cow	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Bull	0	0	0	2	0	0	0	15	2	0	0	0	2	20
	Unknown	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>15</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>20</b>
<b>Total</b>	Cow	0	0	0	3	2	0	0	2	0	0	0	0	0	6
	Bull	0	0	0	33	40	2	2	16	3	0	0	0	2	98
	Unknown	0	0	0	0	1	0	0	0	0	0	0	0	3	4
	<b>Total</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>36</b>	<b>42</b>	<b>2</b>	<b>2</b>	<b>18</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>108</b>

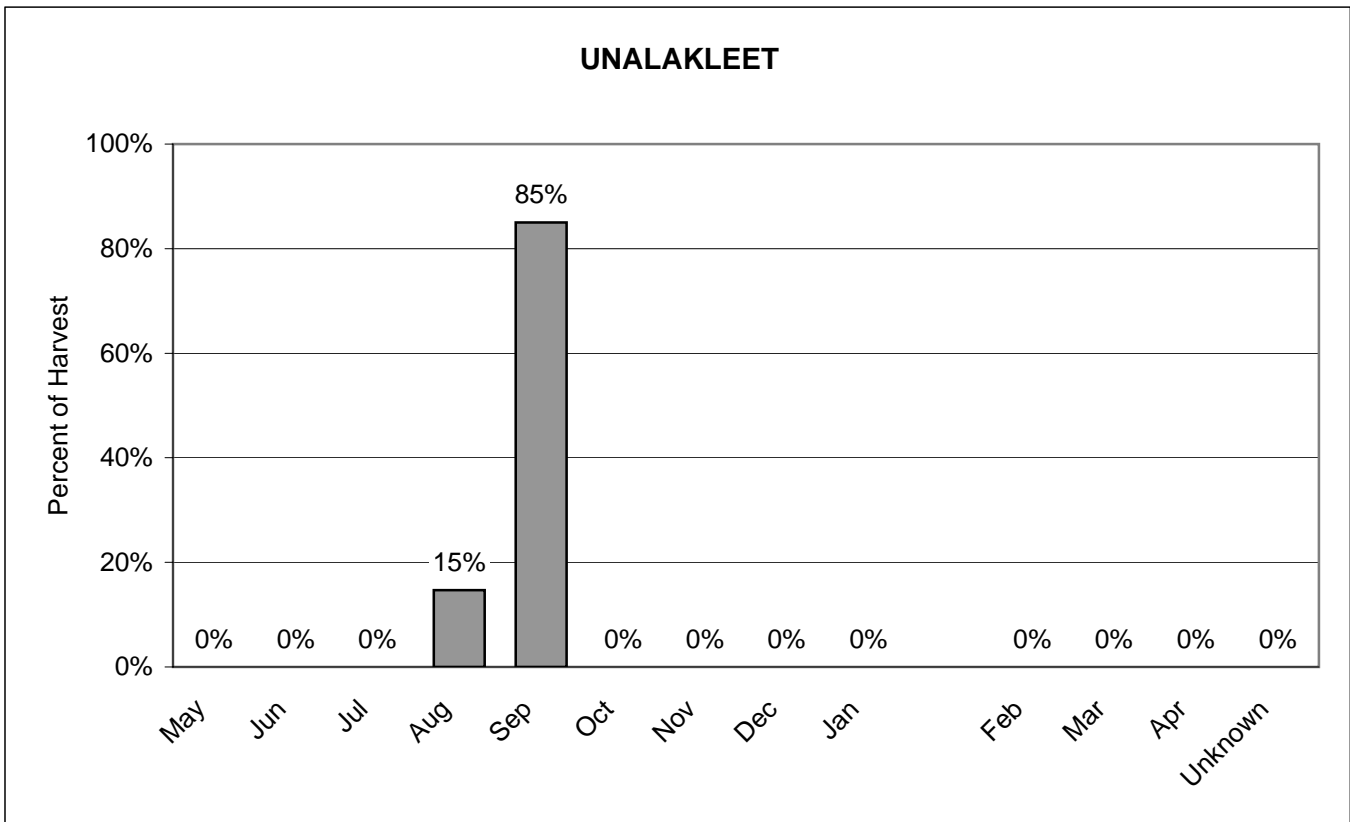
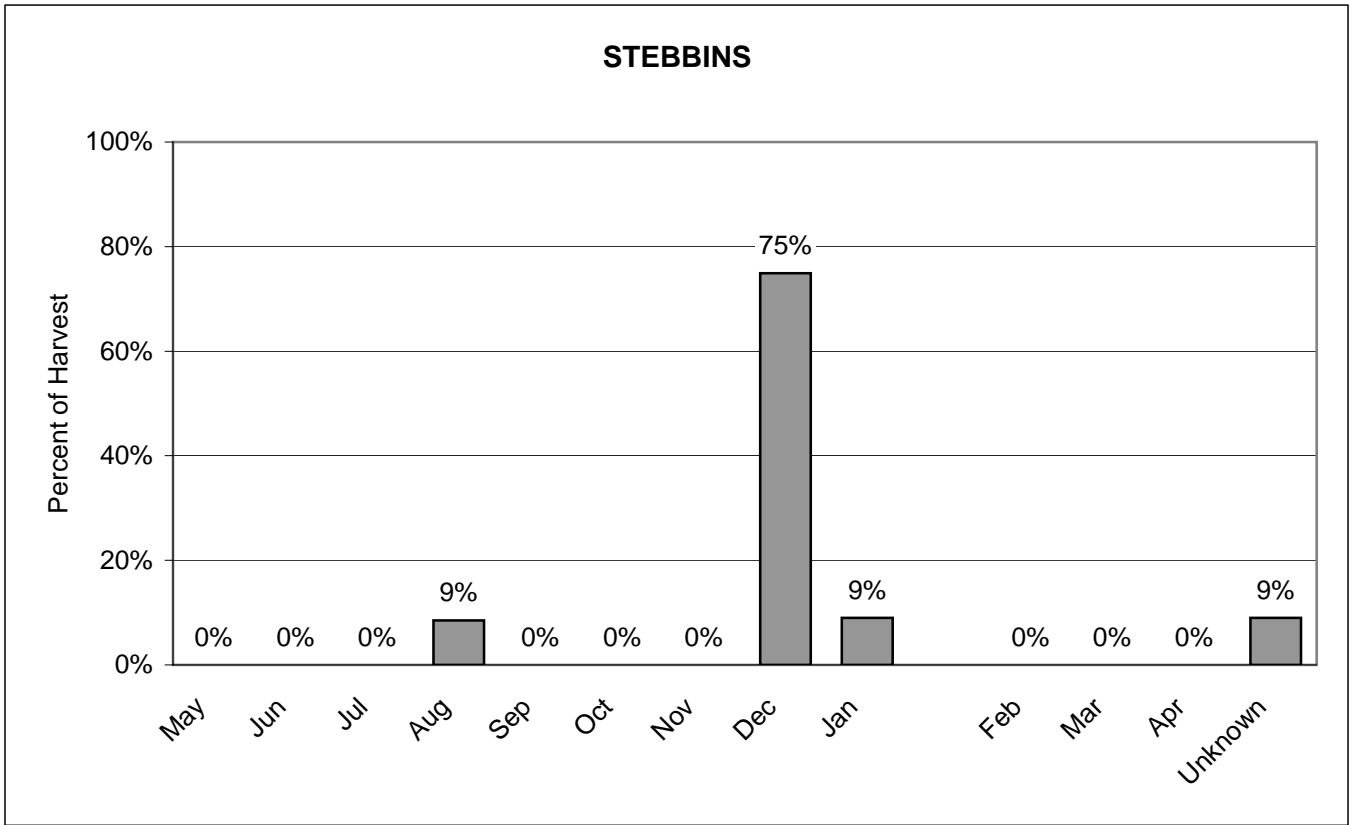
\* Some columns and rows do not add up due to rounding error. Fractions of moose result from expansion of data.

Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 2003.

**FIG. 5. MOOSE HARVESTS BY MONTH IN FOUR NORTHWEST ALASKA COMMUNITIES, 2002-03**



**FIG. 5. (CON'T) MOOSE HARVESTS BY MONTH IN FOUR NORTHWEST ALASKA COMMUNITIES, 2002-03**



**Table 7. Moose Harvests by Uniform Coding Unit in Three Norton Sound Communities, 2001-03**

Uniform Coding Unit	Number of Moose*			Percent of Total
	Golovin	Unalakleet	Stebbins	
Unspecified GMU 18	0	0	2	4%
<b>Subtotal GMU 18</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>4%</b>
Unspecified GMU 21	0	1	0	2%
<b>Subtotal GMU 21</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>2%</b>
Pikmiktalik River (22A-0101)	0	0	12	24%
Nunayulnuk (22A-0102)	0	0	2	4%
Klikitarik/Golsovia (22A-0201)	0	0	3	7%
Unalakleet River (22A-0301)	0	13	0	26%
South River (22A-0302)	0	2	0	4%
North River (22A-0303)	0	10	0	20%
Chiroskey River (22A-0304)	0	1	0	2%
Egavik River (22A-0401)	0	1	0	2%
Ungalik River (22A-0601)	0	1	0	2%
Unspecified 22A	0	0	2	4%
<b>Subtotal GMU 22</b>	<b>0</b>	<b>28</b>	<b>18</b>	<b>95%</b>
<b>Total</b>	<b>0</b>	<b>29</b>	<b>20</b>	<b>100%</b>

\*Some columns and rows do not add up due to rounding error. Fractions of moose result from expansion of data.

Source: Kawerak and Alaska Department of Fish and Game, Household Surveys, 2003.

**Table 8. Brown Bear Harvests, Northwest Alaska, By Community, 1998-2003**

Community	Harvest Year	Community Population (in Survey Year)	Percentage of Households:					Number Harvested	Average Household Harvest
			Using Brown Bear	Attempting to Harvest Brown Bear	Harvesting Brown Bear	Receiving Brown Bear	Giving Brown Bear		
<b>GMU 22</b>									
Brevig Mission	2000-01	286	0%	2%	0%	0%	0%	0	0
Elim	1999-2000	313	0%	0%	0%	0%	0%	0	0
<b>Golovin</b>	<b>2001-02</b>	<b>148</b>	<b>3%</b>	<b>6%</b>	<b>3%</b>	<b>0%</b>	<b>3%</b>	<b>1</b>	<b>*</b>
Koyuk	1998-99	280	1%	3%	1%	0%	0%	1	*
Shaktolik	1998-99	218	0%	0%	0%	0%	0%	0	0
Shaktolik	1999-2000	230	0%	2%	0%	0%	0%	0	0
Shishmaref	2000-01	589	0%	0%	0%	0%	0%	0	0
<b>Stebbins</b>	<b>2002-03</b>	<b>586</b>	<b>1%</b>	<b>3%</b>	<b>1%</b>	<b>0%</b>	<b>0%</b>	<b>2</b>	<b>*</b>
Teller	2000-01	241	8%	5%	2%	6%	2%	1	*
<b>Unalakleet</b>	<b>2002-03</b>	<b>725</b>	<b>0%</b>	<b>3%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0</b>	<b>0</b>
Wales	2000-01	159	0%	2%	0%	2%	0%	0	0
White Mountain	1999-2000	203	0%	2%	0%	0%	0%	0	0
<b>GMU 23</b>									
Kiana	1999	398	8%	11%	2%	6%	2%	2	*
Noatak	1999	423	2%	2%	2%	0%	2%	3	*
<b>Noatak</b>	<b>2001-02</b>	<b>455</b>	<b>2%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1%</b>	<b>1</b>	<b>*</b>
<b>Noorvik</b>	<b>2002</b>	<b>677</b>	<b>15%</b>	<b>16%</b>	<b>3%</b>	<b>13%</b>	<b>3%</b>	<b>5</b>	<b>*</b>
Selawik	1999	767	1%	2%	1%	0%	0%	1	*
Shungnak	1998-99	255	6%	7%	2%	4%	2%	1	*

\* Less than 0.1.

Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.

**Table 9. Black Bear Harvests, Northwest Alaska, By Community, 1998-2003**

Community	Harvest Year	Community Population (in Survey Year)	Percentage of Households:					Number Harvested	Average Household Harvest
			Using Black Bear	Attempting to Harvest Black Bear	Harvesting Black Bear	Receiving Black Bear	Giving Black Bear		
<b>GMU 22</b>									
Elim	1999-00	313	0%	0%	0%	0%	0%	0	0
<b>Golovin</b>	<b>2001-02</b>	<b>148</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0</b>	<b>0</b>
Koyuk	1998-99	280	0%	0%	0%	0%	0%	0	0
Shaktoolik	1998-99	218	0%	0%	0%	0%	0%	0	0
Shaktoolik	1999-00	230	0%	0%	0%	0%	0%	0	0
<b>Stebbins</b>	<b>2002-03</b>	<b>586</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0%</b>	<b>0</b>	<b>0</b>
<b>Unalakleet</b>	<b>2002-03</b>	<b>725</b>	<b>1%</b>	<b>5%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>0.4%</b>	<b>1</b>	<b>*</b>
White Mountain	1999-00	203	0%	0%	0%	0%	0%	0	0
<b>GMU 23</b>									
Kiana	1999	398	18%	18%	10%	8%	11%	9	0.1
Noatak	1999	423	1%	0%	0%	1%	0%	0	0
<b>Noorvik</b>	<b>2002</b>	<b>677</b>	<b>22%</b>	<b>20%</b>	<b>5%</b>	<b>18%</b>	<b>5%</b>	<b>14</b>	<b>0.1</b>
Selawik	1999	767	5%	10%	4%	2%	3%	7	*
Shungnak	1998-99	255	6%	9%	6%	0%	6%	4	*

\* Less than 0.1.

Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.

**Table 10. Wolf and Wolverine Harvests, Northwest Alaska, By Community, 1998-2003**

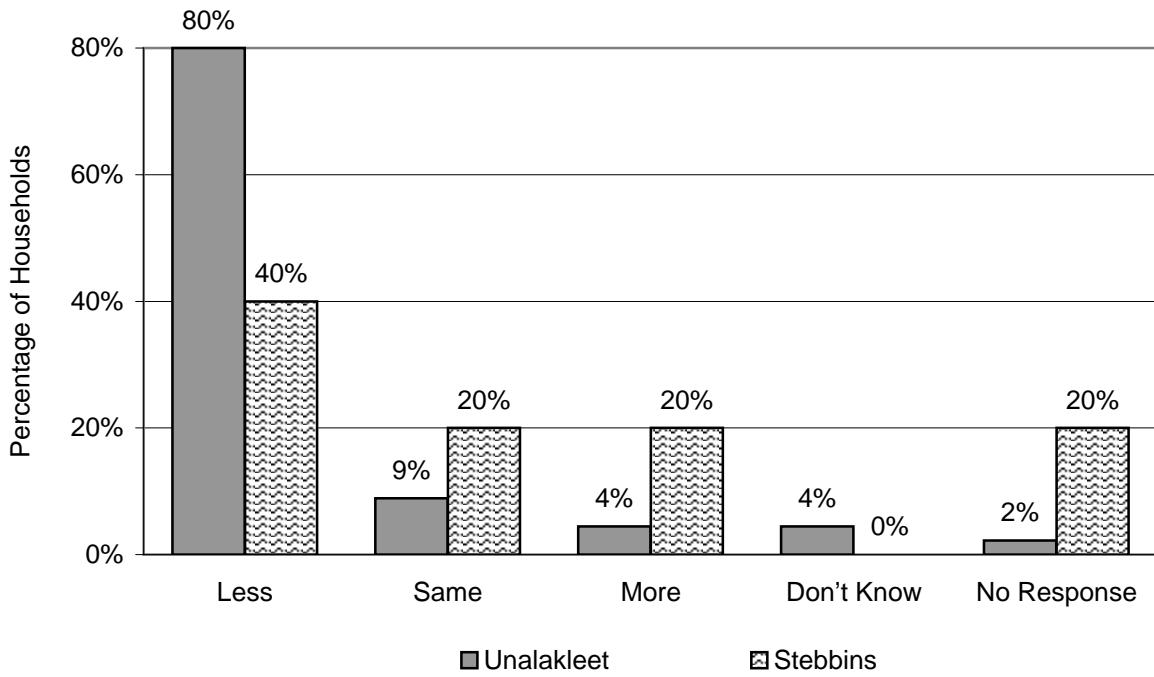
Community	Harvest Year	Community Population (in Survey Year)	Wolf			Wolverine		
			Percentage of Households Harvesting	Number Harvested	Average Household Harvest	Percentage of Households Harvesting	Number Harvested	Average Household Harvest
<b>GMU 22</b>								
Brevig Mission	2000-01	286	8%	8	0.1	5%	3	0.1
Elim	1999-2000	313	5%	13	0.2	1%	3	*
<b>Golovin</b>	<b>2001-02</b>	<b>148</b>	<b>6%</b>	<b>4</b>	<b>0.1</b>	<b>0%</b>	<b>0</b>	<b>0.0</b>
Koyuk	1998-99	280	10%	23	0.3	7%	6	*
Shaktoolik	1998-99	218	14%	19	0.3	6%	3	*
Shaktoolik	1999-2000	230	14%	17	0.3	2%	1	*
Shishmaref	2000-01	589	1%	2	*	4%	7	*
<b>Stebbins</b>	<b>2002-03</b>	<b>586</b>	<b>3%</b>	<b>5</b>	*	<b>3%</b>	<b>5</b>	*
Teller	2000-01	241	0%	0	0	5%	3	*
<b>Unalakleet</b>	<b>2002-03</b>	<b>725</b>	<b>3%</b>	<b>13</b>	<b>0.1</b>	<b>2%</b>	<b>23</b>	<b>0.1</b>
Wales	2000-01	159	0%	0	0	2%	2	*
White Mountain	1999-2000	203	6%	5	*	2%	1	*
<b>GMU 23</b>								
Kiana	1999	398	11%	17	0.2	3%	5	*
Noatak	1999	423	4%	15	0.2	8%	23	0.2
<b>Noatak</b>	<b>2001-02</b>	<b>455</b>	<b>2%</b>	<b>3</b>	*	<b>2%</b>	<b>5</b>	*
<b>Noorvik</b>	<b>2002</b>	<b>677</b>	<b>5%</b>	<b>52</b>	<b>0.3</b>	<b>4%</b>	<b>38</b>	<b>0.2</b>
Selawik	1999	767	1%	2	*	1%	1	*
Shungnak	1998-99	255	19%	18	0.3	9%	5	*

\* Less than 0.1.

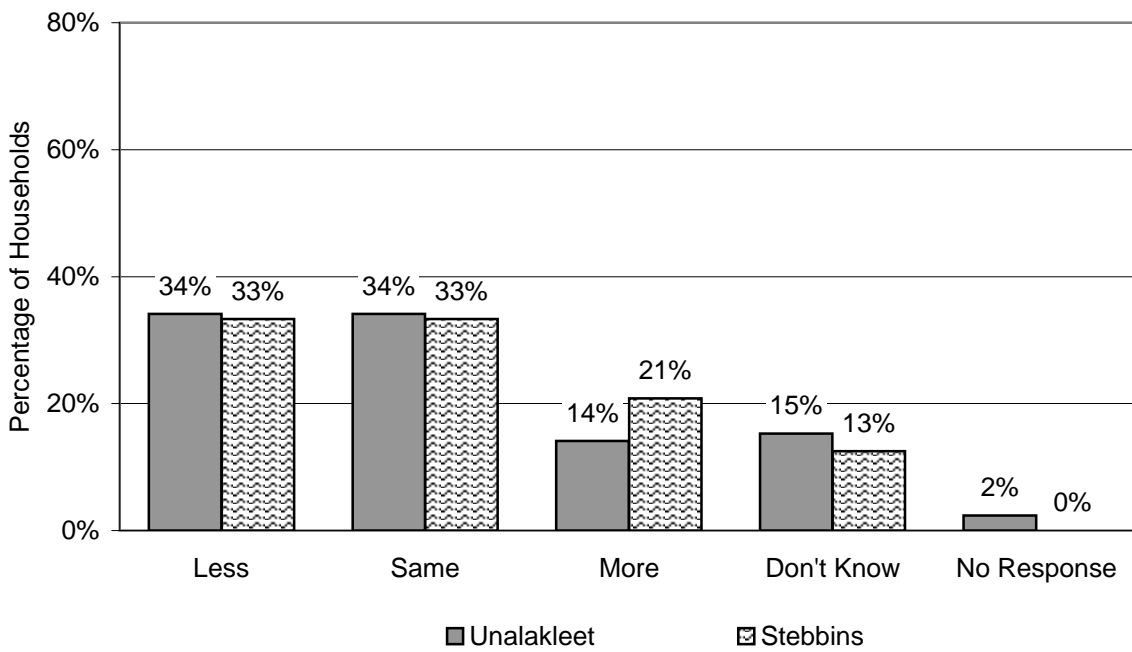
Source: Kawerak, Inc., Maniilaq Association, and Alaska Department of Fish and Game, Household Surveys, 1998-2003.



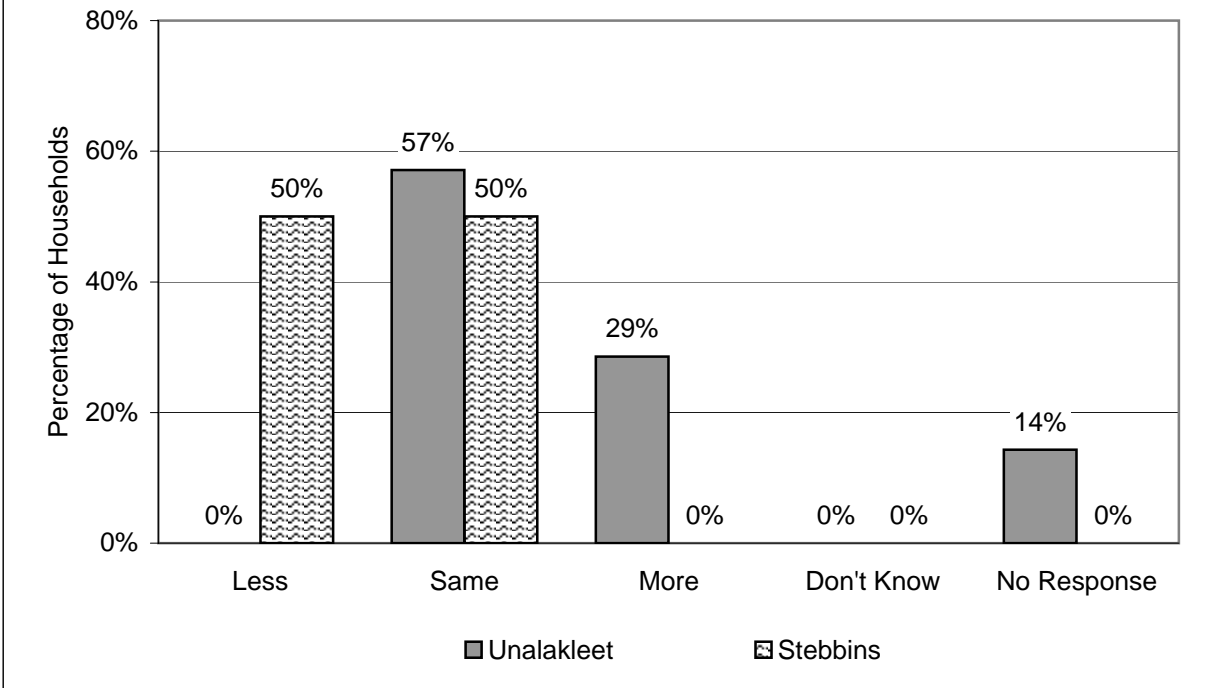
**FIG. 6. AVAILABILITY OF CARIBOU IN 2002-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET AND STEBBINS**



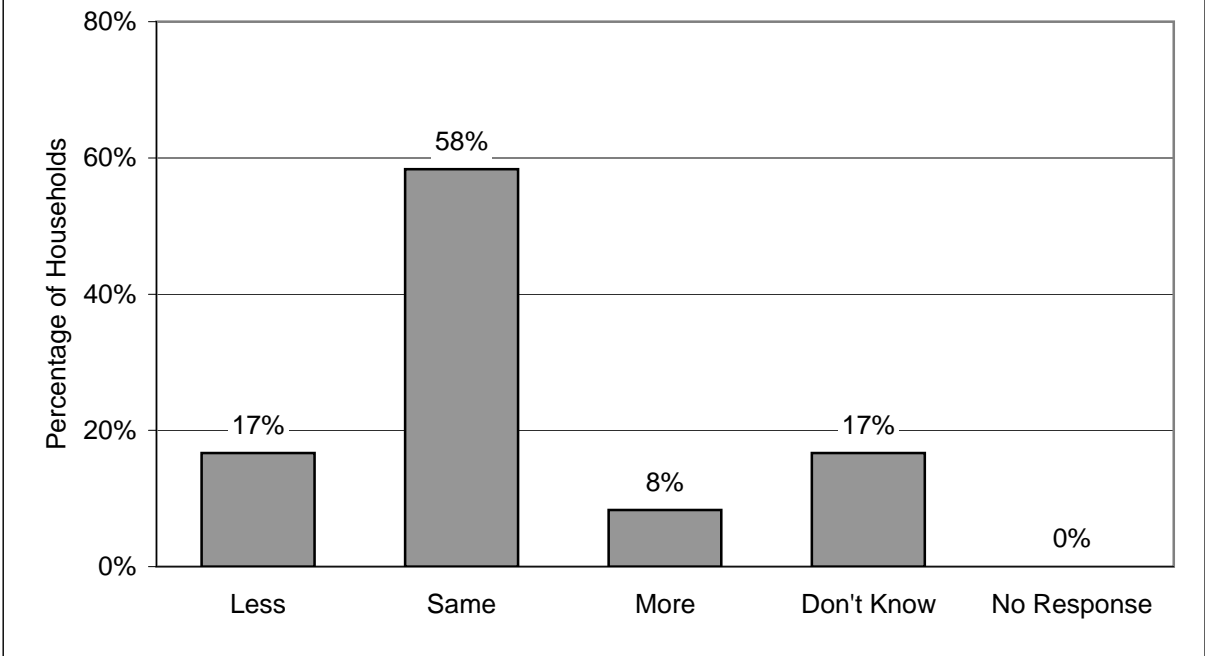
**FIG. 7. AVAILABILITY OF MOOSE IN 2002-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET AND STEBBINS**



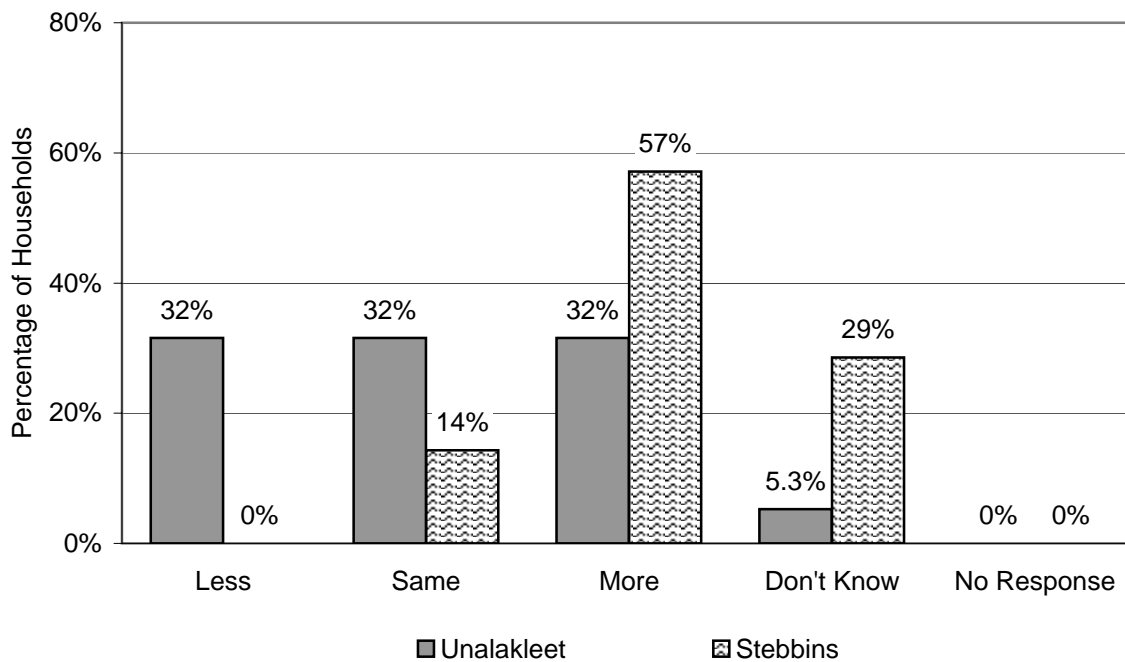
**FIG. 8. AVAILABILITY OF BROWN BEAR IN 2002-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET AND STEBBINS**



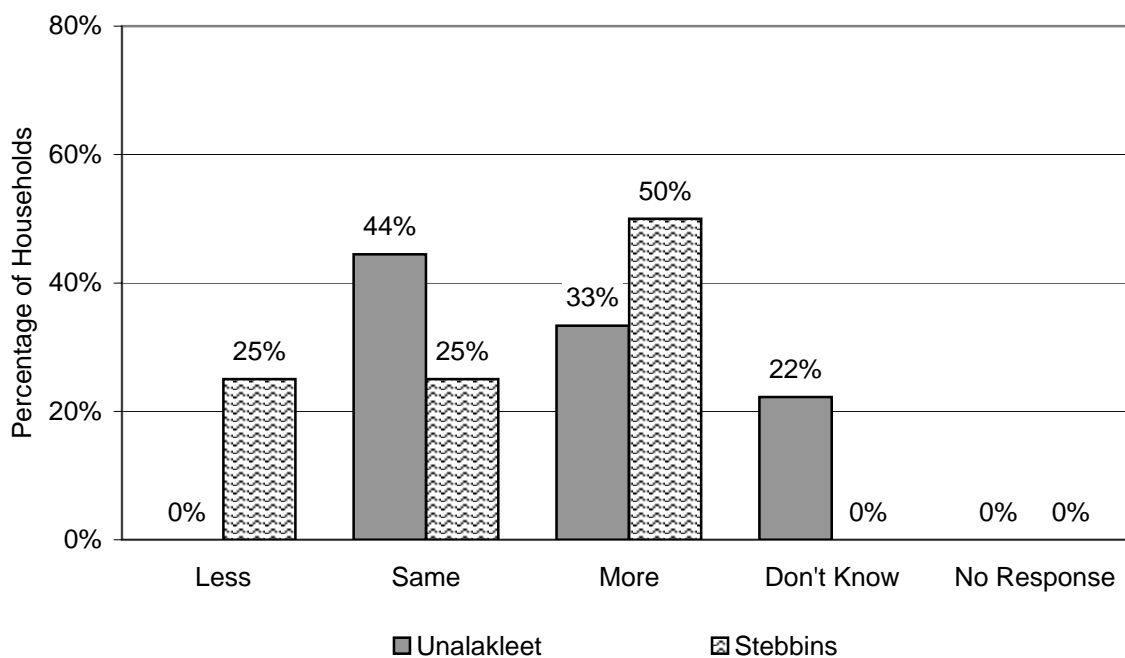
**FIG. 9. AVAILABILITY OF BLACK BEAR IN 2002-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET**



**FIG. 10. AVAILABILITY OF WOLF IN 2022-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET AND STEBBINS**



**FIG. 11. AVAILABILITY OF WOLVERINE IN 2022-03 COMPARED TO THE PREVIOUS YEAR, UNALAKLEET AND STEBBINS**



## **Appendix 1. Survey Comments on Health, Condition, Movement, and Availability of Caribou**

### **Noatak (2001-02)**

1. All bubbly and full of pus.
2. Skinny, no fat.
3. Some were too skinny.
4. Skinny.
5. Skinny.
6. Caribou not okay. Some really skinny, some aren't healthy looking. Supposed to be fat, but aren't.
7. Loss of hair.
8. Some of the first bulls I caught were not all that fat, but they were good.
9. Skinny.

### **Noorvik (2002)**

1. The one we caught was good.
2. Top of the line, really healthy.
3. Greenish-colored lungs in some caribou.
4. Falltime excellent.
5. This fall all caribou were fat. This winter most were fat.
6. Some caribou had pus.
7. All fat, real healthy.
8. Winter females are fat, spring males are fat.
9. Some were fat. A good majority were fat.
10. All looking healthy.
11. Most were fat.
12. All caribou pretty healthy, but I need more shells for hunting.
13. They were in good shape.
14. They were kind of fat.
15. Sick, wounded caribou--unhealthy looking.
16. All are healthy.
17. Most were fat and healthy.
18. White, rashy bumps on brisket.
19. Fall good, females good in winter.
20. Lots of others hunt caribou for me. Skinny caribou they bring.
21. All good, fat, and healthy.
22. Where the joints are, there always be a bubble.
23. Caribou herd is healthy.
24. Just healthy, looking good.
25. All were healthy.
26. Damaged liver, pus in knees.
27. Very good and fat.
28. Most were healthy.
29. This fall the caribou were healthy.
30. Real good and fat, all mixed conditions.
31. Fatter this year, maybe due to the climate.
32. Caribou are healthy.
33. Look healthy.
34. They have a lot of fat.
35. Spots on lungs.

**Noorvik (con't)**

36. The ones we caught were healthy, except for the one with pus.
37. Liver full of pus. Parasites (white) in the meat.
38. They looked healthy. The bulls this winter were lean.
39. The bulls were fat and healthy.
40. They were very healthy.
41. The herd was healthy.
42. Good caribou, nice and fat.
43. Fat caribou.
44. Too much pus under the skin.
45. Good food.

**Stebbins (2002-03)**

1. Caribou didn't travel to our area.
2. None available.
3. Never hunt all year.
4. Hunted reindeer.
5. Don't come around.

**Unalakleet (2002-03)**

1. Didn't migrate to Unalakleet.
2. Haven't seen unhealthy looking caribou. The caribou harvested in April were thin, but in good condition.
3. I talked to guys and checked on the computer to see where they were.
4. Sort of fat, but not really.
5. Weren't here at all this year. All healthy. Fewer warbles, no sandpaper caribou. All went west, not to Nulato Hills.
6. I never saw any caribou.
7. Poor movements, migration.
8. Both in very good shape.
9. Never pass through Unalakleet.
10. Good shape, a little fat on it.
11. The caribou I harvested were in good condition.
12. Never migrate this way.
13. Good meat. Didn't travel down south for two or three years now.
14. Those harvested had a bit of fat, but not much.
15. The ones we got were nice and fat.
16. All healthy, good fat on them.
17. Caribou at Granite Mountain were very healthy (more fat, longer bodies) than ones usually seen around here.
18. Good meat, in good shape.
19. Didn't see any.
20. No caribou.
21. Didn't come down past Koyuk this year. Didn't notice any unhealthy ones. The caribou I harvested were in very good condition.
22. Went west instead of south to Nulato Hills. Caribou were healthy and fat. Saw two that were dropped by wolves or wolverine.
23. Good meat.
24. In good shape. Not much fat, but healthy.
25. They do what they want to do. Migrate one way one year and another way the next.
26. The small herd he saw seemed healthy.
27. They were in good shape.

### **Unalakleet (con't)**

28. They didn't show up. It was too warm. Those white guides, I think they turn them at Granite Mountain.
29. Healthy, not much fat.
30. People were saying less due to migration.
31. No caribou.
32. Haven't been readily available for two years.
33. No caribou nearby.
34. Very few sightings of caribou this year nearby.
35. None in this area.
36. Not enough snow and no caribou nearby.
37. When the caribou make it this far, they are skinny. Travel too far.
38. Didn't migrate to Unalakleet or North River.
39. Hardly any caribou around.
40. Caribou were too far away for this household to hunt.
41. None, not even in Shaktoolik caribou cabin.
42. I know they were way back there, so I didn't go hunting.
43. Nothing available here.
44. Last year we were able to catch them in North River.
45. We didn't have any caribou out there last year, but we have some now this year, so I guess there is more.
46. Far less.
47. No caribou. You had to go to Granite Mountain, Elim, and Koyuk for caribou.
48. Didn't come through this area.
49. Last year had to go 60-70 miles one way. This year, 140-150 miles one way to get caribou.
50. None this year. Last year they were at head of North River (70 miles). This year went 180 miles.
51. Set up a fence on the Seward Peninsula.
52. There's nothing. There is nothing compared to last year.
53. Caribou unavailable.
54. There was a wolf kill we ran into at Inglutalik.
55. Found a herd of 10 or 11 in Inglutalik drainage.
56. First year here.



## **Appendix 2. Survey Comments on Health, Condition, Movement, and Availability of Moose**

### **Stebbins (2002-03)**

1. Never caught any because they had calves--couldn't find a bull.
2. Lots of moose out there.
3. Knows of excessive cow harvest; subsistence hunters harvesting females for meat. Thinks it's at least 15 moose (cow) harvested.
4. Moose seasons are long, but hard to find time to hunt.

### **Unalakeet (2002-03)**

1. Not around any more.
2. Seems like more moose are present in the fall than in the winter, particularly in South River, where we believe they go into the Anvil River drainage to winter.
3. They were good, healthy.
4. Good, healthy moose.
5. Very healthy moose, in good shape. They just follow their browse.
6. The one we got was really good.
7. Didn't see any moose.
8. Didn't notice anything.
9. Good shape, some fat.
10. In good shape, little fat.
11. Didn't see any moose.
12. Haven't really paid attention; hardly see any tracks this year.
13. Didn't see any moose.
14. Never notice any change.
15. Not too fat, good meat.
16. Can't tell where the moose are. There were more moose because of that Yukon fire.
17. Mine was a good young bull, tender with some fat on it.
18. Moose were available, but only when I was bear guiding as an assistant.
19. Good, healthy moose. Good meat.
20. Never see any moose.
21. Some fat content.
22. Fewer moose, but not known for having a lot of moose around here.
23. Don't see as many moose this winter in travels up South River as previous winters. Many wolf and lynx tracks along South River.
24. Just a lot less of them moving around.
25. Seems like they're moving a little later. Too hot. Water level was down so we didn't get to go to the normal hunting grounds.
26. Fat, big bull.
27. They seem to be pretty healthy.
28. Good mixture of large and small bulls and cows.
29. Good meat from Harry Johnson family.
30. Didn't see any to say. Heard quite a bit of wolves been getting at them though.
31. They move on the rut.
32. We came up on that one dead one from a wolf kill. This was the first or second week of snowmachining below the Unalakeet River Lodge.
33. It was good, but it had a big ball on the rear leg. Fish & Game said it was a cyst, but the meat was still good.
34. Nice young bull in good condition.



### Unalakleet (con't)

35. Saw two cows last fall that had scraggly coats, looked terrible.
36. Not much fat, but healthy moose.
37. Got young bull. Moose seen looked healthy.
38. Just the same.
39. No, less available.
40. They were fairly fat. Good red meat.
41. Healthy, good moose.
42. Wart on hind quarter.
43. Seems like there are real big bulls coming. Must have come over from Holy Cross, away from that fire.
44. Good, healthy moose--some fat in it.
45. They weren't where I was hunting.
46. We never see any bulls.
47. Didn't see any moose.
48. It was shot before, so 1/2 of the front quarter was gangrene, so had to leave the quarter.
49. This HH hunted successfully with HH 66--moose credited to that HH.
50. Didn't see any moose.
51. Seems like there are less every year. There's hardly any tracks.
52. It was a gift from God. I've been going after them since I was a little kid.
53. Didn't see that many moose.
54. Showed up after the season closed.
55. Seems like people were getting more last year.
56. Fourth bluff up the Egavik River.
57. Nowhere to be seen during hunting season. Last time they got one was about five years ago.
58. Didn't see any moose.
59. Never see much moose.
60. No moose out there.
61. Never see any moose.
62. Lots of cows.
63. Mostly saw cows and calves.
64. I didn't get to go out much this fall.
65. It seems like more people got more moose. Is there more moose out there?
66. Seems like there were more cows.
67. They're gone. No moose at all.
68. Don't think many people got moose this year.
69. Saw more bulls than before.
70. Seems like there were more moose in the North River drainage.
71. No such animals around here.
72. I just hunted a little bit before, so I can't answer that.

### **Appendix 3. Survey Comments on Health, Condition, Movement, and Availability of Bear, Wolf, and Wolverine**

#### **Stebbins (2002-03)**

##### Brown Bear

1. No one hunts bears because we don't eat them.
2. Will hunt for one this year (brown bear). Never seen a black black bear here in his life.
3. Thinks there is overharvest by reindeer herders and knows of gall bladder sales.

##### Wolf

1. Wolves get into reindeer herds.
2. Knows of eight wolves harvested within 30 miles of here--wolves on reindeer herd.

##### Wolverine

1. Too many wolves and bears for reindeer and moose calves.
2. Knows about two wolverines caught.
3. Knows of six wolverine harvested in Stebbins area by [Name Deleted] out of St. Michael.

#### **Unalakleet (2002-03)**

##### Black Bear

1. All bears taken while guiding have looked healthy. Many of the sows have twins or triplets rather than one cub.
2. Healthy.
3. No bears in the river, only in the hills.
4. Didn't see black bear.
5. We saw a few, one was real big, the biggest one I've ever seen.
6. They're pretty steady. In the same areas. Lots of females with twins.
7. Bears too healthy--taking away our moose.
8. Sometimes they are a pain in the butt, bother us at fish camp.
9. Didn't see any bear.
10. Don't see as many black bear any more.
11. Population of black bear doing well--there are some pretty good-sized black bears.
12. Used to be more black bears than brown bears, but seems to have switched around.
13. Show up every year by the dump site.
14. Both black and brown are more abundant when there are lots of fish and berries.
15. Would have taken a black bear if there was an opportunity, but never saw one.
16. Used to see more black bears.
17. Lots of brown bears, never been many black bears.
18. Black bears are less abundant than they were 3-4 years ago.
19. Black bears not very available.
20. Didn't hunt them last year.

##### Brown Bear

1. Lots of brown bears.
2. More at the dump.
3. No bear spotted.
4. Brown bears--didn't see the number seen in the past, but weather may have been a factor.
5. Never saw any bears last year, but knows they are out there.

### Unalakleet (con't)

6. Lots of brown bears.
7. Brown bears common.

### Wolf

1. More wolves than normal along the trail.
2. The wolf that [Name Deleted] got was in very good shape. Another carcass I've seen was just fat.
3. Never see wolf.
4. Traps for wolves, just a couple sets.
5. No wolves.
6. They seem more concentrated in the valleys than in the open.
7. [Name Deleted] mentioned that the wolves seem to be having fur problems. Loss of hair.
8. Fewer wolves now than three years ago when first moved to this area. Runs a trap line and regularly out in the country. Fewer tracks now. Surprised there are as many around as there are, given lack of caribou and low moose population. Wolf travel patterns.
9. No idea.
10. Fewer when caribou are not present.
11. Didn't see them, just the tracks.
12. Less wolves because the caribou didn't show up.
13. When caribou are here, there are lots of wolves; but few when there are none.
14. This is the most tracks I've ever seen.
15. More sign than normal.
16. More wolves now than ten years ago.

### Wolverine

1. I'm concerned about the moose populations around here. That's something to worry about.
2. Nothing. One of those wolverine had a bullet wound in the skull. It was healing over. Those must be pretty strong. There are more wolverines running around this year compared to last year.
3. Moose population declining, need to reduce bears.
4. Probably average take here this winter.
5. Some people did well getting wolverines this year.
6. No, there just seems to be more of them.
7. Didn't see any.
8. Numerous--highest wolverine population he's seen.

## Appendix 4. General Survey Comments and Concerns about Wildlife

### Noatak (2001-02)

1. Wish regulation would change to get rid of split moose season. Shorter season is okay, but two-week closure in September is not desirable. Doesn't see why only Noatak is restricted.
2. Yes, it is hard to get our sheep because those with planes always get them first, leaving us in the village with none to get.
3. Too many bears.
4. No. Caribou migrate different this year.
5. It's always storage and weather--poor drying conditions--that keep me from harvesting. I love moose meat.
6. Too many outside people hunt and mislead our caribou migration. Too many hunters from outside leave carcasses to rot.

### Noorvik (2002)

1. There are lots of caribou every fall. Got to put more than one caribou away, because we're running out of meat already.
2. Same as 20 years ago, just fine.
3. Check on the caribou that are sick, especially the liver and lungs.
4. Wildlife in danger from Red Dog. Wild wolves.
5. Fall caribou coming through village, and winter meat left behind. Be careful how we hunt, encourage others not to hunt and leave and waste meat.
6. This year it was a pretty good year.
7. Foxes running around.
8. Wolf population are plentiful--healthy packs--seen some here and there. Caribou and reindeer are mixed together in a herd, so that is good.
9. Only offered to buy.
10. If the law weren't changed, then everything is good.
11. Subsistence is to be continued for local residents and is extremely important to the lifestyle.
12. That we need subsistence and that it cannot and should not be taken from Alaskan Natives!
13. Likes salmon, caribou--she can't go without it.
14. Not enough in my traps.
15. If anybody doesn't bring me meat, I won't have any meat.
16. Red Dog / to continue to monitor wildlife.
17. Sick caribou.
18. Last summer while riding around looking for berries, we saw a moose that had a large growth on its back, like he had a backpack. Before we had another look, he took off for the woods.
19. I have a concern about moose being shot with .22 rifle for "fun" by some teenage boys in town. I am also concerned about the amount of ducks and geese taken each year that end up in the garbage dump.
20. Low rabbit population.
21. Animals being killed and left, not used. Animals being wounded with small calibers. I have helped people clean moose in the past which have old bullet wounds (.22, 7.62x39mm).
22. They should keep getting samples from caribou because of minerals and stuff in Red Dog. Check the ground for minerals.
23. Conflict with laws about Native hunting and fishing. Main concern is do laws allow subsistence gathering when needs are greatest.
24. Need info for the new people, including non-Native.
25. Wildlife is pretty stable.
26. Just hope they don't stop our subsistence hunting / fishing.

**Stebbins (2002-03)**

1. More abundance now than last five years. Most people lay off cow moose, some young kids hunt cows.
2. Wants animals to be tested for chemicals. Says some chum salmon caught last year "glowed in the dark."
3. Seems like populations are stable. It's good.
4. Animals are good. People catch something every year. Caught about 10 snow geese this spring.
5. Thinks overharvesting is an issue, and [illegible] of marine mammals. Too much harvest of moose.

**Unalakleet (2002-03)**

1. Shooting bears and leaving them lay--aware of three that were taken and left last summer. Believes poaching takes at least three times the number of bears taken by sport and guided hunts.
2. Too many bears, and they're coming closer to the village because of the nearby landfill. The city should be allowed to control the bears around the landfill. There are berrypickers, greens gatherers, using the land surrounding it.
3. Kill all the bear.
4. There are no more game around any more.
5. We need fewer bears.
6. I'm concerned because those boys scare the caribou and let them go back towards Nome.
7. I think trapping should be like the way it was long time ago. So people could make a living off of it. I love trapping and hunting. I'm for subsistence all the way. We should be able to take any much we want.
8. There are too many brown bears around here. They bother the camp and take the dry fish and whatever. If you have to shoot a brown bear, do it so it don't bother the camp. Stop sport fishermen in the river. We're getting less and less.
9. Not much to complain about.
10. Little kids chasing caribou and scaring them. Maybe that's why they don't show up anymore.
11. I think for the most part, there are too many bears, and that they affect the moose population. That's the main thing.
12. Herd the caribou down this way next year.
13. There ain't any.
14. We saw a lot of wolves in North River the other year. Last year it was too shallow for my motor.
15. Hardly any moose.
16. Wolves and bears have impact on calving moose.
17. I wish the caribou would come back.
18. Too many bear.
19. Moose decline, too many bears.
20. Not too much.
21. I'm concerned that there are too many cow moose shot and a lot of wasteful hunting.
22. Caribou, when they come here, people should not chase them and play with them, or they'll quit coming. Long ago the elders would tell us not to waste meat or play around with game. They knew what they were talking about.
23. Where are all the moose?
24. I'm too old to hunt. There's just not enough any more. The caribou will be here in a couple of years, ten at the most.
25. Not a good idea to have so many bear and big game hunters coming in. If you want to use resources from an area, you should live in that area.
26. One is the caribou herd changed their migration. The last two or three years the caribou haven't showed up.
27. There doesn't seem to be enough of it.

### Unalakleet (con't)

28. No, I see moose when they're not in season.
29. Wish they'd lower the gas and shell prices.
30. There were no caribou and not many moose.
31. Wish they would pop up more and not get too scarce.
32. Not as of now, but too many bears. Scared to go berry picking.
33. Too much traffic.
34. I'm concerned about them bears. They're coming too close to town. The bears and wolves are the ones scaring the caribou. Long time ago we kill lots. The beavers are no good. They go where salmon lay eggs.
35. No. Last year I heard that some people did not take all the meat.
36. Caribou haven't showed up regularly lately and it's very hard on people who have come to depend on them.
37. No time to go out. The best foods come from out in the country.
38. Hunters should leave smaller moose alone and let them grow a bit bigger.
39. I haven't been out. As far as hunting is concerned, I don't have anything.
40. You know when there was lots of caribou. [Name deleted] would shoot lots and if they were not fat, he would go after other ones. Maybe that's why they don't come back anymore. We should regulate our own subsistence.
41. Not really. I wish that the caribou would come back.
42. They better knock that sh\*\* off, Fish & Game. We use what we catch. Fish & Game, they don't know what they're doing.
43. Are the hunters in Granite Mountain scaring the caribou back into the Seward Peninsula in the fall?
44. We can't manage it. The good Lord gives us the game. The moose go somewhere in the winter.
45. No more caribou around here. Maybe the people up north are scaring them away.
46. If they don't let us do subsistence, how will we live? Animals are on this earth to be used by us.
47. They should make it more subsistence available.
48. Don't ever let hunting stop. Subsistence is important to people, important lifestyle. We need it.
49. Wish caribou were here. Have to go a long ways for them now, wintertime.
50. Too many bears. Starting to see coyotes and other predators coming into the area. A cougar was spotted last fall. Caribou haven't been migrating down like they used to. I heard about the moose count, and we should have no guiding for moose.
51. It's like everything is depleting, getting harder to find. Even the lynx.
52. Caribou come and go. Moose seem to be doing good. Wolves not out of control.
53. Open up the wolf for maximum kill.
54. There's always too many porcupines.
55. No, just wish there were caribou.
56. I don't like the fact that the kids scare them off. We should leave them alone unless we're gonna eat them.
57. Hard to think of anything.
58. All the brown bear go to the beach and eat on the carcasses. When the caribou come, the people should let the first ones pass, and the kids should take all the meat when they catch them. Bears quit breaking into cabins this last year.
59. Cut down the hunting. Shorten the season on moose. Kill all the wolf.
60. I keep wondering if the population is going down. The caribou haven't been coming around.
61. No caribou.
62. I just wish all these kids would not zoom by and scare game. The kids leave lots of garbage out in the country.
63. I just wonder if there are too many bears around for the moose population. Maybe the wolves are keeping the caribou away.
64. Too many bear.
65. Same restrictions. Maybe, no.

### Unalakleet (con't)

66. Glad about one bear a year. Saw a mountain lion on Unalakleet River in September.
67. No more sport fishing.
68. The caribou have been a long ways away. I'd like to hunt musk ox.
69. I just wish the caribou would come back.
70. They should try to conserve it, not waste too much. They should take everything.
71. Where are the caribou? Are they getting fewer now?
72. There's just not enough out there.
73. Too many brown bears.
74. I just wish the caribou would come back.
75. Too many moose hunters in our area.
76. Kill the predators. Airborne shooting, same day for the bear and wolf. Only good bear is a dead bear.
77. Would like to see ADF&G support reasons to increase bear harvest (i.e. sale of bear parts). Explore monetary options for promoting increasing bear harvest.
78. Too many brown bears in the summertime. Kill them all, especially by the new dump.
79. They're doing a good job, I think.
80. Everybody pretty much respects what they got.
81. No complaints.
82. None. I just hope they stick around.
83. I want to keep subsistence alive. It's very important.
84. I just don't think there's enough wildlife.
85. I just wish that there was more around to see.
86. Getting fewer and fewer.
87. They're getting more and more brown bears around. They should catch more bear.
88. Nothing at this time.
89. Too many wolves and bears compared to when I first got up here.
90. Oh, I love them around. We need them. God put them here on this earth to eat and use, so we should be happy around here.
91. Some of the wildlife that people are leaving behind and wasting is something to be concerned about. Also, overharvest of whales and selling the meat has to be stopped. That way we won't be regulated too strictly.
92. No caribou around here.
93. I don't really have any comments. I have just been here for two years.
94. It seems that the moose walked around only after sport fishing closed. We got too many lodges here in Unalakleet with too many boats scaring away the moose.
95. Need more wildlife.
96. No, we're excited to see them, though.
97. I'm not against nothing, I guess.
98. How the weather is affecting them. It seems like a pretty bare, warm winter.
99. I guess I'd like to see more moose, but I guess I was hunting in the wrong area. I did see a moose yesterday, the 11th of May on the river.
100. I don't want people hunting on private land.
101. Still too soon for me to say.
102. I'm hearing that the caribou are down and hope that they come back.
103. I haven't been here long enough to say, but they seem to be a little scarce.
104. I don't really know enough about it to comment.
105. Got no time to hunt.
106. They need less restrictions for Natives. They need to charge the white man more to hunt around here. They need to restrict the hunting for white people more. Charge them more money.
107. Wonder why there is a lack of caribou and moose.
108. I wish that there was more enforcement of humane treatment of animals. I don't like when people don't check their traps for a week. I don't like bears being shot, because most of the time the meat

**Unalakleet (con't)**

is left behind.

109. I'm concerned about the lack of moose and the caribou migration. They haven't been through here for the past couple of years. Personally, I'd like to see them cut down the wolf population.
110. I haven't seen very much.
111. We need to get back to our own way of hunting. We have to be left alone when we're gathering. They just interfere and put confusion in our life.
112. I don't know. If somebody does something wrong, they should fine them instead of letting them get away. I think when they hunt, they should bring their hunt home. Protect the spawning areas and calving area. Be more resourceful with wildlife.
113. No caribou.





## Appendix 5. Survey Instruments

# SUBSISTENCE HUNTING HARVEST SURVEY, GMU 22

**Kawerak, Inc. and Alaska Department of Fish and Game, 2003**

INTERVIEWER \_\_\_\_\_

COMMUNITY \_\_\_\_\_

DATE \_\_\_\_\_

HH ID \_\_\_\_\_

Information collected on this survey is used by Kawerak and ADF&G to improve harvest estimates of wildlife in the Norton Sound region. This information provides for effective management and implementation of the subsistence priority as required by law. We will not publish information about your household's subsistence activities. We will not use the information from this survey for enforcement. Participation in the survey is voluntary. We will publish a summary of big game harvests by your community, and send it to all households.

**1. Are you willing to participate in our survey?** **YES**    **NO**  
*[Continue if yes.]*

**2. How many people live in your household?** \_\_\_\_\_

### CARIBOU

**3. In the past 12 months (May 2002-April 2003), did anyone in your household:**

<b>HUNT CARIBOU?</b>	<b>YES</b>	<b>NO</b>
<b>HARVEST CARIBOU?</b>	<b>YES</b>	<b>NO</b>
<b>GET CARIBOU FROM OTHER HOUSEHOLDS?</b>	<b>YES</b>	<b>NO</b>
<b>GIVE CARIBOU TO OTHER HOUSEHOLDS?</b>	<b>YES</b>	<b>NO</b>

*[Continue if they hunted caribou.]*

4. How many people in your household hunted caribou in the past year? \_\_\_\_\_

5. How many caribou did your household harvest in the past year? *[Fill in chart below.]*

Summer/Fall 2002 (May-October)			Winter/Spring 2002-03 (November-April)			Total Caribou
Males (Bulls)	Females (Cows)	Unknown	Males (Bulls)	Females (Cows)	Unknown	

6. Where did your household hunt caribou in the past year?

*[List river drainages or UCUs]* \_\_\_\_\_

**CARIBOU (CON'T)**

7. How available were caribou in your area in the past year compared to the year before?

- MORE AVAILABLE \_\_\_\_\_
- LESS AVAILABLE \_\_\_\_\_
- ABOUT THE SAME \_\_\_\_\_
- DON'T KNOW \_\_\_\_\_

COMMENTS:

8. Did anyone in your household kill but not eat caribou last year because they did not look healthy?  
YES    NO

[If yes] What was wrong with them?

Symptom	How many caribou?	Symptom	How many caribou?
1.		3.	
2.		4.	

9. What else did you notice about the health, condition, or movements of caribou last year?

**MOOSE**

10. In the past 12 months (May 2002-April 2003), did anyone in your household:

- HUNT MOOSE? YES    NO
- HARVEST MOOSE? YES    NO
- GET MOOSE FROM OTHER HOUSEHOLDS? YES    NO
- GIVE MOOSE TO OTHER HOUSEHOLDS? YES    NO

[Continue if they hunted moose.]

11. How many people in your household hunted moose in the past year? \_\_\_\_\_

12. How many moose did your household harvest in the past year? \_\_\_\_\_

Moose	Location (UCU)	M or F	2002								2003				Unknown
			May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	
# 1															
# 2															
# 3															

13. How available were moose in your area in the past year compared to the year before?

- MORE AVAILABLE \_\_\_\_\_
- LESS AVAILABLE \_\_\_\_\_
- ABOUT THE SAME \_\_\_\_\_
- DON'T KNOW \_\_\_\_\_

COMMENTS:

14. Did anyone in your household kill but not eat moose last year because they did not look healthy?  
 YES NO

[If yes] What was wrong with them?

Symptom	How many moose?
1.	
2.	

15. What else did you notice about the health, condition, or movements of moose last year?

**BLACK AND BROWN BEAR**

16. In the past 12 months (May 2002-April 2003), did anyone in your household:

HUNT BLACK BEAR?	YES	NO	HUNT BROWN BEAR?	YES	NO
HARVEST BLACK BEAR?	YES	NO	HARVEST BROWN BEAR?	YES	NO
GET BLACK BEAR FROM OTHERS?	YES	NO	GET BROWN BEAR FROM OTHERS?	YES	NO
GIVE BLACK BEAR TO OTHERS?	YES	NO	GIVE BROWN BEAR TO OTHERS?	YES	NO

[Continue if they hunted bears.]

17. How many people in your household hunted **black** bears in the past year? \_\_\_\_\_  
 How many people in your household hunted **brown** bears in the past year? \_\_\_\_\_

18. How many **black** bears did your household harvest in the past year? \_\_\_\_\_

19. How many **brown** bears did your household harvest in the past year? \_\_\_\_\_

20. How available were bears in your area in the past year compared to the year before?

<b>BLACK BEARS:</b>	MORE AVAILABLE	_____	<b>BROWN BEARS:</b>	MORE AVAILABLE	_____
	LESS AVAILABLE	_____		LESS AVAILABLE	_____
	ABOUT THE SAME	_____		ABOUT THE SAME	_____
	DON'T KNOW	_____		DON'T KNOW	_____

COMMENTS:

21. What else did you notice about the health, condition, or movements of bears last year?

**WOLF AND WOLVERINE**

**22. Did anyone in your household hunt or trap wolves in the past year?      YES      NO**

*[Continue if yes.]*

23. How many wolves did your household harvest in the past year? \_\_\_\_\_

24. How available were wolves in your area in the past year compared to the year before?

- MORE AVAILABLE \_\_\_\_\_
- LESS AVAILABLE \_\_\_\_\_
- ABOUT THE SAME \_\_\_\_\_
- DON'T KNOW \_\_\_\_\_

COMMENTS:

25. What else did you notice about the health, condition, or movements of wolves last year?

**26. Did anyone in your household hunt or trap wolverines in the past year?      YES      NO**

*[Continue if yes.]*

27. How many wolverines did your household harvest in the past year? \_\_\_\_\_

28. How available were wolverines in your area in the past year compared to the year before?

- MORE AVAILABLE \_\_\_\_\_
- LESS AVAILABLE \_\_\_\_\_
- ABOUT THE SAME \_\_\_\_\_
- DON'T KNOW \_\_\_\_\_

COMMENTS:

29. What else did you notice about the health, condition, or movements of wolverines last year?

**GENERAL**

**30. Do you have any comments or concerns about wildlife in your area?**

## 2002 NOATAK WILDLIFE HARVEST SURVEY

### CARIBOU

1. In the past year (Nov '01-Oct '02), did anyone in your household:

HUNT CARIBOU?	YES	NO
HARVEST CARIBOU?	YES	NO
GET CARIBOU FROM OTHER HOUSEHOLDS?	YES	NO
GIVE CARIBOU TO OTHER HOUSEHOLDS?	YES	NO

2. [If hunted] How many people in your household hunted caribou in the past year? \_\_\_\_\_

3. How many caribou did your household take in the past year?

May-October 2002 (Open water hunting)			Jan-April 2002 and Nov-Dec 2001 (Snowmachine hunting)			Total Caribou
Males (Bulls)	Females (Cows)	Unknown	Males (Bulls)	Females (Cows)	Unknown	

4. Did anyone in your household kill but not eat caribou last year because they did not look healthy?

YES    NO

[If yes] What was wrong with them?

Symptom	How many caribou?	Symptom	How many caribou?
1.		3.	
2.		4.	

5. What else did you notice about the health or condition of caribou last year?

### MOOSE

1. In the past year (Nov '01-Oct '02), did anyone in your household:

HUNT MOOSE?	YES	NO
HARVEST MOOSE?	YES	NO
GET MOOSE FROM OTHER HOUSEHOLDS?	YES	NO
GIVE MOOSE TO OTHER HOUSEHOLDS?	YES	NO

**MOOSE (CON'T)**

2. [If hunted] How many people in your household hunted moose in the past year? \_\_\_\_\_
3. How many moose did your household harvest in the past year?  
Please indicate month(s) of harvest.

	2001		2002										Total Moose	
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct		Unknown
Male														
Female														
Unknown														

**BROWN BEAR**

1. In the past year (Nov '01-Oct '02), did anyone in your household:
- |                             |     |    |
|-----------------------------|-----|----|
| HUNT BROWN BEAR?            | YES | NO |
| HARVEST BROWN BEAR?         | YES | NO |
| GET BROWN BEAR FROM OTHERS? | YES | NO |
| GIVE BROWN BEAR TO OTHERS?  | YES | NO |
2. [If hunted] How many people in your household hunted brown bears in the past year? \_\_\_\_\_
3. How many black bears did your household harvest in the past year? \_\_\_\_\_
4. How many brown bears did your household harvest in the past year? \_\_\_\_\_

**WOLF AND WOLVERINE**

1. Did anyone in your household take wolves in the past year (Nov '01-Oct '02)? YES NO  
[If yes] How many? \_\_\_\_\_
2. Did anyone in your household take wolverines in the past year (Nov '01-Oct '02)? YES NO  
[If yes] How many? \_\_\_\_\_

**Do you have any comments or concerns about wildlife in your area?**

**2002 WILDLIFE HARVEST SURVEY**  
**NOORVIK**

**CARIBOU**

**\*1. In the past year (Jan-Dec 2002), did anyone in your household:**

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| <b>Hunt caribou?</b>                      | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Harvest caribou?</b>                   | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Get caribou from other households?</b> | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Give caribou to other households?</b>  | YES <input type="checkbox"/> | NO <input type="checkbox"/> |

2. *(If household hunted)* How many people in your household hunted caribou in the past year? \_\_\_\_\_

3. How many caribou did your household harvest in the past year? *(Fill in table below).*

Summer and Fall Hunting (May-October 2002)			Winter and Spring Hunting (Jan-April 2002 and Nov-Dec 2002)			Total Caribou
Males (Bulls)	Females (Cows)	Unknown	Males (Bulls)	Females (Cows)	Unknown	

4. Did anyone in your household kill but not eat caribou in the past year because they did not look healthy?

YES  NO

*(If yes)* What was wrong with them?

Symptom	How many caribou?	Symptom	How many caribou?
1.		3.	
2.		4.	

5. What else did you notice about the health or condition of caribou last year?

**MOOSE**

**\*6. In the past year (Jan-Dec 2002), did anyone in your household:**

- |   |                              |                             |
|---|------------------------------|-----------------------------|
| <b>Hunt moose?</b>                      | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Harvest moose?</b>                   | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Get moose from other households?</b> | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Give moose to other households?</b>  | YES <input type="checkbox"/> | NO <input type="checkbox"/> |



**MOOSE (CON'T)**

7. (If household hunted) How many people in your household hunted moose in the past year? \_\_\_\_\_
8. How many moose did your household harvest in the past year? (Fill in table with number of moose and month(s) of harvest.)

	2002												Unknown	Total Moose
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec		
Bull														
Cow														
Unknown														

**BLACK AND BROWN BEAR**

- \*9. In the past year (Jan-Dec 2002), did anyone in your household:**
- |                                    |                              |                             |                                    |                              |                             |
|------------------------------------|------------------------------|-----------------------------|------------------------------------|------------------------------|-----------------------------|
| <b>Hunt black bear?</b>            | YES <input type="checkbox"/> | NO <input type="checkbox"/> | <b>Hunt brown bear?</b>            | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Harvest black bear?</b>         | YES <input type="checkbox"/> | NO <input type="checkbox"/> | <b>Harvest brown bear?</b>         | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Get black bear from others?</b> | YES <input type="checkbox"/> | NO <input type="checkbox"/> | <b>Get brown bear from others?</b> | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
| <b>Give black bear to others?</b>  | YES <input type="checkbox"/> | NO <input type="checkbox"/> | <b>Give brown bear to others?</b>  | YES <input type="checkbox"/> | NO <input type="checkbox"/> |
10. (If household hunted) How many people in your household hunted **black** bears in the past year? \_\_\_\_\_  
 How many people in your household hunted **brown** bears in the past year? \_\_\_\_\_
11. How many **black** bears did your household harvest in the past year? \_\_\_\_\_  
 How many **brown** bears did your household harvest in the past year? \_\_\_\_\_

**WOLF AND WOLVERINE**

- \*12. Did anyone in your household harvest wolves in the past year (Jan-Dec 2002)?** YES  NO   
 (If yes) How many? \_\_\_\_\_
- \*13. Did anyone in your household harvest wolverines in the past year (Jan-Dec 2002)?** YES  NO   
 (If yes) How many? \_\_\_\_\_

- \*14. Do you have any comments or concerns about wildlife in your area?**