Technical Paper No. 355

Subsistence Harvests and Uses of Wild Resources in Lime Village, Alaska, 2007

by

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and

Terri Lemons

September 2010

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 (metric)

centimeter	cm
deciliter	dL
gram	g
hectare	ha
kilogram	kg
kilometer	km
liter	L
meter	m
milliliter	mL
millimeter	mm

Weights and measures (English)

cubic feet per second	ft^3/s
foot	ft
gallon	gal
inch	in
mile	mi
nautical mile	nmi
ounce	oz
pound	lb
quart	qt
yard	yd

Time and temperature

day	d
degrees Celsius	°C
degrees Fahrenheit	°F
degrees kelvin	K
hour	h
minute	min
second	s

Physics and chemistry

all atomic symbols	
alternating current	AC
ampere	A
calorie	cal
direct current	DC
hertz	Hz
horsepower	hp
hydrogen ion activity (negative log of)	pH
parts per million	ppm
parts per thousand	ppt, ‰
volts	V
watts	W

General

Alaska Administrative Code	AAC
all commonly-accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.
all commonly-accepted professional titles	e.g., Dr., Ph.D., R.N., etc.
at	@
compass directions:	
east	E
north	N
south	S
west	W
copyright	©
corporate suffixes:	
Company	Co.
Corporation	Corp.
Incorporated	Inc.
Limited	Ltd.
District of Columbia	D.C.
et alii (and others)	et al.
et cetera (and so forth)	etc.
exempli gratia (for example)	e.g.
Federal Information Code	FIC
id est (that is)	i.e.
latitude or longitude	lat. or long.
monetary symbols (U.S.)	$, ¢
months (tables and figures)	first three letters (Jan,...,Dec)
registered trademark	®
trademark	™
United States (adjective)	U.S.
United States of America (noun)	USA
U.S.C.	United States Code
U.S. state	two-letter abbreviations (e.g., AK, WA)

Measures (fisheries)

fork length	FL
mideye-to-fork	MEF
mideye-to-tail-fork	METF
standard length	SL
total length	TL

Mathematics, statistics

all standard mathematical signs, symbols and abbreviations	
alternate hypothesis	H_A
base of natural logarithm	e
catch per unit effort	CPUE
coefficient of variation	CV
common test statistics	(F, t, χ^2, etc.)
confidence interval	CI
correlation coefficient (multiple)	R
correlation coefficient (simple)	r
covariance	cov
degree (angular)	°
degrees of freedom	df
expected value	E
greater than	>
greater than or equal to	≥
harvest per unit effort	HPUE
less than	<
less than or equal to	≤
logarithm (natural)	ln
logarithm (base 10)	log
logarithm (specify base)	$\log_2$, etc.
minute (angular)	'
not significant	NS
null hypothesis	H_O
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	α
probability of a type II error (acceptance of the null hypothesis when false)	β
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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by

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Review draft of final report to Stephen R. Braund and Associates under ADF&G Agreement IHP-06-050.

The Division of Subsistence Technical Paper series was established in 1979 and represents the most complete collection of information about customary and traditional uses of fish and wildlife resources in Alaska. The papers cover all regions of the state. Some papers were written in response to specific fish and game management issues. Others provide detailed, basic information on the subsistence uses of particular communities which pertain to a large number of scientific and policy questions.

Technical Paper series reports 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.

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TABLE OF CONTENTS

Page

Table of Contents, continued

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

Appendix **Page**

ABSTRACT

This report presents information about subsistence uses of fish, wildlife, and plant resources in Lime Village, Interior Alaska. This is the first harvest assessment survey for this community since a compilation of qualitative harvest data was completed in 1983. The Alaska Department of Fish and Game Division of Subsistence conducted the project in collaboration with Stephen R. Braund & Associates as part of a multiyear, multiphase study in a region of Southwest Alaska being considered for the development of a large scale mine. The Pebble Project is a mineral deposit in an advanced exploration stage located near Frying Pan Lake, which is 100 miles south of Lime Village. The Pebble Project requires updated baseline information about subsistence harvests and uses. Information was collected through systematic household surveys and mapping interviews conducted with the informed consent of the community. Also as part of the informed consent process, researchers presented preliminary project findings to the community for its review. In total, 7 households were interviewed, 64% of the year-round resident households. The project documented the continuing importance of subsistence hunting, fishing, and gathering to the residents of Lime Village. In 2007, every household participated in subsistence activities and used wild resources. Subsistence harvests are large and diverse.

Key words: Harvest survey, subsistence uses, subsistence fishing, subsistence hunting, Lime Village, Nondalton, Dena'ina, Athabascan, Pebble Project, Bristol Bay.

CHAPTER 1: INTRODUCTION

PROJECT BACKGROUND

This report provides updated information about the subsistence economy and uses of the fish, wildlife, and wild plant resources by the residents of Lime Village, which is located in Interior Alaska (Figure 1-1). This is the first harvest assessment survey conducted by the Alaska Department of Fish and Game (ADF&G) Division of Subsistence in Lime Village, although Kari (1983) did compile a qualitative analysis of the harvest and uses of resources in Lime Village.

Table 1-1 reports the population of Lime Village in 2000 and 2007, based on federal (U. S. Census Bureau 2001) and state (ADLWD 2009) estimates, as well as on the findings of this project. The residents of Lime Village rely on subsistence hunting, fishing, and gathering for nutrition and to support their way of life. They utilize a variety of resources, including salmon and other fishes, large land mammals (caribou, moose, black bears), small land mammals (small game and furbearers), birds and bird eggs, and wild plants (ADF&G Community Subsistence Information System [CSIS[1]]; Kari 1983). Table 1-2 presents a list, including the Linnaean taxonomic names, of resources used in the project community.

Table 1-1.–Population of Lime Village, 2000 and 2007.

Census year 2000 [a]				Study findings for 2007 [b]			
Total population		Alaska Native population		Total population		Alaska Native population	
Households	Population	People	Percentage of total	Households	Population	People	Percentage of total
n.d.	41	n.d.	n.d.	11	27	24	88%

a. According to ADLWD 2009, "most of Lime Village (41 persons) was erroneously reported in the balance of Koyukuk–Middle Yukon in 2000."

b. Pertains to estimated population as of 12/13/07, based on surveys of year-round households.

Source For 2007 study findings: ADF&G Division of Subsistence household survey, 2007.

The Pebble Project is a mineral deposit in an advanced exploration phase located near Frying Pan Lake, which is 100 miles south of Lime Village. The mineral deposit includes gold, copper, and molybdenum. Northern Dynasty Mines Inc. (NDM) of Vancouver, Canada, the project operator, began environmental baseline studies in 2004 to gather information needed for a feasibility study and applications for federal and state permits (NDM 2005). In 2007, NDM partnered with Anglo-American PLC to form the Pebble Limited Partnership[2].

[1] ADF&G CSIS: http://www.subsistence.adfg.state.ak.us/CSIS/. Hereinafter cited as CSIS.

[2] The Pebble Partnership, "Facts at a Glance," http://www.pebblepartnership.com/news/facts, accessed June 2009.

Table 1-2.–Resources used in Lime Village, 2007.

Common name (Local common name)	Scientific name
Fishes	
Chum salmon	*Oncorhynchus keta*
Coho salmon	*Oncorhynchus kisutch*
Chinook salmon	*Oncorhynchus tshawytscha*
Pink salmon	*Oncorhynchus gorbuscha*
Sockeye salmon	*Oncorhynchus nerka*
Unknown salmon	*Oncorhynchus* spp.
Unknown chars	*Salvelinus* spp.
Arctic grayling	*Thymallus arcticus*
Northern pike	*Esox lucius*
Sheefish	*Stenodus leucichthys*
Broad whitefish	*Coregonus nasus*
Least cisco	*Coregonus sardinella*
Land mammals	
Black bear	*Ursus americanus*
Caribou	*Rangifer tarandus*
Moose	*Alces americanus*
Beaver	*Castor canadensis*
Red fox	*Vulpes vulpes*
American marten	*Martes americana*
Porcupine	*Erethizon dorsatum*
Gray wolf	*Canis lupus*
Wolverine	*Gulo gulo*
Birds and eggs	
Migratory birds, ducks	
Bufflehead	*Bucephala albeola*
Goldeneyes	*Bucephala* spp.
Mallard	*Anas platyrhynchos*
Northern pintail	*Anas acuta*
Black scoter	*Melanitta americana*
Green winged teal	*Anas carolinensis*
American wigeon	*Anas americana*
Migratory birds, geese	
Canada geese	
Dusky Canada goose	*Branta canadensis occidentalis*
Lesser Canada goose	*Branta canadensis parvipes*
Unknown Canada geese	*Branta canadensis* spp.
Snow goose	*Chen caerulescens*
White-fronted geese	*Anser* spp.
Migratory birds, other	
Unknown swan	*Cygnus* spp.

–continued–

Table 1-2. Page 2 of 2.

Common name (Local common name)	Scientific name
Upland game birds	
Ruffed grouse	*Bonasa umbellus*
Spruce grouse	*Dendragapus canadensis*
Ptarmigan	*Lagopus* spp.
Vegetation	
Crowberry (blackberry)	*Empetrum nigrum*
Blueberry	*Vaccinium uligonosum*
Bog cranberry	*Oxycoccus microcarpus*
Highbush cranberry	*Viburnum edule*
Lingonberry (cranberry)	*Vaccinium vitus-idaea*
Northern black currant	*Ribes hudsonianum*
Northern red currant	*Ribes triste*
(Nagoonberry)	*Rubus arcticus*
Raspberry	*Rubus idaeus*
Cloudberry (salmonberry)	*Rubus chamaemorus*
Chickweeds	*Stellaria* spp.
Sweet coltsfoots (wild spinaches)	*Petasites hyperboreus*
Ferns (fiddleheads)	Various spp.
Fireweed	*Epilobium angustifolium*
Grasses	*Gramineae* spp.
Horsetails	*Equisetum* spp.
Labrador (Hudson Bay) tea	*Ledum palustre*
Juniper	*Juniperus communis*
Mountain ash	*Sorbus scopulina*
Pineapple weed	*Matricaria matricarioides*
Rose – hips	*Rosa acicularis*
Roseroot	*Sedum rosea*
Docks (sour docks, wild rhubarbs)	*Rumex* spp.
Shrubby cinquefoil (tundra rose)	*Potentilla fruticosa*
Cow parsnip (wild celery)	*Heracleum lanatum*
Wild flag (wild iris)	*Iris setosa*
Wild chive (wild onion)	*Allium schoenoprasm*
(Wild peas)	*Hedysarum* spp.
Louseworts (wooly louseworts)	*Pedicularia* spp.
Wormwoods	*Artemisia* spp.
Yarrows	*Achillea* spp.
White spruce	*Picea glauca*
Paper birch	*Betula papyrifera*
Balsam poplar, cottonwood	*Populus balsamifera*
Alders	*Alnus* spp.

Sources ADF&G Division of Subsistence household surveys 2007; ADF&G 1999; Hultèn 1968; Nelson et al. 2004

Development applications for the Pebble Mine created the need for updated baseline information about subsistence harvests and uses in the nearby communities, as well as for demographic and other economic

data. Lime Village residents have strong family ties to Nondalton, near the Pebble Project site, and residents of these 2 communities share resources. The Division of Subsistence has undertaken a multiyear, multiphase study to provide this information. Phase I examined the subsistence baseline information in Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth in 2005 for the 2004 data year (Fall et al. 2006). Phase II expanded the study to 5 additional communities within the affected watersheds: Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok for the 2005 data year (Krieg et al. 2009).

Phase III of this study examines subsistence baseline information in King Salmon, Naknek, South Naknek, and Lime Village in the 2007 data year. The first 3 communities are located on the shores of Bristol Bay, thus their subsistence economies are fueled by a high production of maritime resources. Lime Village, however, is 191 miles inland from Naknek, and thus has a very different subsistence economy. Since it would be difficult to make comparisons to the other Phase III project communities, this report will present only Lime Village findings; a separate forthcoming report will detail findings in King Salmon, South Naknek, and Naknek. The fieldwork for Phase IV of this study occurred in 2009 in the communities of Aleknagik, Clark's Point, and Manokotak for the 2008 data year.

ADF&G Division of Subsistence conducted this study under contract number IHP-06-050 in collaboration with Stephen R. Braund & Associates (SRB&A, a contractor for PLP) and the study community. SRB&A, funded by PLP, provided funds to ADF&G to conduct this study. SRB&A is an anthropological consulting firm based in Anchorage, Alaska, that specializes in sociocultural research and analysis of subsistence uses, subsistence mapping, traditional knowledge, and cultural resources. As a whole, when complete, this significant study will have broad applicability in resource management and land planning, and will provide updated baseline information about demographics, economics, and subsistence activities in this area of Alaska.

STUDY OBJECTIVES

The multiphase study has the following objectives:

1. Design a survey instrument to produce updated baseline information about subsistence hunting, fishing, gathering, and other topics; and that is compatible with information collected in previous rounds of household interviews.
2. Conduct key respondent interviews to explore key issues in the project community.
3. Train local residents in administration of the systematic household survey.
4. Conduct household surveys to record the following information:
    a. Demographic information.
    b. Involvement in use, harvest, and sharing of fishes, wildlife, and wild plants in 2007.
    c. Estimates of amount of resources harvested in 2007.
    d. Information about jobs and cash income in 2007.
    e. Assessments of changes in subsistence harvest and use patterns.
    f. Location of hunting and harvests of subsistence resources in 2007.
5. Collaboratively review and interpret study findings with the study community.
6. Produce a final report.
7. Communicate study findings to the community and the public.

RESEARCH METHODS

ETHICAL PRINCIPLES FOR THE CONDUCT OF RESEARCH

The study is guided by the research principles adopted by the Alaska Federation of Natives in 1993 and the Interagency Arctic Research Policy Committee on June 28, 1990 (see Miraglia 1998). These principles stress community approval of research designs, informed consent, anonymity of study participants, community review of draft study findings, and the provision of study findings to each study community upon completion of the research.

PROJECT PLANNING AND APPROVALS

After approval of the contract, project staff from ADF&G and SRB&A met in November 2007 to refine project objectives, methods, schedules, and responsibilities. The researchers discussed what had been learned while administering the surveys during phases I and II of the study in order to apply these observations to the upcoming round of household interviews. To meet the information needs of the participating organizations, coordinate research, and minimize respondent burden, the group reached the following decisions:

1. SRB&A would continue to conduct research on respondent households' subsistence activities over the previous 10 years using detailed mapping sessions. The results of these interviews do not appear in this report.
2. The Division of Subsistence would use its standard household harvest survey instrument to meet needs for updated baseline data. The survey instrument would be the same as that used in phases I and II, with the exception that the data year would be updated to 2007.
3. The Division of Subsistence would also use the standard method of collecting subsistence map data, recording on a paper map the locations where members of participating households hunted, fished, and gathered subsistence resources during the 2007 data year.
4. SRB&A would provide personnel to assist in ADF&G fieldwork. ADF&G would send 2 researchers, Davin Holen from the southern office and Amy Russell from the northern office, to Lime Village.

The Lime Village community was sent a letter of introduction to the project in September 2007; however, due to infrequent mail service the letter did not arrive until December. Ursula Graham, the village administrator for Lime Village, contacted Holen and said the community would be interested in participating in the project. Although no community scoping meeting could occur due to the cost of traveling to Lime Village, the community was provided with copies of the survey form and other informational material. Lime Village passed a resolution supporting this project before research commenced. Graham arranged to have a Local Research Assistant (LRA) work with ADF&G. The LRA was paid directly by ADF&G. Graham also worked with Holen to ensure the fieldwork would occur when residents would be present in the community, which was April 2008.

Table 1-3 lists all project staff. The list includes those individuals involved in project management, field research, data entry, data analysis, map production, and report writing.

Table 1-3.–Project staff, Lime Village.

Task	Name	Organization
Project design and management	Davin Holen	ADF&G Division of Subsistence
Data management lead	David Koster	ADF&G Division of Subsistence
Field research lead	Davin Holen	ADF&G Division of Subsistence
Programmer	Terri Lemons	ADF&G Division of Subsistence
Data entry	Analin Lazatin	ADF&G Division of Subsistence
Cartography	Iris A. Prophet	Stephen R. Braund & Associates
	Raena K. Schraer	Stephen R. Braund & Associates
	Stephen R. Braund	Stephen R. Braund & Associates
	Davin Holen	ADF&G Division of Subsistence
Field research staff	Davin Holen	ADF&G Division of Subsistence
	Amy Russell	ADF&G Division of Subsistence
	Wassillie Bobby, Jr.	Lime Village Traditional Council
SR Braund & Associates liaison	Stephen R. Braund	Stephen R. Braund & Associates

Systematic Household Surveys

The primary method for collecting subsistence harvest and use information in this project was a systematic household survey. Following discussion by e-mail and telephone with community members, ADF&G finalized the Lime Village survey instrument in February 2008. A key goal was to structure the survey instrument so as to collect demographic, resource harvest and use, and other economic data that were compatible with information collected in previous rounds of household surveys in the study communities and with data that appeared in the ADF&G Community Subsistence Information System (CSIS) (formerly the Community Profile Database [CPDB[3]]). Appendix A is an example of the survey instrument used in this project.

Holen and Russell traveled to Lime Village on a chartered flight[4] on March 26, 2008. Holen and Russell administered the survey, while the LRA, who had received a training manual, explained the survey to local residents and arranged the interviews. Holen also trained the LRA to administer the household survey if residents who were unable to participate became available. The goal was to interview one representative from each year-round household in Lime Village. Researchers received no response from 1 household currently residing in the community, 4 households are regularly out of the community for several months,[5] and 3 households declined to be interviewed. Participation was voluntary and all responses are confidential at both the individual and household levels.

[3] Scott, C., L. B. Brown, G. B. Jennings, and C. Utermohle. *Unpublished*. ADF&G Division of Subsistence Community Profile Database, 2001, for Microsoft Access 2000. Version 3.12. Alaska Department of Fish and Game Division of Subsistence, Juneau. Hereinafter cited as the CPDB.

[4] There is no regularly scheduled transportation service to Lime Village.

[5] These households were not included in the population estimate.

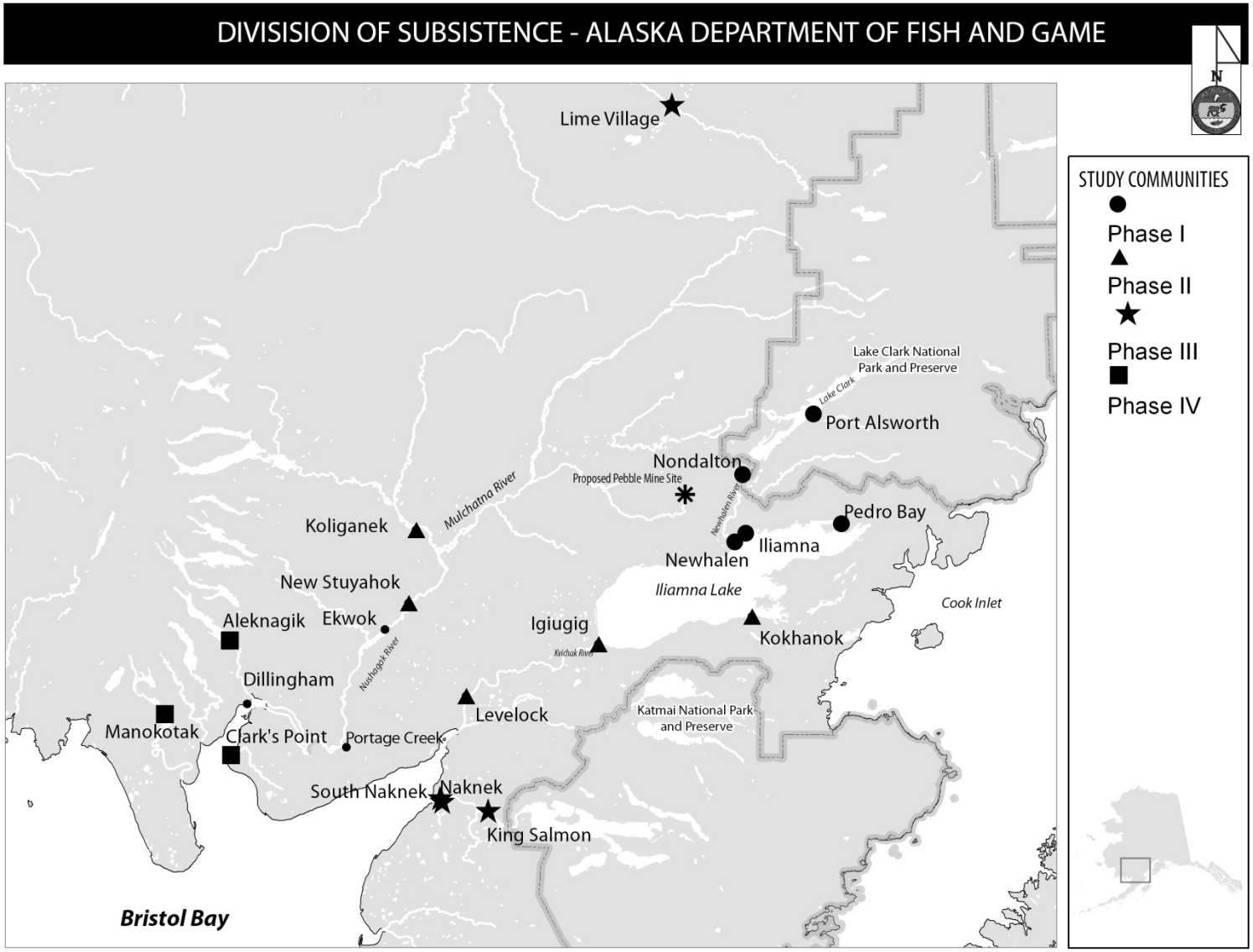

Figure 1-1.–Map of study area.

Researchers were able to interview a total of 7 Lime Village households (Table 1-4). On the first day of their trip to Lime Village, 2 interviews were conducted, and on the second day, 3 more interviews were conducted. Both ADF&G researchers and the LRA tried to arrange additional interviews but 3 households declined to be interviewed. Holen and Russell departed for Anchorage in the late afternoon of March 27. On March 30, 2008, Holen drove to Wasilla, Alaska, to interview 2 additional year-round Lime Village households who were away from the community for a short time to visit family.

Thus, the sample achievement was 64% of Lime Village households. Each interview in the community lasted approximately 1 hour and 20 minutes; the shortest was 30 minutes and the longest approximately 1 hour and 40 minutes.

Table 1-4.–Lime Village sample achievement, 2007.

Number of dwelling units	15
Interview goal	15
Households interviewed	7
Households failed to contact	1
Households declined to be interviewed	3
Moved/nonresident households [a]	4
Total households attempted to interview	11
Refusal rate	20%
Final estimate of permanent households	11
Percentage of total households interviewed	64%
Interview weighting factor	1.57
Sampled population	17
Estimated population	26.7

a. Nonresident households had not lived in the community for at least 3 months during the study year.

Source ADF&G Division of Subsistence household survey 2008.

Mapping of Locations of Subsistence Hunting, Fishing, and Gathering, 2007

During the household interviews, researchers asked respondents to indicate the locations of their hunting, fishing, and gathering activities during the 2007 data year. Specifically, interviewers asked the respondents to mark on the maps the sites of each harvest and effort, the species harvested, the amounts harvested, and the months of effort and harvest. To capture and analyze the data, ADF&G and SRB&A staff applied the mapping method developed for the multiphase project. Points were used for harvest locations, polygons (circled areas) were used for harvest and effort areas, and lines were used to indicate trap lines.

These data update findings from a mapping study conducted by Kari (1983), which included qualitative interviews that collected information about resource harvest and effort areas used in the early 1980s, as well as similar areas used between 1960 and 1980. The results and discussion section of this report includes as much temporal comparison as possible of harvest and effort in these areas from Kari's earlier timeframes to the data gathered during this project.

The maps used for this project were produced by Holen at ADF&G using ArcGIS 9.3 software[6] on 11″ x 17″ paper. They consisted of 2 sets of paper maps: 1 high resolution U. S. Geological Survey (USGS) topographic map set at 1:250,000 and 1 grayscale map set, with topographic relief and major features

[6] Product names are given because they are established standards for the State of Alaska or for scientific completeness: they do not constitute product endorsement.

labeled, at 1:500,000. There were 2 different maps in each set: one for subsistence fishing (water based) activities, and one for hunting, trapping, and plant gathering (land based) activities. During the mapping activity, researchers also recorded the household's identification number (which helps to ensure the confidentiality of spatial data), the date of the mapping interview, and the interviewer's initials on each map.

The mapping component of the survey was conducted at the same time as the survey. During the interviews conducted in Lime Village, because there were 2 ADF&G researchers, Holen was able to conduct the mapping component of the survey while Russell conducted the survey. In the interviews conducted in Wasilla, Holen conducted both components.

Key Respondent Interviews

Key respondent interviews also occurred during the survey component of the project. During their visit to Lime Village, Holen and Russell asked additional questions about resource harvest and uses while conducting the surveys. Holen also gathered additional information during the interviews in Wasilla. While in Lime Village, Russell accompanied 1 resident on 2 ice fishing trips, during which she recorded detailed notes. Information derived from the key respondent interviews has been incorporated in the discussion of the harvest data.

DATA ANALYSIS AND REVIEW

SURVEY DATA ENTRY AND ANALYSIS

All data were coded for data entry by Division of Subsistence staff in Anchorage. Responses were coded following standardized conventions used by the division to facilitate data entry. The division's information management staff set up standard Microsoft SQL Server database structures that included rules, constraints, and referential integrity to ensure that data were entered completely and accurately. Data entry screens were available on a secured Internet site. Daily incremental backups of the database occurred, and transaction logs were backed up hourly. Full backups of the database occurred twice weekly. This ensured that no more than 1 hour of data entry would be lost in the unlikely event of a catastrophic failure. All survey data were entered twice and each set compared in order to minimize data entry errors.

Once data were entered and confirmed, information was processed with the use of Statistical Package for the Social Sciences (SPSS) software, version 11.5. Initial processing included the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, and referential integrity do not capture all of the possible inconsistencies that may appear. Harvest data collected as numbers or gallons or buckets were converted to pounds usable weight using standard factors (see Appendix B for conversion factors).

ADF&G staff also used SPSS for analyzing the survey information. Analysis included review of raw data frequencies, cross tabulations, table generation, estimation of population parameters, and calculation of confidence intervals for the estimates. All surveys were completed and there were no missing data.

Harvest estimates and responses to all questions were calculated based upon the application of weighted means (Cochran 1977). These calculations are standard methods for extrapolating sampled data. As an example, the formula for harvest expansion is

$$H_i = \bar{h}_i S_i \quad (1)$$

where:

$$\bar{h}_i = \frac{h_i}{n_i} \text{ (mean harvest per returned survey)} \quad (2)$$

and H_i = the total harvest (numbers of resource or pounds) for the community I,

h_i = the total harvest reported in returned surveys,

n_i = the number of returned surveys, and

S_i = the number of households in a community.

As an interim step, the standard deviation (SD), or variance (V) (which is the SD squared), was also calculated with the raw, unexpanded data. The standard error (SE), or SD, of the mean was also calculated for the community. This was used to estimate the relative precision of the mean, or the likelihood that an unknown value would fall within a certain distance from the mean. In this project, the relative precision of the mean is shown in the tables as a confidence limit (CL), expressed as a percentage. Once the standard error was calculated, the CL was determined by multiplying the SE by a constant that reflected the level of significance desired, based on a normal distribution. The constant for 95% confidence limits is 1.96. Though there are numerous ways to express the formula below, it contains the components of an SD, V, and SE.

$$CL\ \%\ (\pm) = \frac{t_{\alpha/2} \times \frac{s}{\sqrt{n}} \times \sqrt{\frac{N-n}{N-1}}}{\bar{x}} \quad (3)$$

where:

s = sample standard deviation,

n = sample size,

N = population size, and

$t_{\alpha/2}$ = student's t statistic for alpha level (α=.95) with n–1 degrees of freedom.

Small CL percentages indicate that an estimate is likely to be very close to the actual mean of the sample. Larger percentages mean that estimates could be further away from the mean of the sample.

The corrected, final data from the household survey will be added to the Division of Subsistence CSIS. This publicly accessible database includes community-level study findings.

Population Estimates and Other Demographic Information

As noted above, a goal of the research was to collect demographic information about all year-round households of Lime Village. Because not all households were interviewed, a population estimate was calculated by multiplying the average household size of interviewed households by the total number of year-round households, as identified by Division of Subsistence researchers in consultation with community officials and other knowledgeable respondents (Table 1-1).

There may be several reasons for the differences between the population estimates (and other demographic data) for the community generated from the division's household survey and follow up efforts as of December 31, 2007, and the estimates developed by the federal census as conducted in April 2000. For example, the division survey results may reflect changes in the population of the community since the 2000 federal census. In addition, as noted by the Alaska Department of Labor and Workforce Development, "most of Lime Village (41 persons) was erroneously reported in the balance of the Koyukuk–Middle Yukon in 2000" (ADLWD 2009). Since that time, the Alaska Department of Labor has collected data to update the population of Lime Village, which in 2007 was estimated at 25 residents (ADLWD 2009).

MAP DATA ENTRY AND ANALYSIS

ADF&G information management staff checked maps for consistency with data recorded on the survey forms. They also removed extraneous marks from the maps to ensure the digitizing process would occur with minimal error. The map design included tick marks, similar to registration marks, used to pinpoint

geographical features and thus provide accuracy during the digitizing process. Each map could then be aligned by the SRB&A GIS team, who digitized the polygons, points, and lines that researchers had drawn by hand on the paper maps during the interviews.

During the map digitizing process, Holen also met with SRB&A staff to discuss the level of confidentiality of the map data. This discussion was prompted by community concerns regarding confidentiality of specific harvest locations. Using the map template that had been developed and used by ADF&G in the earlier 2 phases of this project, SRB&A produced the maps for this report.

Community Review Meeting

ADF&G and SRB&A staff presented preliminary survey findings at a meeting in Lime Village on December 16, 2008. This meeting was organized in collaboration with the traditional council and community leadership. Ten community members attended the review meeting, as did Davin Holen, Victoria Ciccone, Terri Lemons of ADF&G and Stephanie Schively and Sarah Kessick of SRB&A.

Final Report Organization

ADF&G researchers prepared this final report. Similar to other reports generated from the multiphase study, this report summarizes the results of the key respondent interviews, systematic household surveys, mapping interviews conducted by ADF&G, and community meetings. The third chapter of the report compares the study findings to previous research by ADF&G, especially Kari 1983.

ADF&G provided a draft report to SRB&A, the Lime Village Traditional Council, and ADF&G area biologists for their review and comment. After receipt of comments, the report was finalized. ADF&G will mail a short (4 page) summary of the study findings to every household in Lime Village and include it as Appendix C of the finalized report.

CHAPTER 2: STUDY FINDINGS

COMMUNITY BACKGROUND

Lime Village, once also referred to as "Hungry Village," is one of the most remote communities in Alaska (Kari 1983:5). The current community is located on the Stony River, at the headwaters of the Kuskokwim River, and is considered to be the most remote Dena'ina Athabascan community in Alaska. Their nearest neighbor is Stony River, a predominately Central Yup'ik community located 2 hours downriver (northwest) by snowmachine in the winter or boat in the summer. Lime Village has strong kinship and cultural ties to Nondalton, another Dena'ina community located 98 miles to the south. There are many Nondalton residents and families who are originally from Lime Village. Although this area of Dena'ina Athabascan territory is sparsely populated, it is here on the Stony River near the present day Lime Village that the Dena'ina are thought to have originated (Kari and Fall 2003; Kari 1977; Townsend 1981).

The Dena'ina of the interior of Alaska were traditionally a seminomadic people who traveled seasonally to harvest resources at various sites and who repeated this seasonal round each year. Most groups had winter villages where they would build permanent semisubterranean sod houses. According to Ellanna and Balluta (1992:58), the inland Dena'ina consisted of 4 bands organized through kin networks into several winter villages. There was a group that predominantly used the middle to upper reaches of the Stony River, including the settlements known today as *Hłsit* and *Qeghnilen*; a band that predominantly used the area around Telequana Lake; a band that traveled along the Mulchatna River; and a band that predominantly used the area around Kijik on Lake Clark (Ellanna and Balluta 1992:58). During the late 19th century, probably as a result of an increased reliance on trade goods, these 4 bands consolidated into 2 bands: one that used the Stony River area and another that used the area at Kijik on Lake Clark (Ellanna and Balluta 1992:58,63). The Kijik location was ideally situated so that inland Dena'ina could make the trip each summer to Bristol Bay to work in the commercial salmon fishery. Travel was mainly by birch bark canoe, skin kayaks, and by foot. Kijik remained the main site for inland Dena'ina on Lake Clark until a measles epidemic in 1902, which was a motivating factor for residents to abandon the community and move downstream to Old Nondalton on Six-Mile Lake. The last family moved out of Kijik in 1909.

Less is known about the former Dena'ina villages of the upper Mulchatna River. Kari (1983), through linguistic research working with Dena'ina elders, has recorded 3 settlements along the Mulchatna River, Shehtnu (*Shek Kaq'*) at the mouth of the Springway Creek, one at the mouth of the Chilchitna River (Chalchitnu) (known as *Chałchi Kaq'*), and the last at the mouth of the Chilakadrotna (*Tsilak'idghutnu*) (known as *Niłaghedlen* or *Tsilak'idghut-nu Hdakaq*). These villages were eventually abandoned, sometime around 1888 due to a lack of game in the area, and residents moved south to Kijik (Ellanna and Balluta 1992:64). The band residing at Telequana Lake resided at a location known as Trail Creek (*Ch'qu-ch'ishtnu*) near Telequana Lake (*Dila Vena* or *Vek'dilah Vena*). Nondalton residents remember this site having 4 or 5 plank houses, as well as some semisubterranean homes. This community ceased functioning in approximately 1910 and residents moved to Lake Clark to have access to schools and work in the Bristol Bay commercial fishery (Ellanna and Balluta 1992:65).

The people of Stony River were mainly concentrated in the village of *Qeghnilen* or "Canyon Village". Many residents of Nondalton can trace their descent to ancestors who came from *Qeghnilen* (Ellanna and Balluta 1992:65). Residents of both Lime Village and Nondalton can also trace their heritage to the village of *Hłsit*, which was located on a stream flowing from Tishimna Lake (*Hłsit Vena*). Both *Qeghnilen* and *Hłsit* dissolved in the 1930s (Ellanna and Balluta 1992:65). These settlements did not have more than 200 residents each at any time. The best predissolution estimate of the total population of all

inland Dena'ina settlements is 546 as of 1875, based on Russian Orthodox Church records (Ellanna and Balluta 1992:67).

Priscilla Kari worked in Lime Village in the 1980s (Kari 1983) to document patterns of subsistence harvest; however, most of her work was qualitative in nature. At that time, Lime Village had a population of 41 residents, almost all of whom used Dena'ina as their primary language (Kari 1983:5). Today, there is only 1 couple who have Dena'ina as their primary language.

Close family ties support the efforts of both Lime Village and Nondalton residents to work together to conduct joint subsistence activities. In addition, there is significant sharing of resources between the 2 communities: for example, residents often send each other caribou meat by aircraft or snowmachine. In terms of quantitative research on harvest patterns, Lime Village is not well documented; this project represents the first harvest survey in Lime Village by the Division of Subsistence.

Present day Lime Village is composed of a small group of houses connected by trails perched atop a small bluff overlooking the Stony River. The village maintains an aircraft runway, but there is no regular air service: oftentimes no airplanes land for weeks at a time. The closest store or fuel source is located at Stony River, which is 2 ½ hours downstream by snowmachine or boat. The remoteness of the community and lack of regular air service means the community relies heavily on subsistence harvests and most likely accounts for its high per capita harvest of wild resources.

There are few operating public buildings in the community. The only running water in the community is in the community "washeteria," which has 2 toilets, 1 shower, and laundry facilities. The school and faculty housing, which are now closed due to lack of students, are also plumbed for running water. There is also a diesel–solar generator at the school, but it has fallen into disrepair and has not been fixed because there is no one trained to repair it.

DEMOGRAPHY, CASH EMPLOYMENT, MONETARY INCOME

DEMOGRAPHY

There are no reliable population data for Lime Village in the 2000 census; however, the State of Alaska estimated a population of 41 residents based on workforce data in 2000 (ADLWD 2009). In 2007, the household survey estimated that there was a population of 27 residents in 11 year-round households, of which 88% (24 residents) were Alaska Native (Table 2-1). Residents with children must home school, or relocate to other communities for their children to attend school.

According to the survey, the mean number of years of residency in Lime Village was 34 years, and the maximum years of residency at 95 years (Table 2-1). The largest age cohort for both males and females was young adults between 15 and 19 years old (Table 2-2 and Figure 2-1). These young adults were no longer in high school and were starting families of their own. Due to the small population and the frequency of single person households, other age categories are sparse. Because Lime Village is a small community, a single individual can dramatically change the demographics, a point to keep in mind when reviewing Figure 2-1.

Of the Lime Village household heads interviewed, 83% were born in Alaska (Table 2-3). Most were born in Lime Village (33%) or in nearby Stony River (25%). Other nearby Interior Alaska communities where household heads were born include Nikolai (8%), Sleetmute (8%), and *Qeghnilen* (8%), the latter of which is no longer inhabited.

CASH EMPLOYMENT CHARACTERISTICS AND MONETARY INCOME

According to those interviewed in 2007, 40% of the earned income in Lime Village resulted from jobs with the local government (Table 2-4). Administrative support occupations added 18% to the percentage of earned income and state government jobs added another 13% of the income. This was followed by income derived from transportation (11%), services (9%), and construction (9%). Most jobs were located

in Lime Village (86%), although 1 job was located in McGrath (5%) and 2 jobs (10%) were located outside of Alaska.

In Lime Village in 2007, 42% of adults were employed year-round and 80% of all adults were employed at some time during the year (Table 2-5). Each adult had an average of 2.8 jobs. Households had an average of 4 jobs and 71% of households had at least 1 member who was employed (Table 2-5). In 2007, the per capita income in Lime Village was $6,515, while the average household income was $15,823. The average per capita income in Lime Village in 2007 was well below the average per capita income for the state of Alaska, which in 2000 was $22,660 ADLWD 2009. Therefore, subsistence in Lime Village is an important part of the local economy. In 2007 the per capita harvest of edible wild resources was 936 pounds per person, which is high compared to other rural communities in the state.

LEVELS OF PARTICIPATION IN HARVESTS AND USES

Table 2-6 reports levels of individual participation in the harvest and processing of wild resources by Lime Village households in 2007. The 2 largest areas of participation were gathering and processing plants and berries (88%), and harvesting and processing fish (77%). A majority of households also harvested and processed birds and game (65% hunting and 71% harvesting birds and game) and 53% of households hunted, trapped, and processed furbearers (Table 2-6). In total, 94% of Lime Village households attempted to harvest or processed wild resources in 2007.

RESOURCE HARVEST AND USE PATTERNS

Table 2-7 summarizes resource harvest and use characteristics for Lime Village in 2007. All households (100%) used, attempted to harvest, and harvested at least 1 wild resource. The average harvest was 2,272 pounds usable weight per household, or 936 pounds per capita. During the study year, Lime Village households harvested an average of 14 different kinds of resources and used an average of 18 different kinds of resources. The maximum number of resources used by any household was 29. In addition, households gave away an average of 9 different kinds of resources.

Species Used and Seasonal Round

Fish were by far the most commonly harvested resource in Lime Village in 2007 (see Figure 2-2), which is typical of Interior Alaska communities that are located on major rivers. In the late winter months, when the weather is warm but the lake ice is still safe, residents set nets under the ice to target least ciscoes, which make up 26% of nonsalmon fish harvests by weight. Other species, such as northern pike, are also harvested through the ice.

After the ice melts, the salmon begin to return to nearby rivers, and residents start to harvest Chinook and sockeye salmon (Figure 2-4). Later runs bring chum and coho salmon. Salmon, especially sockeye salmon, are a major component of the diet (Table 2-8). In 2007, all 4 species of salmon harvested by local households were in the top 10 of wild resources harvested and used by Lime Village households (Table 2-9). Another important summer activity in 2007 was hunting for black bears, which were primarily harvested in May and June (Table 2-10).

A fall activity that often stretched into winter was caribou hunting. In 2007, caribou were the second major source of subsistence food by weight at Lime Village (after sockeye salmon) (Table 2-9). During the study year, 86% of households used caribou and 71% hunted caribou (Table 2-8). In addition to caribou, moose also contributed to the diet of the residents of Lime Village, with 57% of households using moose and hunting moose (Table 2-8). In 2007, Lime Village residents harvested moose in fall (see Table 2-10 for a summary of moose harvests by month and sex).

Migratory birds crossing Interior Alaska on their way to and from their summer habitat in the Arctic stop to rest on the marsh and tundra areas that surround Lime Village. In 2007, 57% of the households used migratory birds, and 43% harvested them during both the spring and the fall seasons (Table 2-8).

Although over one-half of the population of the community participated in this activity, migratory birds did not account for a major portion of the diet (Table 2-9).

Although porcupines and beavers were not major contributors to the diet in terms of pounds per capita, many households did harvest and use them (tables 2-8 and 2-9). These animals are harvested opportunistically throughout the year while residents are conducting other harvesting activities; especially porcupines, which are mainly harvested while residents are at fish camps.

Harvest Quantities

Table 2-8 reports estimated wild resource harvests and uses by Lime Village households in 2007 and is organized first by general category and then by species. All resources are reported in pounds usable weight unless otherwise noted (see Appendix B for conversion factors). The "harvest" category includes resources taken by any member of the surveyed household during the study year. The "use" category includes all resources received and given away by a household, as well as resources acquired as gifts, by trade, through hunting partnerships, or as meat given to hunting guides by their clients. Purchased foods are not included. Differences between harvest and use percentages reflect sharing between households, which results in a wider distribution of wild foods.

The total harvest for all subsistence resources during 2007 for Lime Village was 24,991 lb, or 936 pounds per person (Table 2-8). Table 2-9 lists the top 10 resources harvested, in terms of pounds per capita, and the 10 resources used by the most Lime Village households.

Salmon constituted the largest portion of the subsistence harvest, at 14,848 lb (60%), or 556 pounds per person (Figure 2-2). The resource most harvested was sockeye salmon, which totaled 7,348 lb, or 275 pounds per person (Table 2-8). These salmon arrive in June and July and are harvested mainly near fish camps located on the Stony River. Also important are Chinook salmon, which were harvested at the same locations as sockeye salmon, but at an earlier time (see Figure 2-4). In 2007, Lime Village households harvested 3,782 lb of Chinook salmon, or 142 pounds per person.

Nonsalmon fishes were also an important resource at Lime Village in 2007, making up 5% of the total harvest of wild resources by weight (Table 2-8 and Figure 2-2). In 2007, Lime Village households harvested 1,332 lb of nonsalmon fishes, or 50 pounds per person. Figure 2-3 shows the harvest of freshwater fishes by species in Lime Village in 2007. The major species harvested include northern pike with 49% (651 lb or 24 pounds per person) of the total harvest of nonsalmon fishes by weight, and least ciscoes (346 lb or 13 pounds per person) at 26% of the total harvest of nonsalmon fishes by weight (Table 2-8 and Figure 2-3). Much of this harvest occurs just south of the community, at Trout Lake, during the winter through the ice. Other harvested nonsalmon fishes includes broad whitefish at 17% of the nonsalmon fish harvest by weight (220 lb or 8 pounds per person) and Arctic grayling at 9% of the nonsalmon fish harvest by weight (116 lb or 4 pounds per person).

Large land mammals (Table 2-8 and Figure 2-5) were the other major source of wild foods at Lime Village in 2007, with 6,487 lb harvested, or 243 pounds per person. Of the total harvest of large land mammals, 65% was caribou (by weight), with 4,243 lb harvested, or 159 pounds per person. Moose are also important, since this resource was 26% of the harvest by weight in 2007 (1,697 lb harvested or 64 pounds per person). Black bears are also important, at 8% of the harvest by weight (547 lb harvested or 21 pounds per person).

In 2007, beavers and porcupines were important small land mammal resources. Lime Village households harvested 358 lb of beaver, or 13 pounds per person and 101 lb of porcupine or 4 pounds per person (Table 2-3). Foxes and martens were also harvested for furs.

Hunting for both migratory waterfowl and upland birds was an important subsistence activity for Lime Village residents in 2007, although these resources do not supply a major proportion of the harvest.

Households of Lime Village harvested 486 lb of migratory waterfowl, or 18 pounds per person, and 91 lb of upland birds including ptarmigan and grouse, or 3 pounds per person.

Gathering berries is an important fall resource harvest activity: residents devote a large amount of time and effort to this activity. In 2007, Lime Village households harvested 1,175 lb of berries (294 gal), or 44 pounds per person.

All residents in Lime Village heat their homes with wood, and gathering wood, which mostly occurs in winter, takes a considerable amount of time and effort. The total harvest of wood for the community was 127 cords.

General Hunting, Fishing, and Gathering Areas

Mapping of harvest and use areas by Lime Village residents demonstrates that residents use specific areas for each resource activity. Chinook and sockeye salmon are harvested along the Stony River at traditional fish camps (Figure 2-6). As mentioned earlier, Trout Lake is a popular harvesting area for nonsalmon fishes, including least ciscoes. Broad whitefish and northern pike are also harvested at Trout Lake, Tundra Lake, as well as at several other locations (figures 2-7 and 2-8).

Different areas are used to hunt individual large land mammal species as well. In 2007, caribou were primarily hunted just south of the community, in the area around Tundra Lake (Figure 2-9). Moose, on the other hand, were hunted mostly north of the Stony River, although there was some effort to the south (Figure 2-10). Black bears were hunted along the Stony River, mostly to the west of the community (Figure 2-11). Small land mammals were mainly hunted along traplines that radiated from the community (Figure 2-12). Migratory waterfowl were hunted to the south of the community, near Tundra and Trout lakes, and residents harvested game birds along the Stony River, often while traveling in pursuit of other activities (Figure 2-13). Residents of Lime Village use a wide variety of areas for harvesting plants, berries, and wood. Many are near the community, although some pick berries near their fish camps to the east of the community (Figure 2-14).

SHARING AND RECEIVING OF WILD RESOURCES

Lime Village 2007 estimates of sharing indicate that 100% of households receive wild resources from other households and 100% of households give resources away (tables 2-7 and 2-8). Households received an average of 8 resources and gave away an average of 9 resources (Table 2-7). The fish resource is the most abundantly used, and is one of the most commonly shared: 86% of households gave away fish and 71% of households received fish (Table 2-8).

Large land mammals are also widely shared, at about the same rate as fish. In 2007, 57% of households gave away large land mammals, including black bears, and 86% received large land mammals. It is interesting to note that caribou are widely shared: 71% of households received caribou (Table 2-8). Small land mammals are also shared, with 57% giving away small land mammals, including beavers, and 71% receiving small land mammals. The higher "receiving" percentage means that households who harvest this resource widely share it with the community because more households received the resource than gave it away.

USE AND HARVEST BY RESOURCE CATEGORY

SALMON

As noted in figures 2-2 and 2-4, salmon, especially sockeye salmon, had the highest harvest of any other resource in 2007. Salmon have always been especially important to Lime Village residents because it is a reliable resource, unlike large land mammals, whose populations and abundance can vary from year to year (Kari 1983:107).

Lime Village households harvested 61% of their salmon, in terms of numbers of fish, in 2007 by using setnets along the Stony River (Table 2-11 and Figure 2-6). In addition to setnets, 34% of the harvest of salmon was taken by a combination of dip nets and fish wheels and 5% were harvested using rod and reel gear (in terms of numbers of fish). In terms of both numbers and pounds of fish, sockeye salmon were the primary species harvested (Table 2-8 and Figure 2-4), with 67% taken in setnets and 33% harvested by dip nets and fish wheels.

Other salmon, such as Chinook salmon (which makes up 25% of the salmon harvest by weight), were also primarily taken with setnets as well (77%; Table 2-11 and Figure 2-4). This harvest percentage is in terms of useable weight: residents at the community review meeting noted that they did not harvest as many Chinook salmon as sockeye salmon (341 Chinook compared to 1,713 sockeye salmon). The harvest in terms of pounds seems high because most Chinook salmon weigh more than sockeye salmon. Chum salmon harvests were more diverse: 40% were harvested with setnets, 54% with dip nets and fish wheels, and 5% with rod and reel gear. Coho salmon, a late running salmon, were often harvested with rod and reel gear after the bulk of the salmon harvest had occurred, and that salmon processed and stored. Coho salmon accounted for 6% of the salmon harvest by weight, and 57% of the harvest was taken using rod and reel gear (Table 2-11 and Figure 2-4).

FRESHWATER FISHES

Table 2-12 lists, by gear type, the percentage of each nonsalmon fish species harvested by Lime Village households in 2007. Households harvested 43% of their nonsalmon fish by setnet and 21% by ice fishing. Residents also used rod and reel (37% of households) to harvest nonsalmon fishes as well. Harvest of nonsalmon fishes by gear type varied depending on the species. For example, as shown in Table 2-12, households used setnets to harvest broad whitefish (100%) and harvested northern pike by ice fishing (43%) or rod and reel (57%). In 2007, most of these harvests occurred at Trout Lake (Figure 2-7).

It should be noted that although northern pike constitute 49% of the nonsalmon fish harvest by weight, fewer fish were actually harvested (see Appendix B for conversion factors) compared to other nonsalmon fishes. For example, 233 northern pike were harvested in 2007 by Lime Village households and 864 least ciscoes were harvested (Table 2-8). Arctic grayling were harvested only with rod and reel gear (Table 2-12).

LARGE LAND MAMMALS

In 2007, large land mammals made up 26% of the total Lime Village harvest of wild resources by weight (Figure 2-2). This is a change from the past, such as when Kari (1983:77) noted that Lime Village residents considered moose and caribou a major contributor to their diet, rather than other resources such as fish and fowl. In 2007, residents noted that the harvests of moose and caribou were down compared to recent years (past 5 years), forcing an increased reliance on salmon and nonsalmon fishes. However, considerable effort had been invested in hunting moose and caribou. In 2007, 86% of the households in Lime Village attempted to harvest large land mammals while 57% were successful (Table 2-8).

Of the total effort, 71% of households attempted to harvest caribou while 57% attempted to harvest moose. Caribou are harvested locally, mainly south of the community, and are shared with kin-related residents of Nondalton, 98 miles south of Lime Village (Figure 2-9). In 2007, the success rate for caribou was much higher than that for moose: 43% of households successfully harvested a caribou while only 14% successfully harvested a moose (Table 2-8).

Black bears were also important in 2007, with 57% of households attempting to harvest them. Black bears are taken opportunistically while traveling along the Stony River (Figure 2-11), or when they become a nuisance at fish camps. One elder in the community reported harvesting a black bear at his fish camp by using a traditional Dena'ina snare trap.

SMALL LAND MAMMALS/FURBEARERS

Lime Village residents in 2007 harvested small land mammals for both furs and for food. Beavers are harvested for both food and furs (41 beavers harvested; Table 2-8). At one time, beavers were heavily harvested, equal to the harvest of black bears by Lime Village residents (Kari 1983:78). Porcupines are harvested for food and quills (13 porcupines harvested; Table 2-8). The major furbearing species harvested included 44 red foxes and 167 martens (Table 2-8). In addition, there were 5 gray wolves and 8 wolverines harvested (Table 2-8). Most small land mammals are harvested from traplines or while traveling along the Stony River (Figure 2-12).

BIRDS

In 2007, Lime Village residents harvested waterfowl south of the community in the areas surrounding the Trout and Tundra lakes (Figure 2-13). Nearly one-half of the community of Lime Village participated in harvesting migratory birds (43%) and 43% were successful. Most effort was expended in hunting ducks (43%) rather than geese (29%) (Table 2-8). In addition, a larger number of ducks were harvested (448 ducks) compared to geese (66; Table 2-8).

A similar amount of effort was also expended in harvesting upland game birds, with 57% of households attempting to harvest and 43% successfully harvesting these birds (Table 2-8). In terms of the number of upland birds harvested, more grouse (118) were harvested than ptarmigan (13; Table 2-8).

WILD PLANTS

As noted above, Lime Village residents are very active in harvesting wild plant resources, especially berries and wood. In total, 294 gallons of berries were harvested and 86% of households participated in harvesting berries (Table 2-8). Berries are harvested at a variety of locations, some well upriver from the community (Figure 2-14). Most of these areas are accessed by boat on the Stony River, or by the trail to Trout Lake south of the community. Also as noted earlier, wood is the main source of heat for homes in Lime Village; 127 cords of wood were harvested in 2007 which heated approximately 11 households plus a community building (tables 1-1 and 2-8).

COMPARING 2007 WITH PREVIOUS YEARS, AND COMMUNITY CONCERNS

All interviewed Lime Village households reported that, in total, their harvests and uses of resources in 2007 were about the same as in the recent past (the last 5 years). Table 2-13 summarizes respondents' assessments for each major resource category (see also Figure 2-15). Respondents reported that they used either fewer or the same of each resource; no respondents said they used more than in recent years. For example, 86% of households reported that their uses of salmon in 2007 was the same in recent years, while 14% of households reported that they used fewer salmon in 2007 than in recent years. The comparative estimates for birds and nonsalmon fishes are similar. Of particular concern by respondents was the harvest of large land mammals, with 71% of respondents saying that they harvested and used fewer large land mammals than in previous years (Figure 2-15).

Table 2-14 lists the reasons residents of Lime Village gave for changes in harvests and uses, by resource category (see also Figure 2-16). This was an open-ended question, and respondents could provide more than one reason for changes. Project staff grouped the responses into categories, such as competition for resources, regulations hindering or helping residents harvest resources, sharing of harvests, effects of weather on animals and subsistence activities, changes in the animal populations, personal reasons such as work and health, and other outside effects on residents' opportunities to engage in subsistence activities. In 2007, several residents in Lime Village had traveled outside the community to attend training for work and were therefore absent during certain seasons. These trips lasted 1 to 4 months. Since the community

has only 11 households, some of which are occupied by only 1 person, it takes only a few people to travel outside the community to make a noticeable difference in the community harvest pattern (Table 2-1).

The 2 major categories of responses were changes in animal populations and personal reasons such as work and health. Households' use of fewer salmon and nonsalmon fishes were entirely attributed to personal reasons (Table 2-14 and Figure 2-16). The harvest of fewer large land mammals was entirely due to animal population changes: households said that there were fewer animals available to harvest. At the community review meeting, residents reiterated that there were fewer moose in the area, and this was their prime concern regarding resource abundance. Some residents attributed the lack of large land mammals to the U.S. Air Force aircraft that fly over the area. Residents said that the aircraft flights are loud enough to shake the houses. However, residents did note that they still have caribou in the area, and that their relatives from Nondalton traveled to the area to hunt in 2007.

Residents said that berries were not as abundant as in most years: 67% of respondents harvested fewer wild plants due to poor conditions and 33% due to personal reasons. "Poor conditions" is usually the result of a lack of rain just prior to ripening. Personal reasons again included the absence of residents from the community during berry season. However, as noted above, Lime Village households did harvest a total of 294 gallons (1,175 lb) of berries, or 44 pounds per person.

Table 2-1.–Demographic characteristics of households, Lime Village, 2007.

Characteristics		
Sampled households		7
Number of permanent households in the community		11
Percentage of households sampled		63.6%
Household size		
Mean		2.4
Minimum		1
Maximum		4
Sampled population		17
Estimated community population		27
Age		
Mean		45
Minimum [a]		1
Maximum		95
Median		43
Length of residency–population		
Mean		34
Minimum		1
Maximum		95
Length of residency–household heads		
Mean		44
Minimum		3
Maximum		95
Sex		
Males	Number	13
	Percentage	47.1%
Females	Number	14
	Percentage	52.9%

-continued-

Table 2-1. Page 2 of 2.

Characteristics		
Alaska Native		
Households (either head)	Number	11
	Percentage	100%
Estimated population	Number	24
	Percentage	88.2%

a. A minimum household age of 0 indicates newborn in 2007.

Source ADF&G Division of Subsistence household survey, 2008.

Table 2-2.–Population profile, Lime Village, 2007.

	Male			Female			Total		
Age	Number	Percentage	Cumulative percentage	Number	Percentage	Cumulative percentage	Number	Percentage	Cumulative percentage
0–4	0.0	0.0%	0.0%	1.6	11.1%	11.1%	1.6	5.9%	5.9%
5–9	0.0	0.0%	0.0%	0.0	0.0%	11.1%	0.0	0.0%	5.9%
10–14	0.0	0.0%	0.0%	0.0	0.0%	11.1%	0.0	0.0%	5.9%
15–19	3.1	25.0%	25.0%	3.1	22.2%	33.4%	6.3	23.5%	29.4%
20–24	0.0	0.0%	25.0%	0.0	0.0%	33.4%	0.0	0.0%	29.4%
25–29	0.0	0.0%	25.0%	1.6	11.1%	44.5%	1.6	5.9%	35.3%
30–34	0.0	0.0%	25.0%	0.0	0.0%	44.5%	0.0	0.0%	35.3%
35–39	0.0	0.0%	25.0%	1.6	11.1%	55.6%	1.6	5.9%	41.2%
40–44	1.6	12.5%	37.5%	1.6	11.1%	66.7%	3.1	11.8%	53.0%
45–49	1.6	12.5%	50.0%	0.0	0.0%	66.7%	1.6	5.9%	58.8%
50–54	0.0	0.0%	50.0%	0.0	0.0%	66.7%	0.0	0.0%	58.8%
55–59	0.0	0.0%	50.0%	1.6	11.1%	77.8%	1.6	5.9%	64.7%
60–64	3.1	25.0%	75.0%	1.6	11.1%	88.9%	4.7	17.6%	82.4%
65–69	0.0	0.0%	75.0%	0.0	0.0%	88.9%	0.0	0.0%	82.4%
70–74	0.0	0.0%	75.0%	0.0	0.0%	88.9%	0.0	0.0%	82.4%
75–79	1.6	12.5%	87.5%	1.6	11.1%	100.0%	3.1	11.8%	94.1%
80–84	0.0	0.0%	87.5%	0.0	0.0%	100.0%	0.0	0.0%	94.1%
85–89	0.0	0.0%	87.5%	0.0	0.0%	100.0%	0.0	0.0%	94.1%
90–94	0.0	0.0%	87.5%	0.0	0.0%	100.0%	0.0	0.0%	94.1%
95–99	1.6	12.5%	100.0%	0.0	0.0%	100.0%	1.6	5.9%	100.0%
100–104	0.0	0.0%	100.0%	0.0	0.0%	100.0%	0.0	0.0%	100.0%
Missing	0.0	0.0%	100.0%	0.0	0.0%	100.0%	0.0	0.0%	100.0%
Total	**12.6**	**100.0%**		**14.1**	**100.0%**		**26.7**	**100.0%**	

Source ADF&G Division of Subsistence household survey, 2008.

Table 2-3.–Place of birth of household heads, Lime Village, 2007.

Birthplace	
Lime Village	33.3%
Nikolai	8.3%
Sleetmute	8.3%
Stony River	25.0%
Qeghnilen	8.3%
Other U.S.	16.7%
Unknown	0.0%
Refused	0.0%

Source ADF&G Division of Subsistence household survey, 2008.

Note "Birthplace" means the residence of the parents of the individual when the individual was born.

Table 2-4.–Employment by industry, Lime Village, 2007.

	Jobs	Households	Individuals	Percentage of income
Estimated total number [a]	33.0	7.9	18.9	100.0%
State government, total	**14.3%**	**28.6%**	**16.7%**	**12.6%**
Executive, administrative, and managerial	4.8%	14.3%	8.3%	7.2%
Agricultural, forestry, and fishing occupations	4.8%	14.3%	8.3%	1.8%
Transportation and material moving occupations	4.8%	14.3%	8.3%	3.6%
Local and tribal governments, total	**52.4%**	**71.4%**	**66.7%**	**40.4%**
Executive, administrative, and managerial	14.3%	28.6%	16.7%	8.6%
Social scientists, social workers, religious workers, and lawyers	14.3%	42.9%	25.0%	17.0%
Teachers, librarians, and counselors	4.8%	14.3%	8.3%	3.6%
Health diagnosing and treating practitioners	4.8%	14.3%	8.3%	5.4%
Technologists and technicians, except health	14.3%	28.6%	25.0%	5.8%
Construction, total	**9.5%**	**14.3%**	**16.7%**	**9.0%**
Construction and extractive occupations	4.8%	14.3%	8.3%	6.3%
Handlers, equipment cleaners, helpers, and laborers	4.8%	14.3%	8.3%	2.7%
Transportation, communication, and utilities, total	**4.8%**	**14.3%**	**8.3%**	**10.8%**
Production working occupations	4.8%	14.3%	8.3%	10.8%
Finance, insurance, and real estate, total	**4.8%**	**14.3%**	**8.3%**	**18.1%**
Administrative support occupations, including clerical	4.8%	14.3%	8.3%	18.1%
Services, total	**14.3%**	**28.6%**	**25.0%**	**9.0%**
Writers, artists, entertainers, and athletes	9.5%	14.3%	16.7%	7.2%
Mechanics and repairers	4.8%	14.3%	8.3%	1.8%

a. Estimated number of households and individuals includes only those who were employed during the study period.

Source ADF&G Division of Subsistence household survey, 2008.

Table 2-5.–Employment characteristics, Lime Village, 2007.

Characteristics	
All adults	
Number	23.6
Mean weeks employed	28.6
Employed adults	
Number	18.9
Percentage	80.0%
Jobs	
Number	33.0
Mean	2.8
Minimum	1.0
Maximum	6.0
Months employed	
Mean	8.3
Minimum	1.0
Maximum	12.0
Percentage employed year-round	41.7%
Mean weeks employed	35.7
Households	
Number	11.0
Employed	
Number	7.9
Percentage	71.4%
Jobs per employed household	
Mean	4.2
Minimum	1.0
Maximum	9.0
Employed adults	
Minimum	1.0
Maximum	4.0
Mean	
Employed households	1.7
Total households	2.4
Mean person-weeks of employment	61.3

Source ADF&G Division of Subsistence household survey 2008.

Table 2-6.–Participation in harvesting wild resources, Lime Village, 2007.

Total number of people			27
Birds–game	Hunt	Number	17
		Percentage	64.7%
	Process	Number	19
		Percentage	70.6%
Fish	Fish	Number	20
		Percentage	76.5%
	Process	Number	20
		Percentage	76.5%
Furbearers	Hunt or trap	Number	14
		Percentage	52.9%
	Process	Number	14
		Percentage	52.9%
Plants	Gather	Number	24
		Percentage	88.2%
	Process	Number	24
		Percentage	88.2%
Any resource	Attempt	Number	25
		Percentage	94.1%
	Process	Number	25
		Percentage	94.1%

Source ADF&G Division of Subsistence household survey 2008.

Table 2-7.–Resource harvest and use characteristics, Lime Village, 2007.

Characteristics	
Mean number of resources used per household	**17.9**
Minimum	6.0
Maximum	29.0
95% confidence limit (±)	28.0%
Median	18.0
Mean number of resources attempted to harvest per household	**16.3**
Minimum	4.0
Maximum	29.0
95% confidence limit (±)	36.0%
Median	18.0
Mean number of resources harvested per household	**13.9**
Minimum	0.0
Maximum	28.0
95% confidence limit (±)	49.0%
Median	16.0
Mean number of resources received per household	**8.3**
Minimum	2.0
Maximum	13.0
95% confidence limit (±)	29.0%
Median	9.0
Mean number of resources given away per household	**9.4**
Minimum	2.0
Maximum	22.0
95% confidence limit (±)	50.0%
Median	7.0
Mean household harvest, pounds	**2,271.9**
Minimum	0.0
Maximum	7,375.0
Total pounds harvested	24,991.2
Community per capita harvest, pounds	935.5
Percentage using any resource	100.0%
Percentage attempting to harvest any resource	100.0%
Percentage harvesting any resource	86.0%
Percentage receiving any resource	100.0%
Percentage giving away any resource	100.0%
Number of households in sample	7.0
Number of resources available	124.0

Source ADF&G Division of Subsistence household survey 2008.

Table 2-8.–Estimated harvest and use of fish, game, and plant resources, Lime Village, 2007.

Resource name (s)	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
All resources	**100.0%**	**100.0%**	**85.7%**	**100.0%**	**100.0%**	**24,991.2**	**2,271.9**	**935.5**	**5,539.3**			**54.2%**
Fishes	100.0%	100.0%	85.7%	71.4%	85.7%	16,180.2	1,470.9	605.7	4,125.0		375.0	57.8%
Pacific salmon	100.0%	100.0%	85.7%	57.1%	71.4%	14,847.8	1,349.8	555.8	2,808.1	ind	255.3	56.8%
Chum salmon	85.7%	71.4%	57.1%	42.9%	42.9%	2,860.4	260.0	107.1	586.1	ind	53.3	58.3%
Coho salmon	85.7%	71.4%	57.1%	42.9%	42.9%	857.5	78.0	32.1	168.1	ind	15.3	56.4%
Chinook salmon	85.7%	85.7%	71.4%	57.1%	57.1%	3,781.7	343.8	141.6	341.0	ind	31.0	49.7%
Pink salmon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Sockeye salmon	100.0%	100.0%	85.7%	57.1%	71.4%	7,348.2	668.0	275.1	1,712.9	ind	155.7	56.0%
Fresh sockeye salmon	100.0%	100.0%	85.7%	57.1%	71.4%	7,348.2	668.0	275.1	1,712.9	ind	155.7	56.0%
Spawning sockeye salmon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown salmon	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Nonsalmon fishes	100.0%	85.7%	71.4%	57.1%	71.4%	1,332.4	121.1	49.9	1,316.9		119.7	68.3%
Herring,	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Herring roe	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Herring sac roe	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Herring spawn on kelp	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Smelt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Capelin (grunion)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Unknown smelt	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Cods	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Pacific (gray) cod	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Pacific tomcod	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Flounders	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Starry flounder	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Pacific halibut	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	lb	0.0	0.0%
Sculpins	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown sculpin	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Sharks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%

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Table 2-8. Page 2 of 7.

Resource name (s)	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
Salmon shark	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Soles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Yellowfin sole	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Alaska blackfish	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Burbot	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Chars	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Dolly Varden	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Dolly Varden–resident	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Dolly Varden–anadromous	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Arctic grayling	57.1%	42.9%	42.9%	28.6%	14.3%	115.5	10.5	4.3	165.0	ind	15.0	29.3%
Northern pike	100.0%	85.7%	71.4%	42.9%	42.9%	651.2	59.2	24.4	232.6	ind	21.1	44.2%
Sheefish	28.6%	0.0%	0.0%	28.6%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Trout	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Rainbow trout	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown trout	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Whitefishes	57.1%	57.1%	42.9%	42.9%	42.9%	565.7	51.4	21.2	919.3	ind	83.6	45.7%
Broad whitefish	28.6%	28.6%	14.3%	28.6%	14.3%	220.0	20.0	8.2	55.0	ind	5.0	33.8%
Ciscoes	28.6%	28.6%	28.6%	14.3%	28.6%	345.7	31.4	12.9	864.3	ind	78.6	9.2%
Least cisco	28.6%	28.6%	28.6%	14.3%	28.6%	345.7	31.4	12.9	864.3	ind	78.6	9.2%
Humpback whitefish	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Round whitefish	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Land mammals	100.0%	85.7%	71.4%	85.7%	85.7%	6,944.9	631.4	260.0	317.4		28.9	50.7%
Large land mammals	100.0%	85.7%	57.1%	85.7%	57.1%	6,486.9	589.7	242.8	40.9		3.7	70.9%
Black bear	57.1%	57.1%	57.1%	14.3%	57.1%	546.9	49.7	20.5	9.4	ind	0.9	39.0%
Brown bear	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Caribou	85.7%	71.4%	42.9%	71.4%	42.9%	4,242.9	385.7	158.8	28.3	ind	2.6	66.1%
Moose	57.1%	57.1%	14.3%	57.1%	14.3%	1,697.1	154.3	63.5	3.1	ind	0.3	82.7%
Dall sheep	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%

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Table 2-8. Page 3 of 7.

Resource name (s)	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
Small land mammals/furbearers	85.7%	85.7%	57.1%	71.4%	57.1%	458.1	41.6	17.1	276.6		25.1	50.5%
Beaver	71.4%	71.4%	57.1%	57.1%	42.9%	357.5	32.5	13.4	40.9	ind	3.7	34.0%
Coyote	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Foxes	42.9%	42.9%	42.9%	14.3%	14.3%	0.0	0.0	0.0	44.0	ind	4.0	24.1%
Arctic fox	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Red fox	42.9%	42.9%	42.9%	14.3%	14.3%	0.0	0.0	0.0	44.0	ind	4.0	24.1%
Red fox - crossphase	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Hares	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Snowshoe hare	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
River (land) otter	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Lynx	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Alaska marmot	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Marten	57.1%	57.1%	57.1%	28.6%	14.3%	0.0	0.0	0.0	166.6	ind	15.1	26.4%
Mink	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Muskrat	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Porcupine	85.7%	85.7%	57.1%	14.3%	57.1%	100.6	9.1	3.8	12.6	ind	1.1	48.5%
Squirrels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Arctic ground (parka) squirrel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Red (tree) squirrel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Short-tailed weasel	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Gray wolf	28.6%	28.6%	28.6%	0.0%	28.6%	0.0	0.0	0.0	4.7	ind	0.4	19.5%
Wolverine	42.9%	42.9%	42.9%	0.0%	14.3%	0.0	0.0	0.0	7.9	ind	0.7	23.4%
Marine mammals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0		0.0	0.0%
Porpoises	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Harbor porpoise	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Seals	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Bearded seal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Harbor seal–fresh water	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%

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Table 2-8. Page 4 of 7.

Resource name (s)	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
Harbor seal–salt water	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Ringed seal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown seal	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Steller sea lion	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Walrus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Whales	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Beluga whale	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Birds and eggs	85.7%	71.4%	57.1%	42.9%	28.6%	577.5	52.5	21.6	647.4		58.9	60.2%
Migratory birds	57.1%	42.9%	42.9%	28.6%	28.6%	486.2	44.2	18.2	517.0	ind	47.0	31.9%
Ducks	57.1%	42.9%	42.9%	28.6%	28.6%	322.8	29.3	12.1	447.9	ind	40.7	29.6%
Bufflehead	28.6%	28.6%	28.6%	14.3%	28.6%	47.1	4.3	1.8	117.9	ind	10.7	2.3%
Canvasback	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Eiders	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Common eider	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
King eider	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Gadwall	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Goldeneyes	28.6%	28.6%	28.6%	14.3%	28.6%	32.7	3.0	1.2	40.9	ind	3.7	18.2%
Unknown goldeneyes	28.6%	28.6%	28.6%	14.3%	28.6%	32.7	3.0	1.2	40.9	ind	3.7	18.2%
Harlequin	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Mallard	57.1%	42.9%	42.9%	28.6%	28.6%	62.9	5.7	2.4	62.9	ind	5.7	19.3%
Mergansers	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Common merganser	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Red-breasted merganser	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown merganser	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Long-tailed duck (oldsquaw)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Northern pintail	28.6%	28.6%	28.6%	14.3%	28.6%	37.7	3.4	1.4	47.1	ind	4.3	11.3%
Scaups	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown scaup	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%

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Table 2-8. Page 5 of 7.

Resource name (s)	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
Scoters	57.1%	42.9%	42.9%	28.6%	28.6%	104.7	9.5	3.9	116.3	ind	10.6	32.0%
Black scoter	57.1%	42.9%	42.9%	28.6%	28.6%	104.7	9.5	3.9	116.3	ind	10.6	32.0%
Northern shoveler	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Teals	28.6%	28.6%	28.6%	14.3%	28.6%	4.7	0.4	0.2	15.7	ind	1.4	0.0%
Green winged teal	28.6%	28.6%	28.6%	14.3%	28.6%	4.7	0.4	0.2	15.7	ind	1.4	0.0%
Wigeon	28.6%	28.6%	28.6%	14.3%	28.6%	33.0	3.0	1.2	47.1	ind	4.3	11.3%
Unknown ducks	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Geese	42.9%	28.6%	28.6%	28.6%	28.6%	144.6	13.1	5.4	66.0	ind	6.0	30.6%
Brant	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Canada geese	14.3%	14.3%	14.3%	0.0%	14.3%	61.6	5.6	2.3	31.4	ind	2.9	0.0%
Cackling geese	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Lesser Canada geese [b]	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown Canada geese	14.3%	14.3%	14.3%	0.0%	14.3%	61.6	5.6	2.3	31.4	ind	2.9	0.0%
Emperor geese	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Snow geese	14.3%	0.0%	0.0%	14.3%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
White-fronted geese	28.6%	28.6%	28.6%	14.3%	28.6%	83.0	7.5	3.1	34.6	ind	3.1	27.6%
Unknown geese	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Swans	28.6%	28.6%	28.6%	0.0%	14.3%	18.9	1.7	0.7	3.1	ind	0.3	0.0%
Trumpeter swan	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Tundra (whistling) swan	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown swan	28.6%	28.6%	28.6%	0.0%	14.3%	18.9	1.7	0.7	3.1	ind	0.3	0.0%
Cranes	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Sandhill crane	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Shorebirds	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Common snipe	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Other birds	57.1%	57.1%	42.9%	28.6%	28.6%	91.3	8.3	3.4	130.4	ind	11.9	29.7%
Upland game birds	57.1%	57.1%	42.9%	28.6%	28.6%	91.3	8.3	3.4	130.4	ind	11.9	29.7%
Grouse	57.1%	57.1%	42.9%	28.6%	28.6%	82.5	7.5	3.1	117.9	ind	10.7	29.0%

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Table 2-8. Page 6 of 7.

	Percentage of households					Pounds harvested			Amount harvested [a]			95% confidence limit (±) harvest
Resource name (s)	Use	Attempt	Harvest	Receive	Give	Total	Mean household	Per capita	Total	Unit	Mean household	
Ptarmigan	28.6%	28.6%	14.3%	14.3%	0.0%	8.8	0.8	0.3	12.6	ind	1.1	33.8%
Unknown ptarmigan	28.6%	28.6%	14.3%	14.3%	0.0%	8.8	0.8	0.3	12.6	ind	1.1	33.8%
Bird eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Duck eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Goose eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Swan eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Shorebird eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Common snipe eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Seabird and loon eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Cormorant eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Gull eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Murre eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Tern eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown eggs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Marine invertebrates	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0		0.0	0.0%
Clams	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Pacific littleneck (steamer) clams	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Razor clams	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Softshell clams	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Unknown clams	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Cockles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Crabs	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Dungeness crab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
King crab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Red king crab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Unknown king crab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Tanner crab	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Mussels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%

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Table 2-8. Page 7 of 7.

Resource name (s)	Percentage of households: Use	Attempt	Harvest	Receive	Give	Pounds harvested: Total	Mean household	Per capita	Amount harvested [a]: Total	Unit	Mean household	95% confidence limit (±) harvest
Foolish (blue) mussels	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Octopus	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	ind	0.0	0.0%
Scallops	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Shrimp	0.0%	0.0%	0.0%	0.0%	0.0%	0.0	0.0	0.0	0.0	gal	0.0	0.0%
Plants and fungi	85.7%	85.7%	85.7%	14.3%	42.9%	1,288.6	117.1	48.2	449.4		40.9	32.5%
Berries	85.7%	85.7%	85.7%	14.3%	42.9%	1,175.4	106.9	44.0	293.9	gal	26.7	37.5%
Other plants / mushrooms	57.1%	57.1%	42.9%	0.0%	0.0%	113.1	10.3	4.2	28.3	gal	2.6	64.8%
Trees (wood)	85.7%	71.4%	71.4%	14.3%	14.3%	0.0	0.0	0.0	127.3	crd	11.6	33.3%

a. Amount of resource harvested is individual units unless otherwise specified.

b. Both *B. canadensis taverner* and *B. canadensis parvipes*.

Source ADF&G Division of Subsistence household surveys 2008.

Table 2-9.–Top 10 resources harvested and used, Lime Village, 2007.

Harvest			Use		
Rank	Resource	Pounds per capita	Rank	Resource	Percentage of households using
1.	Sockeye salmon	275.1	1.	Sockeye salmon	100.0%
2.	Caribou	158.8	2.	Northern pike	100.0%
3.	Chinook salmon	141.6	3.	Chum salmon	85.7%
4.	Chum salmon	107.1	4.	Coho salmon	85.7%
5.	Moose	63.5	5.	Chinook salmon	85.7%
6.	Berries	44.0	6.	Caribou	85.7%
7.	Coho salmon	32.1	7.	Porcupine	85.7%
8.	Northern pike	24.4	8.	Berries	85.7%
9.	Whitefish	21.2	9.	Wood	85.7%
10.	Black bear	20.5	10.	Beaver	71.4%

Source ADF&G Division of Subsistence household survey, 2008.

Table 2-10.–Estimated harvests of black bears, caribou, and moose, by month and sex, Lime Village, 2007.

	Black bears			Caribou			Moose		
Harvest month	Unknown	Male	Female	Unknown	Male	Female	Unknown	Male	Female
January	0.0	0.0	0.0	0.0	0.0	3.1	0.0	0.0	0.0
February	0.0	0.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0
March	0.0	0.0	0.0	0.0	0.0	14.1	0.0	0.0	0.0
April	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
May	0.0	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
June	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
July	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
August	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
September	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
October	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0
November	0.0	0.0	0.0	0.0	4.7	0.0	0.0	0.0	1.6
December	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Unknown month	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total harvest	**3.1**	**6.3**	**0.0**	**0.0**	**11.0**	**17.3**	**0.0**	**1.6**	**1.6**

Table 2-11.–Estimated percentages of salmon harvest by gear type, resource, and total salmon harvest, Lime Village, 2007.

		Removed from commercial catch		Subsistence methods											
				Setnet		Seine		Other		Subsistence gear, any method		Rod and reel		Any method	
Resource	Percentage base	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds	Number	Pounds
Salmon	Gear type	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
	Resource	0.0%	0.0%	61.1%	63.1%	0.0%	0.0%	34.4%	33.0%	95.5%	96.1%	4.5%	3.9%	100.0%	100.0%
	Total	0.0%	0.0%	61.1%	63.1%	0.0%	0.0%	34.4%	33.0%	95.5%	96.1%	4.5%	3.9%	100.0%	100.0%
Chum salmon	Gear type	0.0%	0.0%	13.7%	12.3%	0.0%	0.0%	33.1%	31.8%	20.7%	19.0%	24.7%	26.8%	20.9%	19.3%
	Resource	0.0%	0.0%	40.2%	40.2%	0.0%	0.0%	54.4%	54.4%	94.6%	94.6%	5.4%	5.4%	100.0%	100.0%
	Total	0.0%	0.0%	8.4%	7.8%	0.0%	0.0%	11.4%	10.5%	19.8%	18.2%	1.1%	1.0%	20.9%	19.3%
Coho salmon	Gear type	0.0%	0.0%	4.1%	3.3%	0.0%	0.0%	0.2%	0.1%	2.7%	2.2%	75.3%	73.2%	6.0%	5.0%
	Resource	0.0%	0.0%	42.1%	42.1%	0.0%	0.0%	0.9%	0.9%	43.0%	43.0%	57.0%	57.0%	100.0%	100.0%
	Total	0.0%	0.0%	2.5%	2.1%	0.0%	0.0%	0.1%	0.0%	2.6%	2.1%	3.4%	2.8%	6.0%	5.0%
Chinook salmon	Gear type	0.0%	0.0%	15.3%	31.2%	0.0%	0.0%	8.1%	17.8%	12.7%	26.6%	0.0%	0.0%	12.1%	25.6%
	Resource	0.0%	0.0%	77.0%	77.0%	0.0%	0.0%	23.0%	23.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	9.3%	19.7%	0.0%	0.0%	2.8%	5.9%	12.1%	25.6%	0.0%	0.0%	12.1%	25.6%
Pink salmon	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Sockeye salmon	Gear type	0.0%	0.0%	66.8%	53.3%	0.0%	0.0%	58.6%	50.2%	63.9%	52.2%	0.0%	0.0%	61.0%	50.2%
	Resource	0.0%	0.0%	67.0%	67.0%	0.0%	0.0%	33.0%	33.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	40.9%	33.6%	0.0%	0.0%	20.1%	16.6%	61.0%	50.2%	0.0%	0.0%	61.0%	50.2%
Spawning sockeye salmon	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Unknown salmon	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Source ADF&G Division of Subsistence household survey 2008.

Table 2-12.–Estimated percentages of fish other than salmon harvest by gear type, resource, and total harvest, Lime Village, 2007.

Resource	Percentage base	Removed from commercial catch	Subsistence gear							Rod and reel	Any method
			Setnet	Seine	Hand line gear	Dip net	Ice fishing	Subsistence gear (other)	Subsistence gear, any gear		
Nonsalmon fishes	Gear type	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%	100.0%
	Resource	0.0%	42.5%	0.0%	0.0%	0.0%	20.8%	0.0%	63.3%	36.7%	100.0%
	Total	0.0%	42.5%	42.5%	0.0%	0.0%	20.8%	0.0%	63.3%	36.7%	100.0%
Arctic grayling	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	23.6%	8.7%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.7%	8.7%
Northern pike	Gear type	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	32.9%	76.4%	48.9%
	Resource	0.0%	0.0%	0.0%	0.0%	0.0%	42.6%	0.0%	42.6%	57.4%	100.0%
	Total	0.0%	0.0%	0.0%	0.0%	0.0%	20.8%	0.0%	20.8%	28.1%	48.9%
Broad whitefish	Gear type	0.0%	38.9%	0.0%	0.0%	0.0%	0.0%	0.0%	26.1%	0.0%	16.5%
	Resource	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	Total	0.0%	16.5%	16.5%	0.0%	0.0%	0.0%	0.0%	16.5%	0.0%	16.5%
Least cisco	Gear type	0.0%	61.1%	0.0%	0.0%	0.0%	0.0%	0.0%	41.0%	0.0%	25.9%
	Resource	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	Total	0.0%	25.9%	25.9%	0.0%	0.0%	0.0%	0.0%	25.9%	0.0%	25.9%

Note This table lists only those resources for which there was a harvest in the 2007 study year.

Source ADF&G Division of Subsistence household survey 2008.

Table 2-13.–Lime Village comparison of household harvest and use in recent years, 2007.

Resource	Estimated households	Valid responses		No response		Fewer		Same		More	
		Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage	Number	Percentage
Salmon	11.0	11.0	100.0%	0.0	0.0%	1.6	14.3%	9.4	85.7%	0.0	0.0%
Nonsalmon finfishes	11.0	11.0	100.0%	0.0	0.0%	1.6	14.3%	9.4	85.7%	0.0	0.0%
Marine invertebrates	11.0	0.0	0.0%	11.0	100.0%	0.0	0.0%	0.0	0.0%	0.0	0.0%
Large land mammals	11.0	11.0	100.0%	0.0	0.0%	7.9	71.4%	3.1	28.6%	0.0	0.0%
Small land mammals/furbearers	11.0	11.0	100.0%	0.0	0.0%	4.7	42.9%	6.3	57.1%	0.0	0.0%
Marine mammals	11.0	1.6	14.3%	9.4	85.7%	0.0	0.0%	1.6	100.0%	0.0	0.0%
Birds and eggs	11.0	11.0	100.0%	0.0	0.0%	1.6	14.3%	9.4	85.7%	0.0	0.0%
Wild plants	11.0	11.0	100.0%	0.0	0.0%	4.7	42.9%	6.3	57.1%	0.0	0.0%
Overall	11.0	11.0	100.0%	0.0	0.0%	6.3	57.1%	4.7	42.9%	0.0	0.0%
Any resource	11.0	11.0	100.0%	0.0	0.0%	9.4	85.7%	11.0	100.0%	0.0	0.0%

Source ADF&G Division of Subsistence household survey, 2008.

Table 2-14.–Lime Village: reasons for change in harvests and uses in recent years.

Resource category	Use fewer or more	Estimated number of households [b]	Percentage of responses given, by category [a]							
			No reason given	Competition	Regulations	People are sharing less	Weather	Animal population changes [c]	Personal reasons (work, health)	Other outside effects
Salmon	Fewer	1.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Nonsalmon finfishes	Fewer	1.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
Large land mammals	Fewer	7.9	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
Furbearers	Fewer	4.7	33.3%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%	0.0%
Birds and eggs	Fewer	1.6	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
Wild plants	Fewer	4.7	0.0%	0.0%	0.0%	0.0%	0.0%	66.7%	33.3%	0.0%
Overall	Fewer	6.3	50.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%
Any resource	Fewer	9.4	16.7%	0.0%	0.0%	0.0%	0.0%	100.0%	50.0%	16.7%

a. Percentage of estimated number of households that reported less or more uses of the resource category who cited this reason.

b. Estimated number of households citing a change in uses. For number of valid responses, see Table 2-7. Estimated total households in community=11.

c. Includes changes in size of population and/or changes in geographic distribution of animals during hunting seasons that affected harvest opportunities and success.

Source ADF&G Division of Subsistence household survey, 2008.

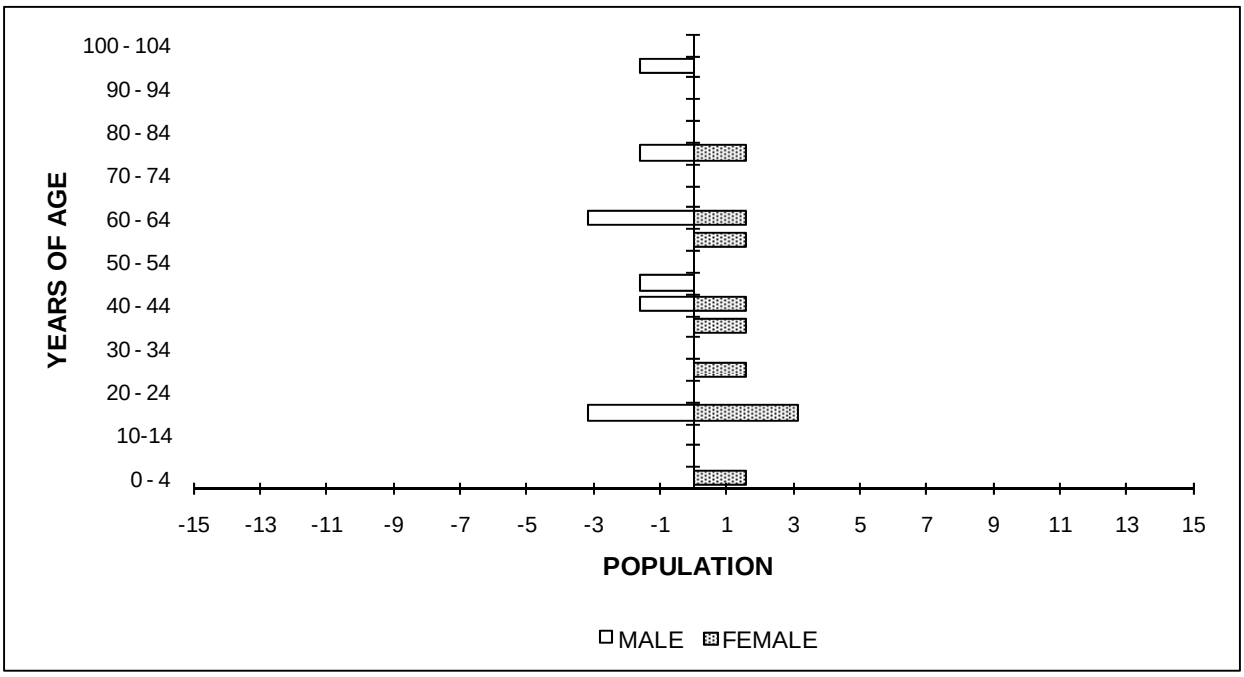

Figure 2-1. Population profile, Lime Village, 2007.

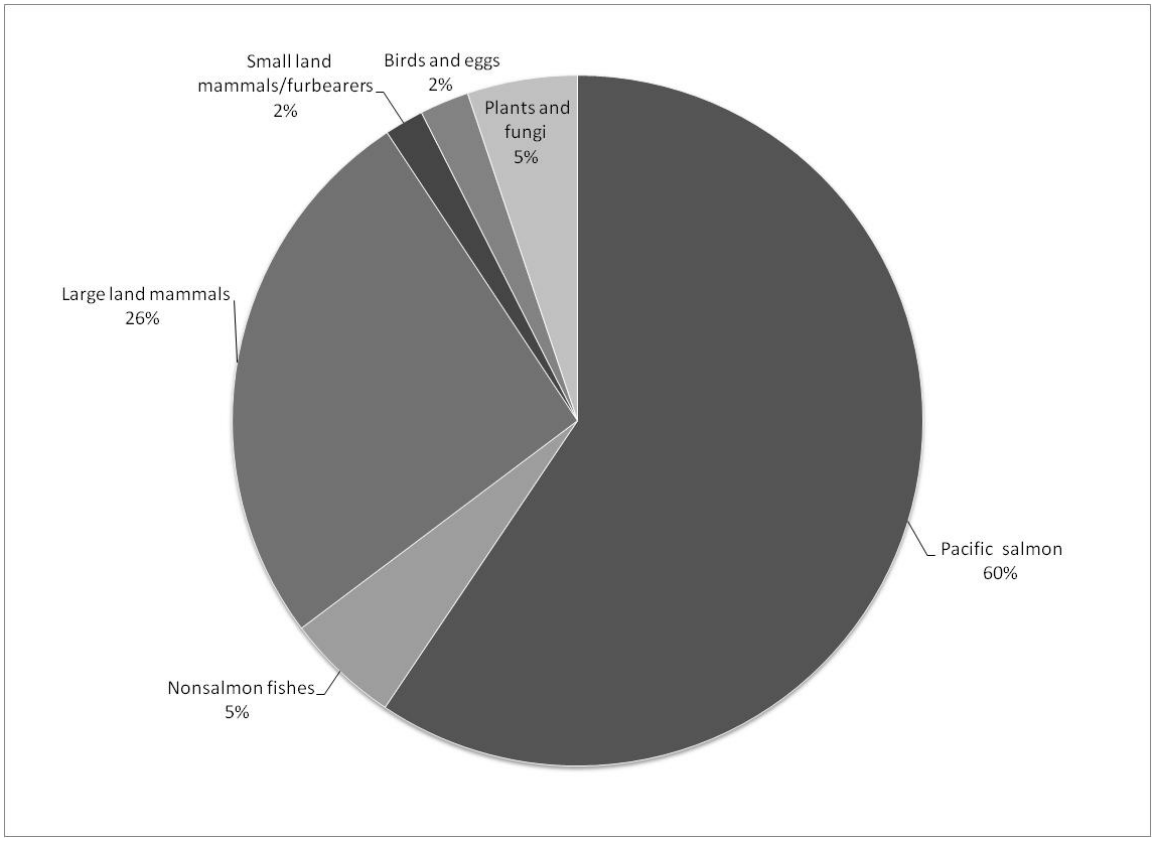

Figure 2-2.–Lime Village composition of wild resource harvests, pounds usable weight, 2007.

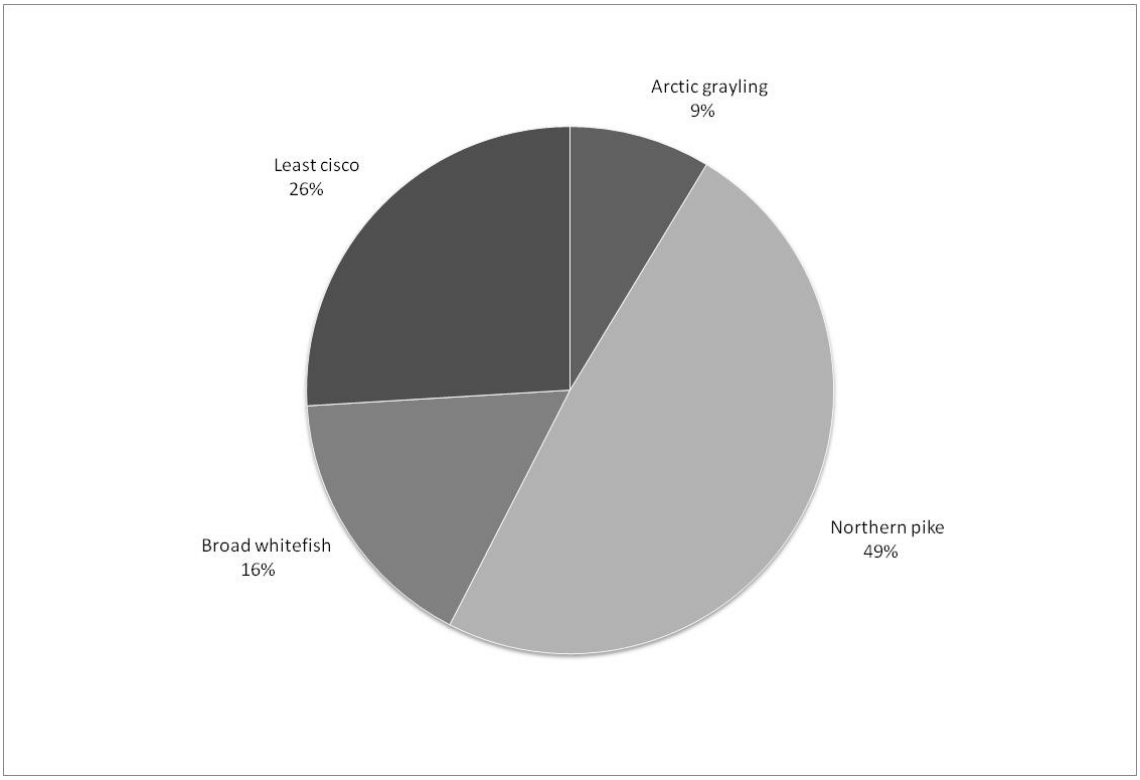

Figure 2-3.–Lime Village composition of freshwater fish harvests, pounds usable weight, 2007.

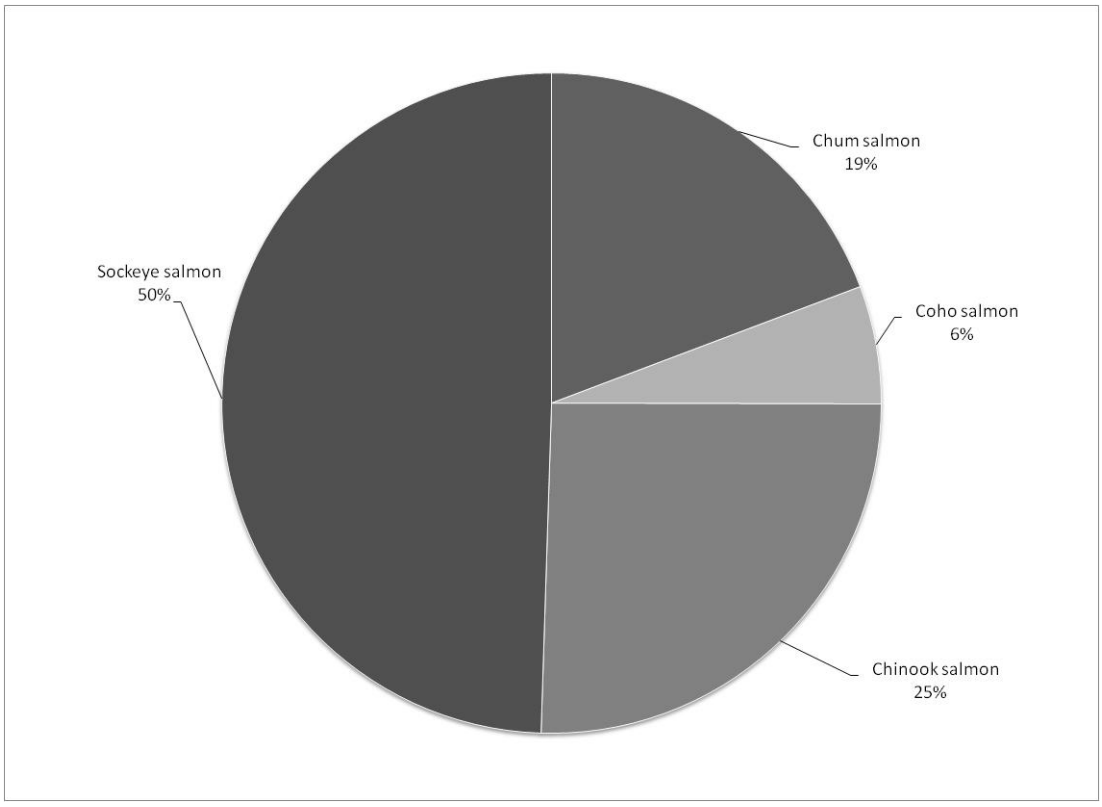

Figure 2-4.–Lime Village composition of salmon harvest, pounds usable weight, 2007.

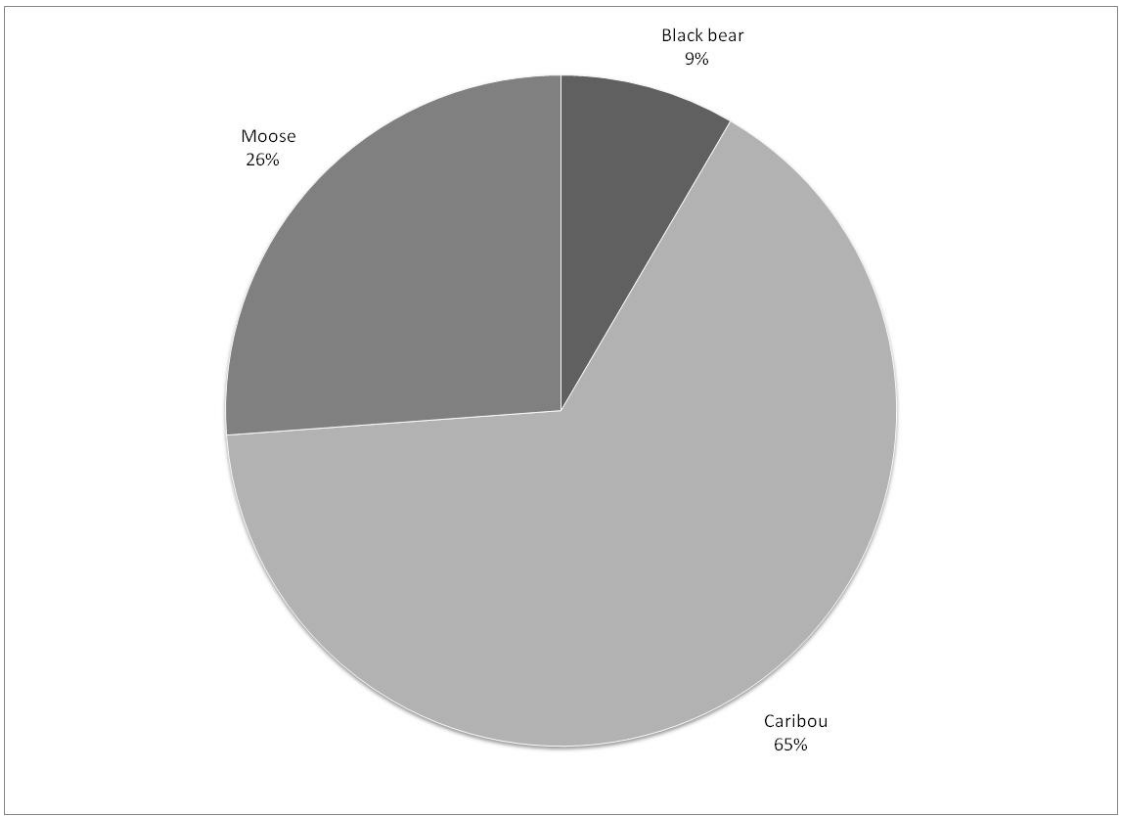

Figure 2-5.–Lime Village composition of large land mammal harvest, pounds usable weight, 2007.

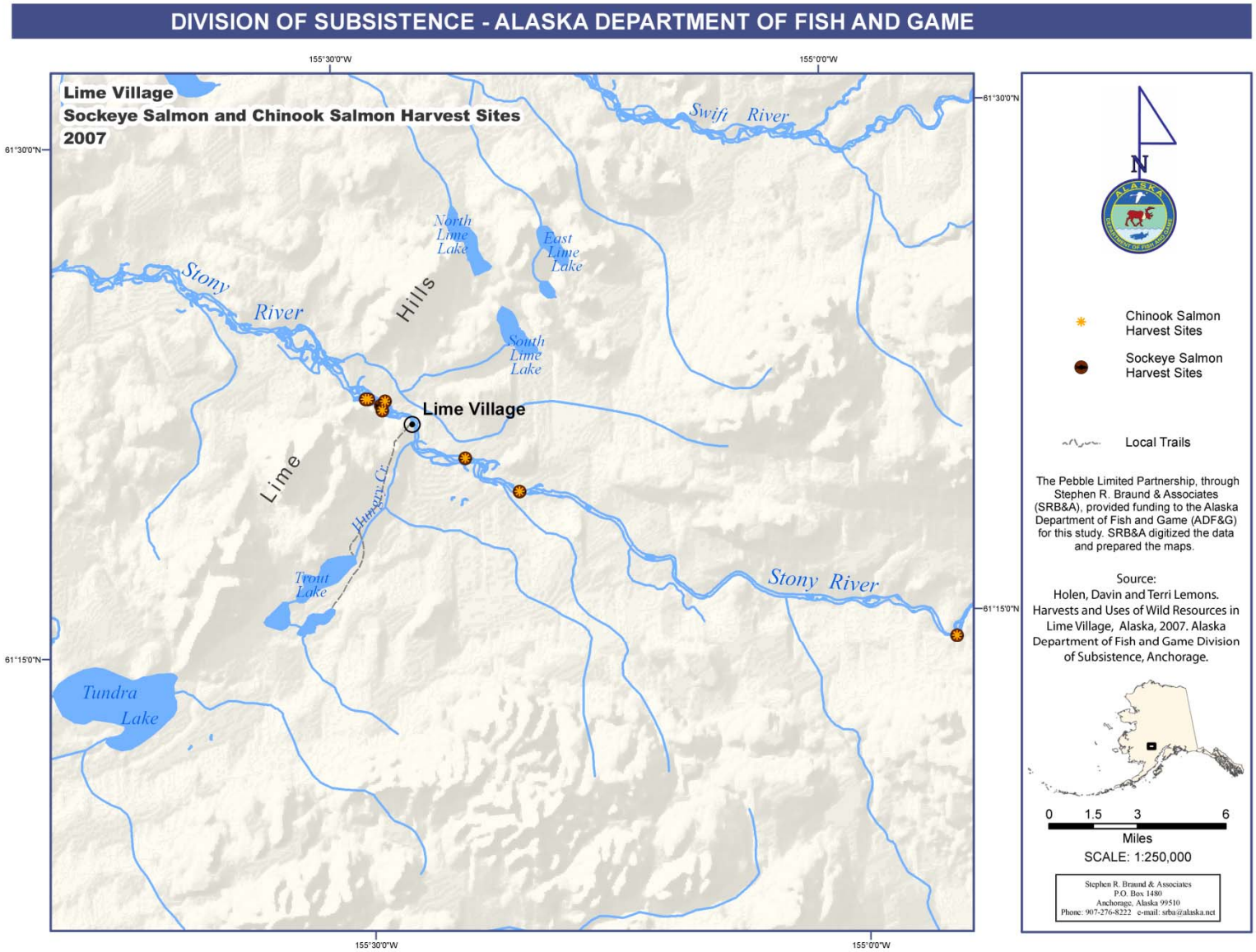

Figure 2-6.–Lime Village sockeye and Chinook salmon harvest sites, 2007.

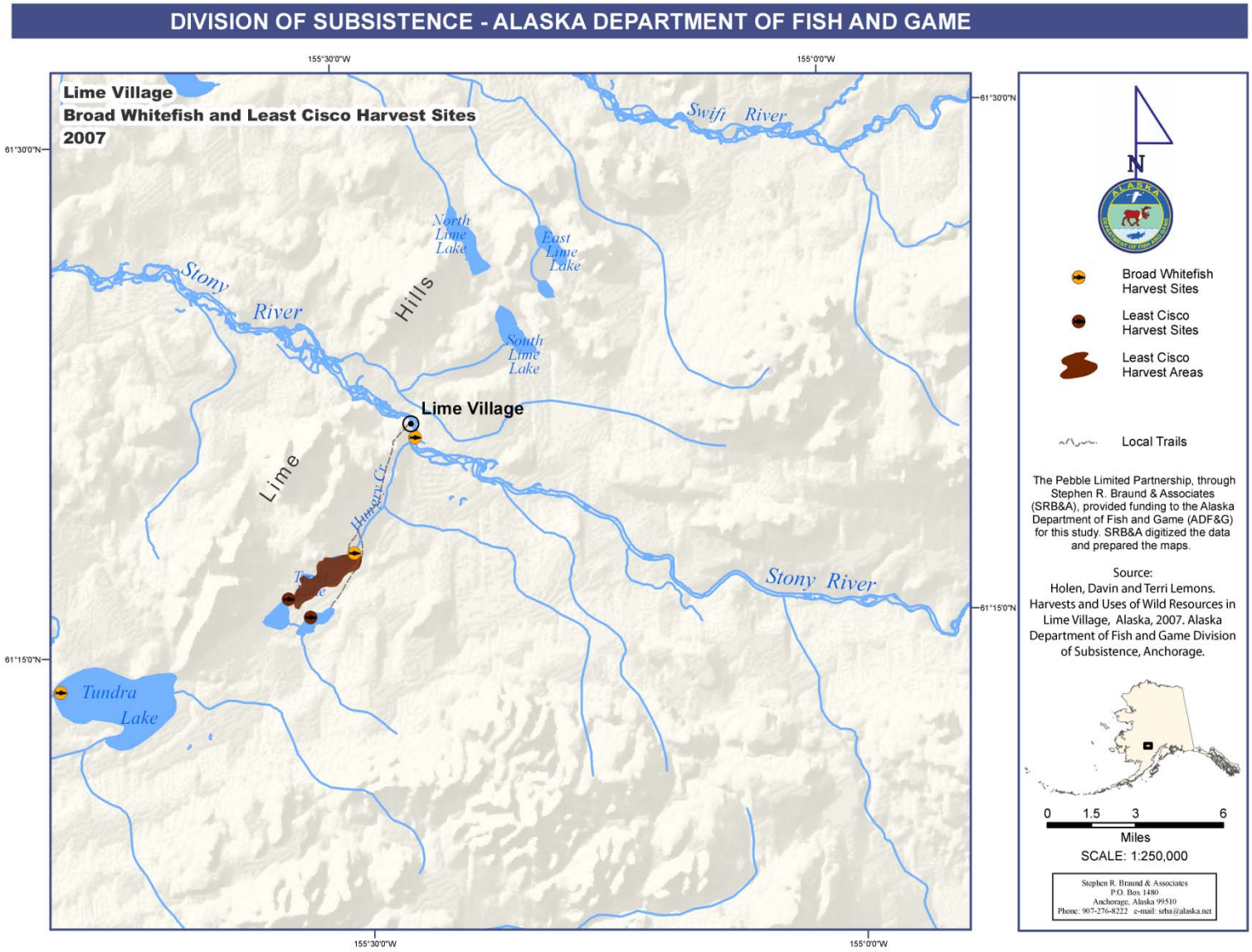

Figure 2-7.–Lime Village broad whitefish and least cisco harvest sites, 2007.

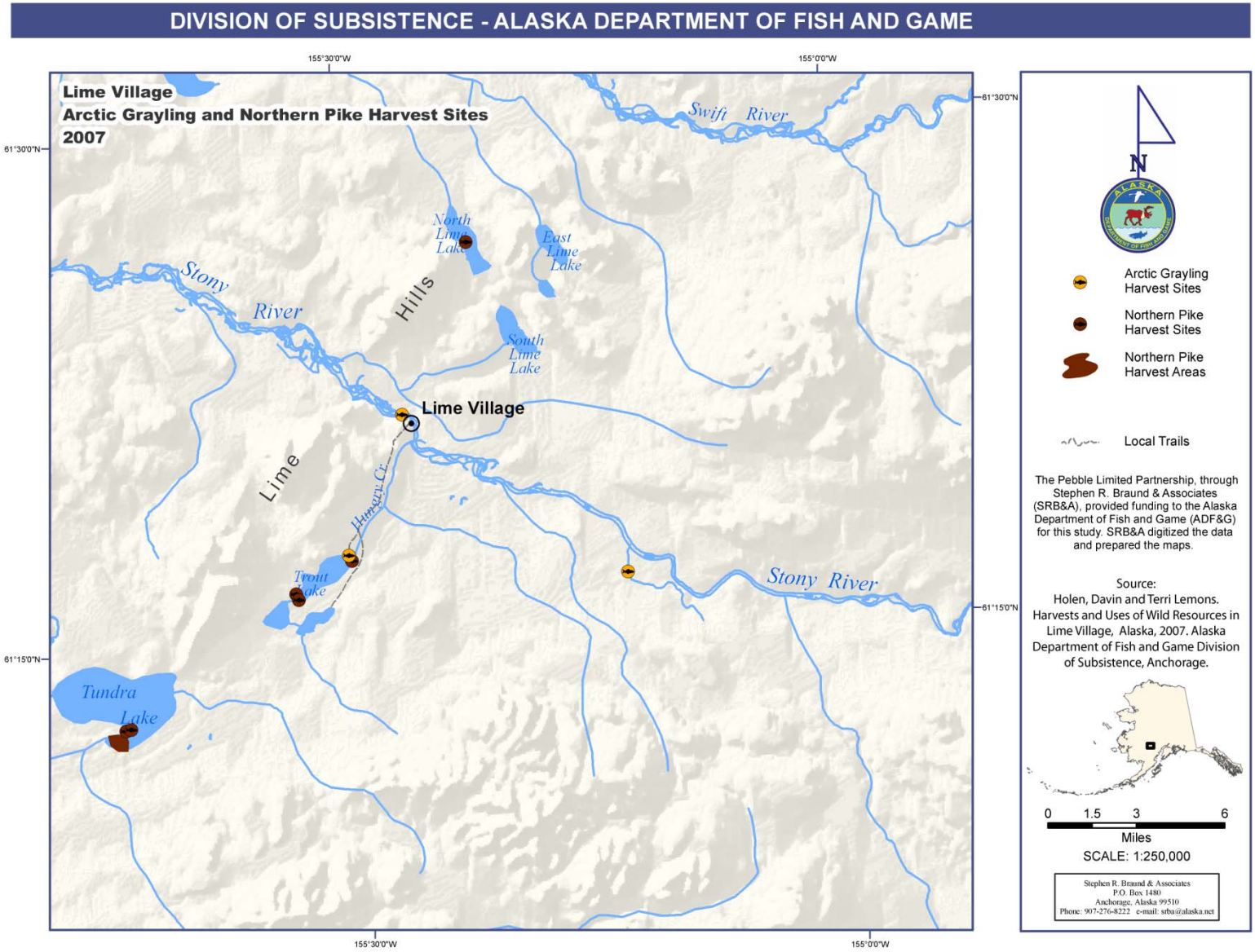

Figure 2-8.–Lime Village Arctic grayling and northern pike harvest sites, 2007.

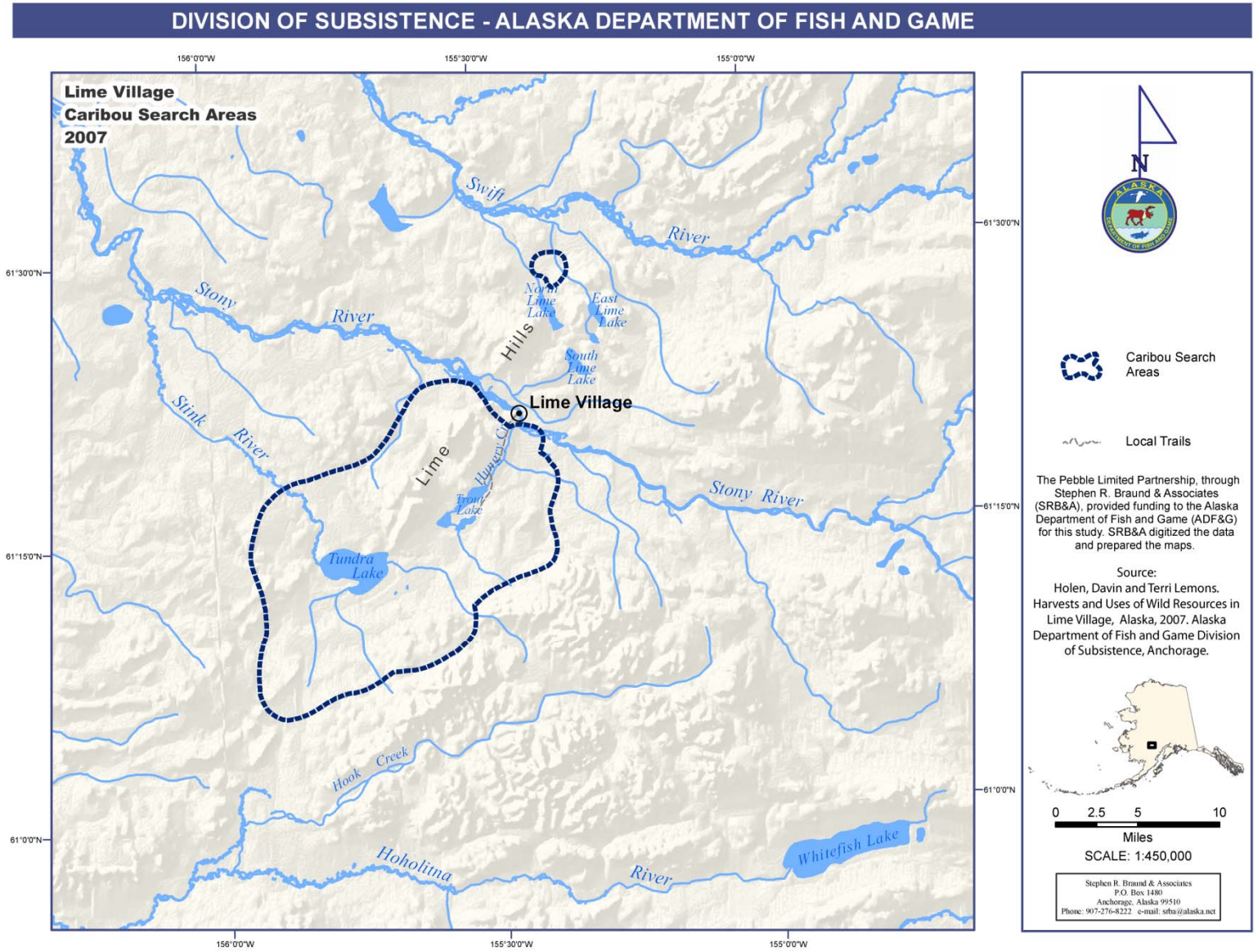

Figure 2-9.–Lime Village caribou search areas, 2007.

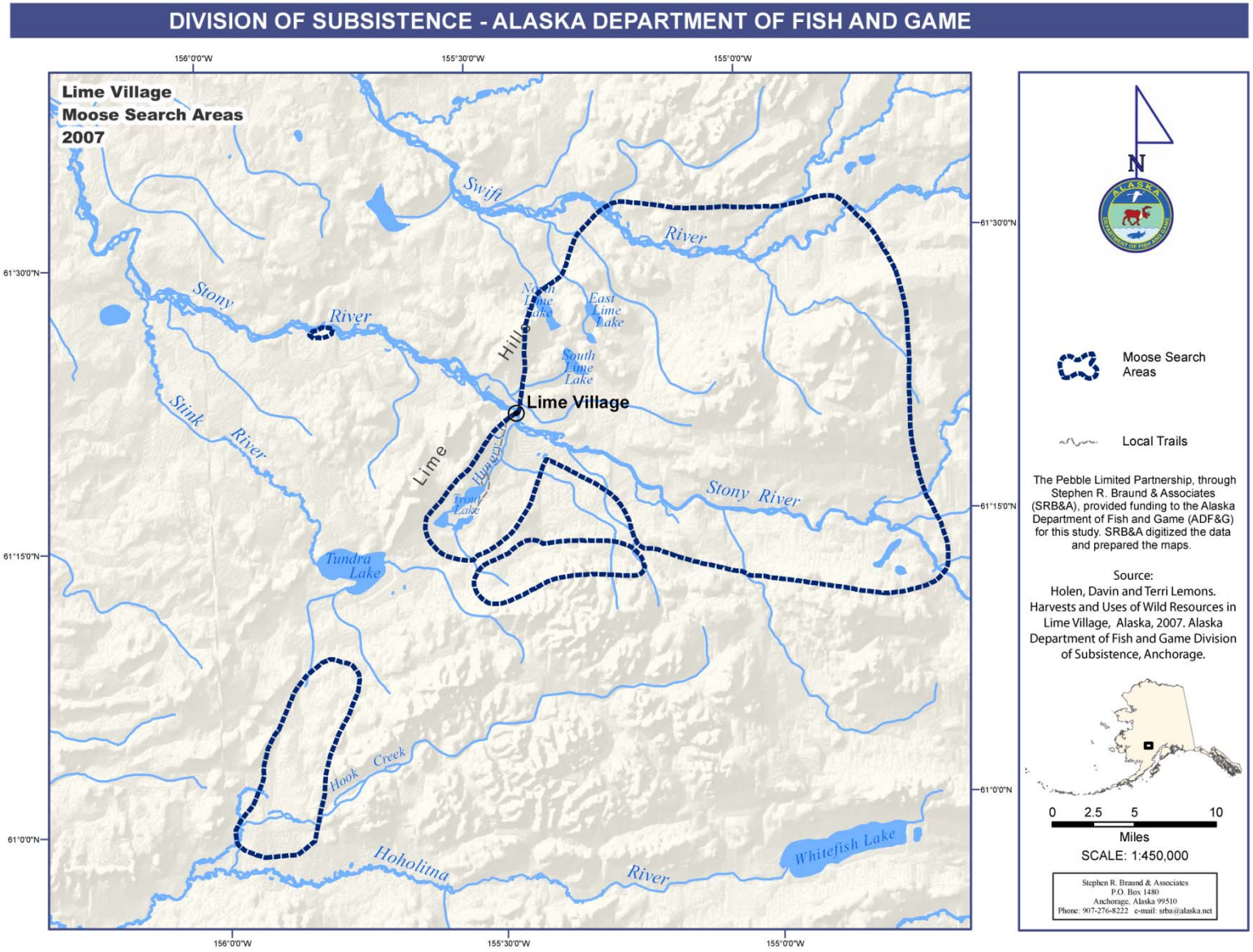

Figure 2-10.–Lime Village moose search areas, 2007.

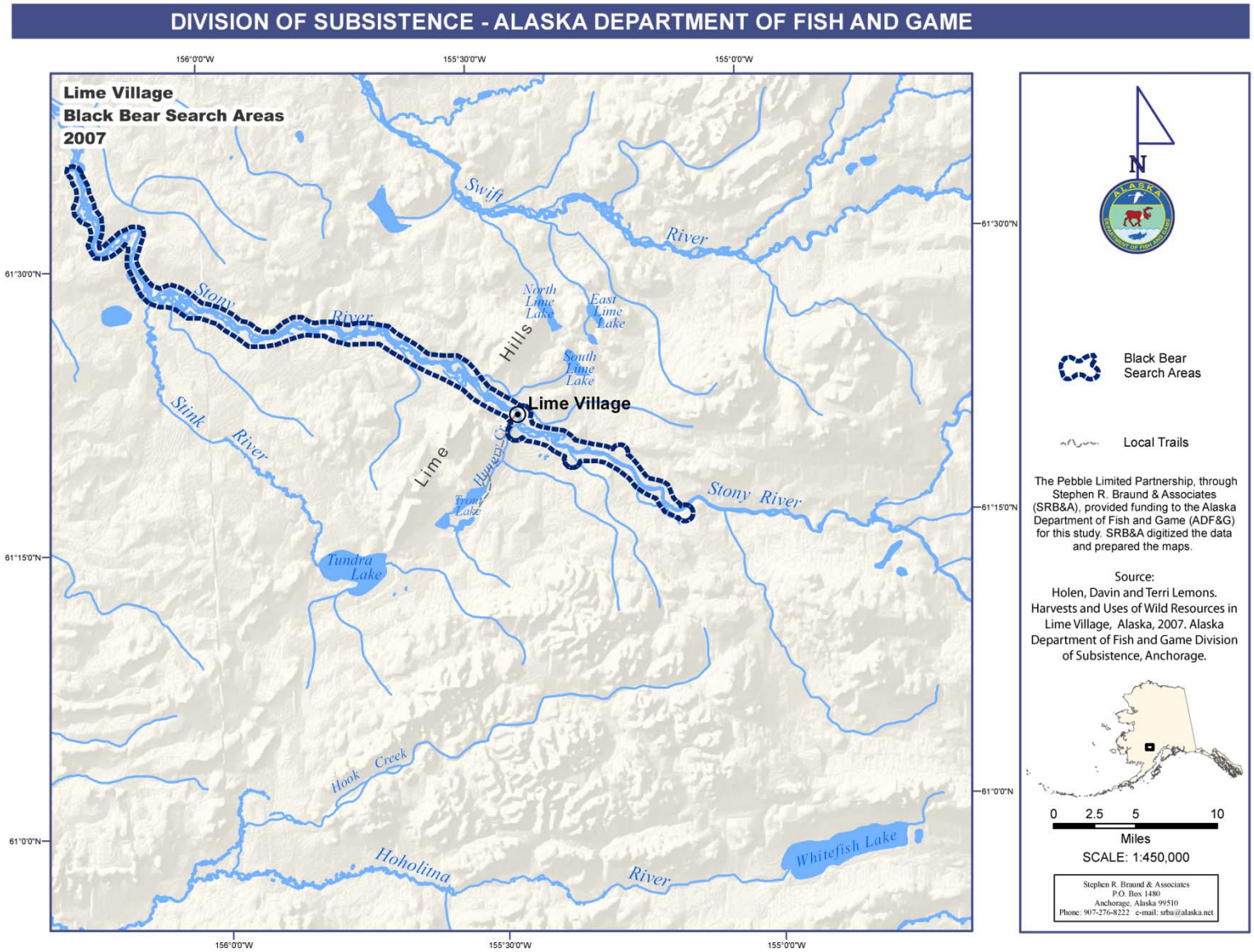

Figure 2-11.–Lime Village black bear search areas, 2007.

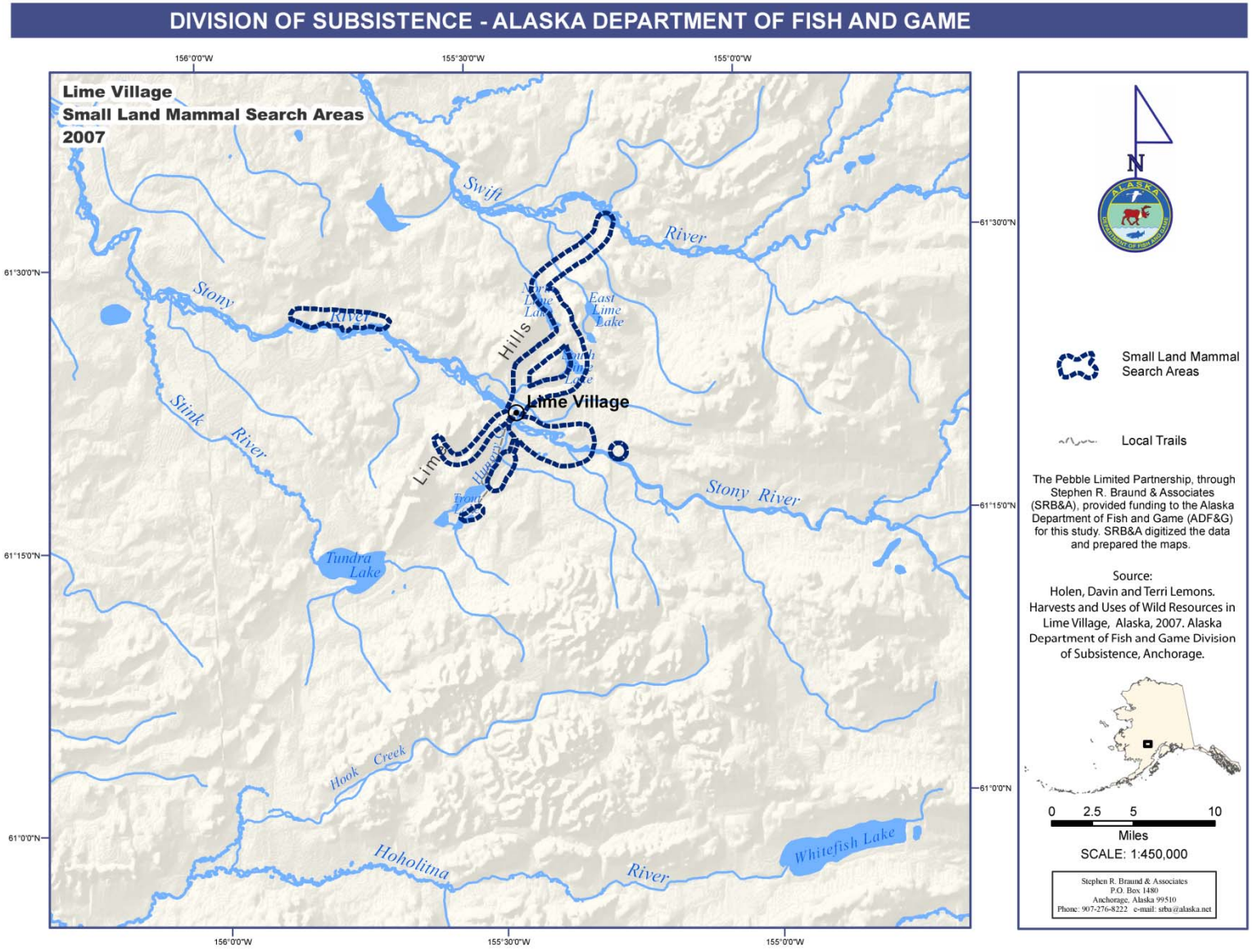

Figure 2-12.–Lime Village small land mammal search areas, 2007.

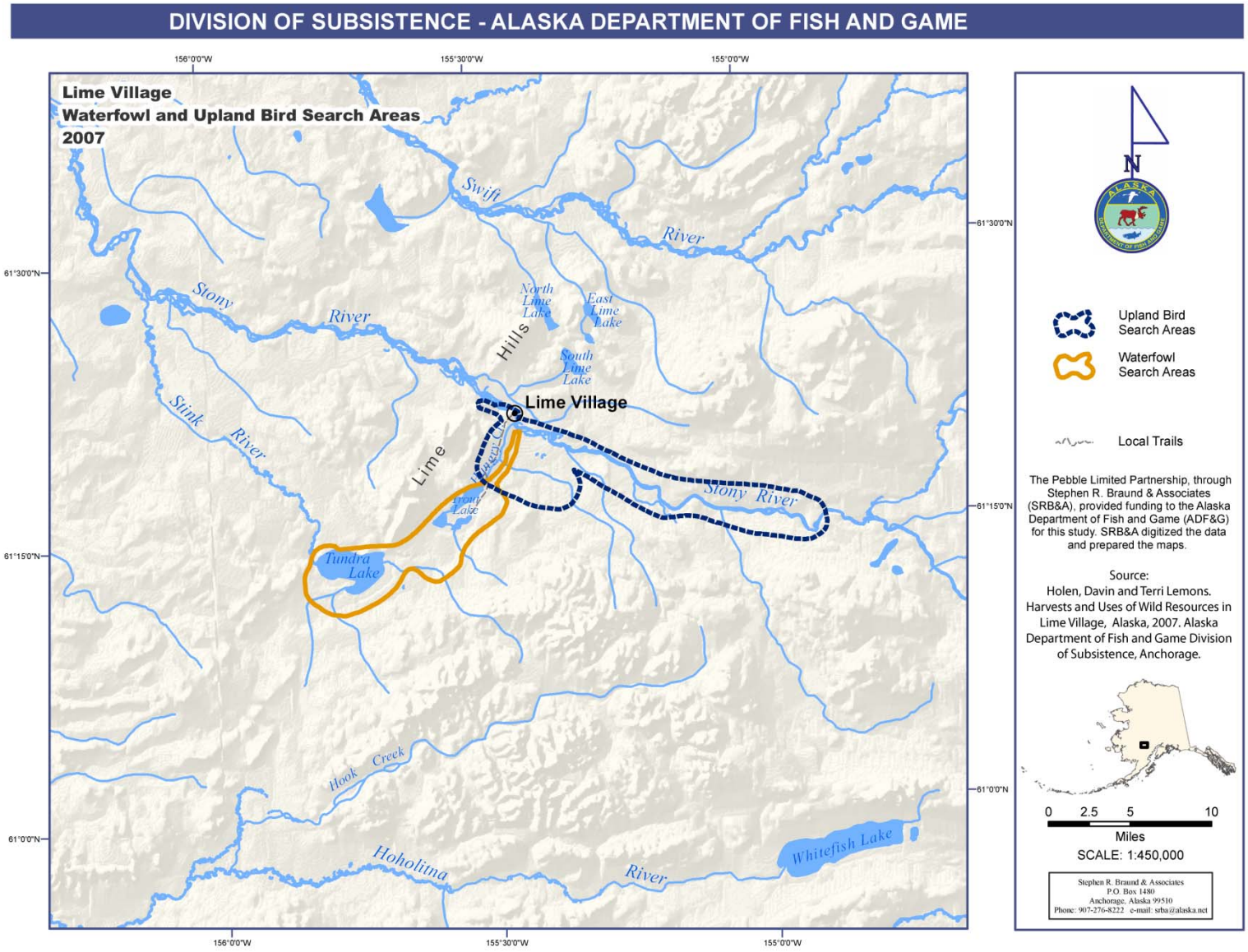

Figure 2-13.–Lime Village waterfowl and upland bird search areas, 2007.

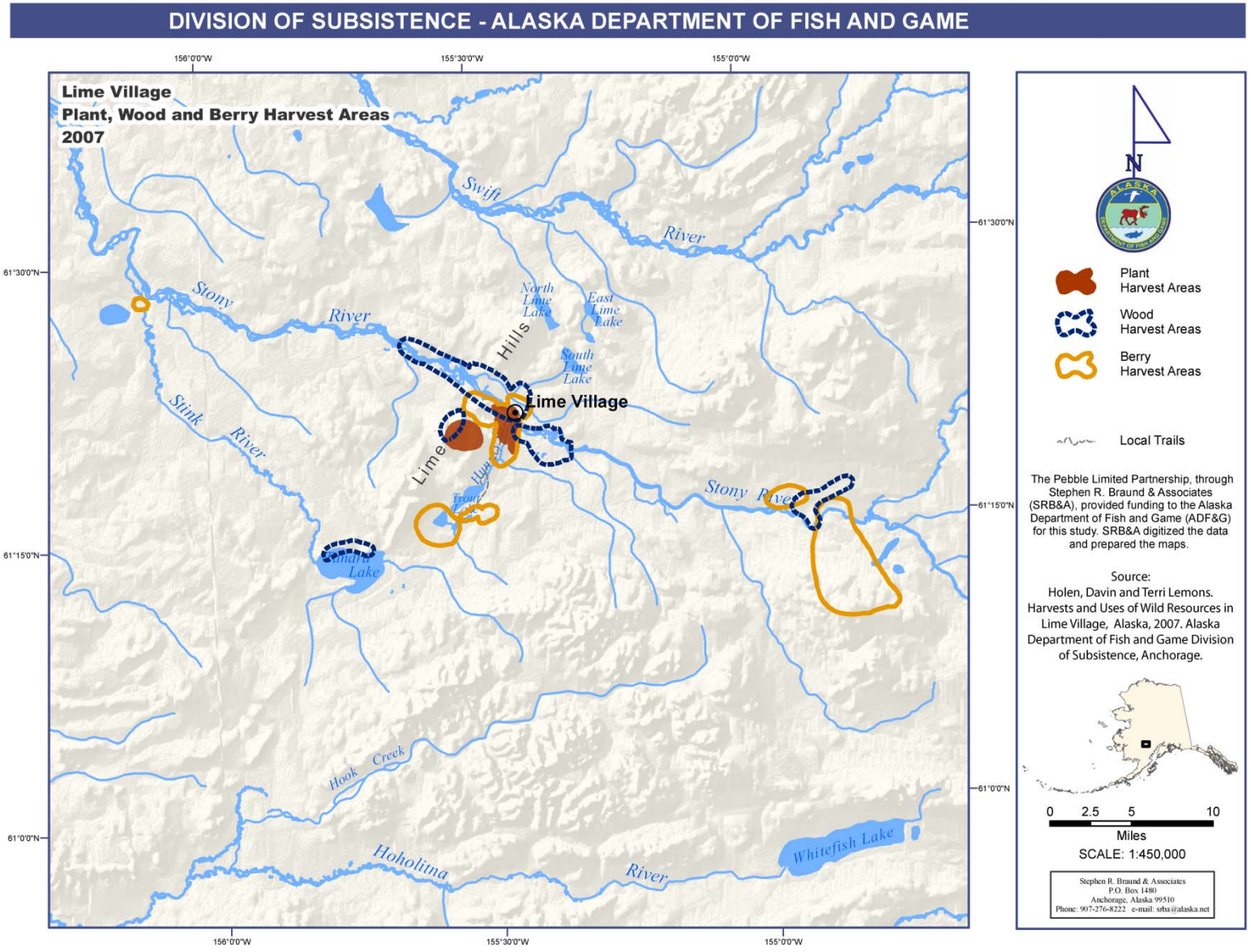

Figure 2-14.–Lime Village plant, wood, and berry harvest areas.

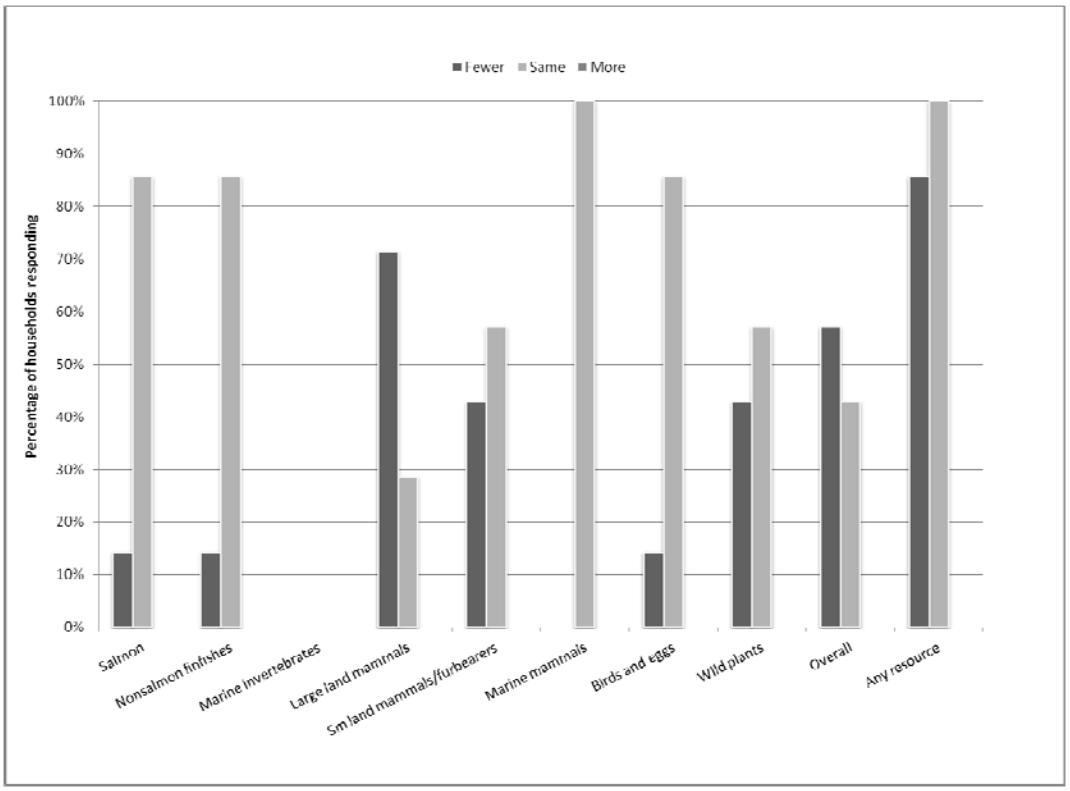

Figure 2-15.–Lime Village harvest and use in recent years

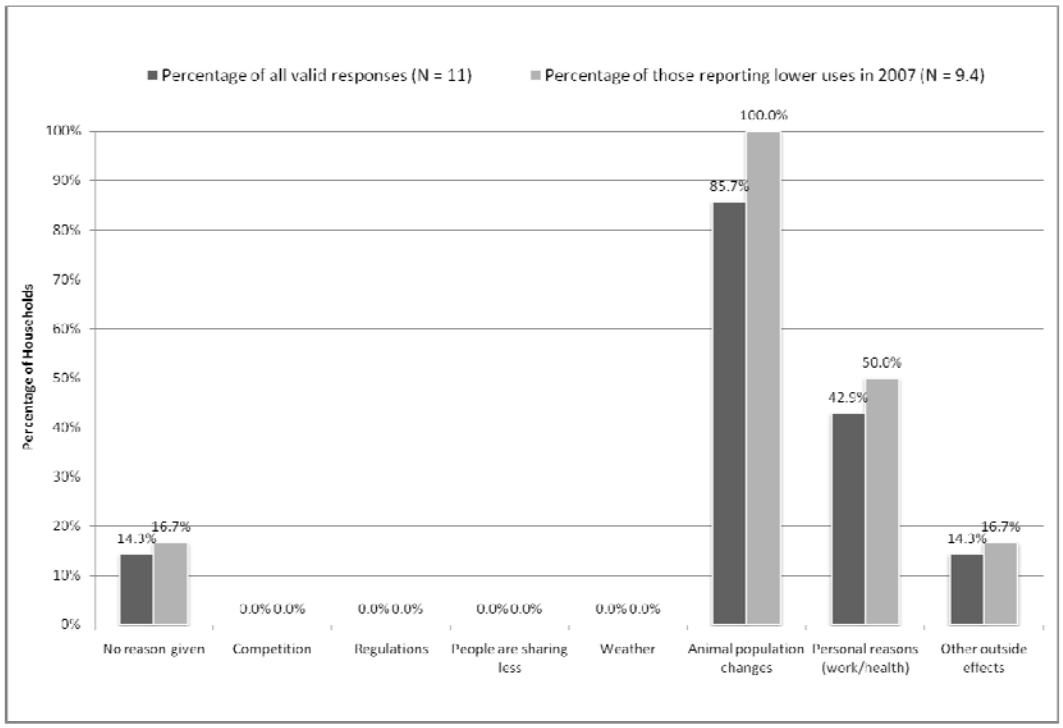

Figure 2-16.–Reasons cited by Lime Village respondents for less usage of any resource in 2007 compared to other recent years.

CHAPTER 3: DISCUSSION AND CONCLUSIONS

SUBSISTENCE HARVEST PATTERNS AND TRENDS

OVERVIEW OF FINDINGS FOR LIME VILLAGE, 2007.

Table 3-1 summarizes selected findings regarding demography, cash economy, and wild resource uses in Lime Village in 2007. The population of Lime Village was predominately Alaska Native (88%), with a majority of residents born in Alaska (83%). Although the federal census did not separate Lime Village from the broader area in their 2000 census, the Alaska Department of Labor and Workforce Development (ADLWD 2009) did estimate a population of 41 in 2000 (see Table 1-1). The Alaska Department of Labor and Workforce Development (ADLWD 2009) 2007 estimate for Lime Village was 25. This was fairly close to the ADF&G Division of Subsistence household survey findings, which estimated a population of 27 (Table 1-1).

Table 3-1.–Selected study findings for Lime Village, 2007.

Demography	
Population	27
Percentage Alaska Native	88.2%
Percentage of household heads born in Alaska	83.3%
Average length of residency, household heads (yr)	44
Cash economy	
Percentage of jobs located in community	85.7%
Average number of months employed	8.3
Percentage of employed adults working year-round	41.7%
Average household income	$15,823
Per capita income	$6,515
Resource harvest and use	
Per capita harvest (pounds usable weight)	935.5
Average household harvest (pounds usable weight)	2,271.9
Number of resources used by 50% or more of households	18.0
Average number of resources used per household	17.9
Average number of resources attempted to harvest per household	16.3
Average number of resources harvested per household	13.9
Average number of resources received per household	8.3
Average number of resources given away per household	9.4
Percentage of total harvest taken by top 25% of harvesters	45.6%
Percentage of households taking 70% of harvest	42.9%
Per capita harvest of lowest 50% of households	508.8
Percentage of total harvest taken by lowest 50% of households	54.4%
Average number of resources used by lowest 50 % of households	16.2
Average number of resources used by top 25% of households	28.0

Source ADF&G Division of Subsistence household survey 2008.

In the cash sectors of the local economy during the 2007 data year, only 47% of adults worked year round in the community. However, residents did work an average of 8 months per year and 86% of jobs were located in the community (Table 3-1). Cash incomes in 2007 reflected the scarcity of year-round jobs. The per capita income was $6,515, with the average household income $15,823 (Table 3-1).

The subsistence harvest estimates for Lime Village in 2007 were high in terms of pounds useable weight. The per capita harvest was 936 lb and the harvest at the household level was 2,272 lb (Table 3-1). The average household in Lime Village is small: an average of 2.4 residents per household (Table 2-1). Therefore, the harvest amount of wild foods is substantial, especially considering that the average American family purchases about 222 lb of meat, fish, and poultry per person per year (Fall 1990:77). In comparison to other communities in Alaska, Wolfe (2000:2) estimated that the average rural harvest in Alaska is 375 pounds per person, and the average harvest in rural Interior Alaska communities at 613 pounds per person, both of which are considerably lower than Lime Village. The remoteness of the community, lack of regular air service, and distance to the nearest store most likely account for the heavy reliance on wild foods.

Harvests in Lime Village were also diverse, with 50% or more of households using an average of 18 different resources. The 2 most important resources for Lime Village are salmon and land mammals (Figure 2-2). Nonsalmon fishes are also important and the harvesting of nonsalmon fishes is an important late winter activity for residents, who either set nets or use lines through the ice. Berries and plants are also important and made up 5% of the harvest in terms of pounds usable weight in 2007 (Figure 2-2). As noted earlier, households also gave away or shared an average of 9 different resources with other households, while receiving an average of 8 different resources. All households of Lime Village participated in harvesting and processing resources (Table 2-8).

CONCLUSION

This study documented the continuing importance of subsistence hunting, fishing, and gathering to the residents of Lime Village. In the 2007 data year, every household in Lime Village participated in subsistence activities and used wild resources. Subsistence harvests were large and diverse in 2007, and contributed a large portion of the community's food supply. Sockeye salmon, other fishes, caribou, moose, and wild plants were the primary subsistence foods as measured in usable pounds, but many households also used small game, and both migratory and upland birds. In addition to their own harvests, most households also receive subsistence resources through extensive sharing networks. Residents also reported sharing their traditional knowledge of wild resources and harvest areas while engaged in subsistence activities.

Results of the household survey suggest a long term trend towards lower subsistence harvests of large land mammals, due to decreased population abundance, not decreased hunting effort. Harvests of moose and caribou by households of Lime Village were generally lower in 2007 than in recent years, as well as compared to the 1980s (Kari 1983). Reasons local households cited for these changes included reduced resource abundance, including a shift in the location of moose and caribou, other outside effects, and personal reasons such as health, work, or changing household size. Causes of changes in subsistence harvests and uses are complex and require additional research in collaboration with communities. Although harvests of large land mammals have changed over time, most households of Lime Village related that their overall harvest and reliance on wild resources has remained constant over time.

Given the importance of subsistence resources and observations of changing harvest and use patterns, it is not surprising that residents of Lime Village expressed concerns about their future opportunities to hunt, fish, and gather wild resources in a manner consistent with their traditions and at levels that meet their harvest goals. Subsistence uses of healthy fish and wildlife populations meaningfully link people to their past, are vital to the present health of the community, and encourage optimism about the future. In addition, providing opportunities for subsistence hunting and fishing is a mandate of state and federal law. Community residents desire to continue subsistence activities not only for themselves but also for their children and other future generations. The intent of this report has been to provide information that will help the community work towards their goal of sustaining their way of life.

ACKNOWLEDGMENTS

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APPENDIX A: LIME VILLAGE SURVEY FORM

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

HH ID: _____ START TIME: _____ INTERVIEWER: _____

ID # OF RESPONDENT BELOW _____ STOP TIME: _____ DATE: _____

CODER: _____

FIELD SUPERVISOR: _____

HOUSEHOLD INFORMATION - WHO WERE MEMBERS OF THIS HOUSEHOLD BETWEEN JANUARY 1 AND DECEMBER 31, 2007 ?

PERSON ID#	M/F	RELATION TO HH HEAD	BIRTHDATE (MM/DD/YR)	RESIDENCE OF PARENT WHEN BORN	TOTAL YEARS IN COMM.	ALASKA NATIVE	IN THE STUDY YEAR, DID YOU FISH/HUNT/PROCESS:							
							LM/MM/BIRDS*		FISH/MI**		FURBEARERS		PLANTS	
							HUNT?	PROCESS?	FISH?	PROCESS?	HUNT/TRAP?	PROCESS?	GATHER?	PROCESS?
HEAD 1	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
1		1												
HEAD 2	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
2		2												
3	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
3														
4	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
4														
5	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
5														
6	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
6														
7	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
7														
8	M F					Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
8														

* LM/MM/BIRDS - should include harvesting/attempting to harvest large and small game, birds, and marine mammals.

** FISH/MI - should include harvesting/attempting to harvest marine invertebrates, eg., clam digging, etc.

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

COMMERCIAL FISHING - SALMON.

DID MEMBERS OF YOUR HOUSEHOLD PARTICIPATE IN COMMERCIAL SALMON FISHING BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES: PLEASE COMPLETE THE FOLLOWING TABLE (UNITS SHOULD INDICATE INDIVIDUALS, IF POUNDS THEN EDIBLE WEIGHT):

IF NO: DID YOU INCIDENTALLY HARVEST SALMON WHILE COMMERCIAL FISHING OTHER SPECIES?

	COMMERCIAL FISHED?		REMOVED FOR OWN USE	GAVE AWAY TO CREW	GAVE AWAY TO OTHERS		ID # FROM PAGE 1	
SPECIES	Y/N	INCIDENTAL*	#	#	#	UNITS	PERMIT HOLDER	CREW
CHINOOK SALMON	Y N					IND		
113000001						1		
CHUM SALMON	Y N					IND		
111000001						1		
SOCKEYE SALMON *SAYAK*	Y N					IND		
115000001						1		
PINK SALMON	Y N					IND		
114000001						1		
COHO SALMON	Y N					IND		
112000001						1		
UNKNOWN SALMON	Y N					IND		
119000001						1		
	Y N					IND		
						1		

* Incidental harvest - Check only if household was not engaged in commercial salmon fishing for that specific resource.

NOTES:

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:	

COMMERCIAL FISHING - NON-SALMON FISH

DID MEMBERS OF YOUR HOUSEHOLD PARTICIPATE IN COMMERCIAL FISHING (OTHER THAN SALMON) BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES: PLEASE COMPLETE THE FOLLOWING TABLE (POUNDS SHOULD INDICATE EDIBLE WEIGHT):

IF NO: DID YOU INCIDENTALLY HARVEST OTHER FISH WHILE COMMERCIAL FISHING FOR SALMON?

	COMMERCIAL FISHED?		FOR OWN USE	TO CREW	TO OTHERS		ID # FROM PAGE 1	
SPECIES	Y/N	INCIDENTAL	#	#	#	UNITS	PERMIT HOLDER	CREW
HALIBUT	Y N					LBS		
121800001						2		
HERRING	Y N					GAL		
120200001						4		
HERRING SPAWN ON KELP	Y N					GAL		
120306001						4		
CAPELIN	Y N					IND		
120402001						1		
SEA RUN DOLLIES	Y N					IND		
125006021						1		
PACIFIC "GRAY" COD	Y N					IND		
121001001						1		
SCULPIN (UNKNOWN)	Y N					IND		
123099001						1		
STARRY FLOUNDER	Y N					IND		
121406001						1		
SALMON SHARK	Y N					IND		
123204001						1		
YELLOWFIN SOLE	Y N					IND		
123606001						1		
	Y N							

NOTES: _____

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:	

COMMERCIAL FISHING - MARINE INVERTEBRATES

DID MEMBERS OF YOUR HOUSEHOLD PARTICIPATE IN COMMERCIAL FISHING FOR MARINE INVERTEBRATES BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES: PLEASE COMPLETE THE FOLLOWING TABLE (POUNDS SHOULD BE EDIBLE WEIGHT):

IF NO: DID YOU INCIDENTALLY HARVEST MARINE INVERTEBRATES WHILE COMMERCIAL FISHING FOR OTHER SPECIES?

	COMMERCIAL FISHED?		FOR OWN USE	TO CREW	TO OTHERS		SHELLS ON?	ID # FROM PAGE 1	
SPECIES	Y/N	INCIDENTAL	#	#	#	UNITS	Y/N	PERMIT HOLDER	CREW
RAZOR CLAMS	Y N					GAL	Y N		
500612001						4			
PACIFIC LITTLENECK CLAMS (STEAMERS)	Y N					GAL	Y N		
500608001						4			
DUNGENESS CRAB	Y N					IND	Y N		
501004001						1			
KING CRAB	Y N					IND	Y N		
501008991						1			
TANNER CRAB	Y N					IND	Y N		
501012991						1			
OCTOPUS	Y N					IND	Y N		
502200001						1			
SHRIMP	Y N					LBS	Y N		
503400001						2			
SCALLOPS	Y N					LBS	Y N		
502699001						2			
	Y N						Y N		

NOTES: _____

_____

LIME VILLAGE: 212 LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007 HHID:

NON-COMMERCIAL FISHING: SALMON.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE SALMON BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE

(UNITS SHOULD INDICATE INDIVIDUALS UNLESS NOTED OTHERWISE. POUNDS SHOULD BE EDIBLE WEIGHT):

			NUMBER HARVESTED BY:							
	USED?	TRIED TO HARVEST	SET NET	SEINE	ROD & REEL	OTHER GEAR			RECEIVED	GAVE AWAY
SPECIES	Y/N	Y/N	#	#	#	TYPE	#	UNITS	Y/N	Y/N
CHINOOK (KING) SALMON	Y N	Y N						IND	Y N	Y N
113000000								1		
SOCKEYE (RED) SALMON	Y N	Y N						IND	Y N	Y N
115000000								1		
CHUM (DOG) SALMON	Y N	Y N						IND	Y N	Y N
111000000								1		
PINK SALMON	Y N	Y N						IND	Y N	Y N
114000000								1		
COHO (SILVER) SALMON	Y N	Y N						IND	Y N	Y N
112000000								1		
SPAWNING REDS	Y N	Y N						IND	Y N	Y N
117050000								1		
UNKNOWN SALMON	Y N	Y N						IND	Y N	Y N
119000000								1		
	Y N	Y N						IND	Y N	Y N
								1		

* 'ROD & REEL' INCLUDES TROLLING IN OPEN WATER

Was your household's harvest and use of salmon typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different? _____

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

NON-COMMERCIAL FISHING: NON-SALMON FINFISH.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE FISH OTHER THAN SALMON BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (UNITS SHOULD INDICATE INDIVIDUALS UNLESS NOTED OTHERWISE. POUNDS SHOULD BE EDIBLE WEIGHT):

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	ROD & REEL #	DIP NET #	HAND LINE* #	SET NET #	ICE FISHING #	SEINE #	OTHER GEAR TYPE	OTHER GEAR #	UNITS	RECEIVED Y/N	GAVE AWAY Y/N
SMELT	Y N	Y N									GAL	Y N	Y N
120499002											4		
HERRING	Y N	Y N									GAL	Y N	Y N
120200002											4		
HERRING SAC ROE	Y N	Y N									GAL	Y N	Y N
120304002											4		
HERRING SPAWN-ON-KELP	Y N	Y N									GAL	Y N	Y N
120306002											4		
CAPELIN	Y N	Y N									IND	Y N	Y N
120402002											1		
ROUND WHITEFISH "CANDLEFISH"	Y N	Y N									IND	Y N	Y N
126412002											1		
HUMPBACK WHITEFISH	Y N	Y N									IND	Y N	Y N
126408002											1		
LEAST CISCO	Y N	Y N									IND	Y N	Y N
126406062											1		
PIKE	Y N	Y N									IND	Y N	Y N
125400002											1		
GRAYLING	Y N	Y N									IND	Y N	Y N
125200002											1		
RAINBOW TROUT	Y N	Y N									IND	Y N	Y N
126204002											1		
LAKE TROUT	Y N	Y N									IND	Y N	Y N
125010002											1		
TROUT - UNKNOWN	Y N	Y N									IND	Y N	Y N
126299002											1		
DOLLY VARDEN	Y N	Y N									IND	Y N	Y N
125006012											1		
SEA RUN DOLLIES	Y N	Y N									IND	Y N	Y N
125006022											1		

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	ROD & REEL #	DIP NET #	HAND LINE* #	SET NET #	ICE FISHING #	SEINE #	OTHER GEAR TYPE	OTHER GEAR #	UNITS	RECEIVED Y/N	GAVE AWAY Y/N
BURBOT "LING COD"	Y N	Y N									IND	Y N	Y N
124800002											1		
BLACK FISH	Y N	Y N									IND	Y N	Y N
124600002											1		
PACIFIC "GRAY" COD	Y N	Y N									IND	Y N	Y N
121004002											1		
PACIFIC TOM COD	Y N	Y N									IND	Y N	Y N
121008002											1		
SCULPIN (UNKNOWN)	Y N	Y N									IND	Y N	Y N
123099002											1		
STARRY FLOUNDER	Y N	Y N									IND	Y N	Y N
121406002											1		
HALIBUT	Y N	Y N									LBS	Y N	Y N
121800002											2		
YELLOWFIN SOLE	Y N	Y N									IND	Y N	Y N
123606002											1		
	Y N	Y N										Y N	Y N

* Hand line used in open water.

Was your household's harvest and use of non-salmon fish typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different? _____

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

NON-COMMERCIAL FISHING: MARINE INVERTEBRATES [SHELLFISH].

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE MARINE INVERTEBRATES BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N [ ] IF YES, PLEASE COMPLETE THE FOLLOWING TABLE

(UNITS SHOULD INDICATE INDIVIDUALS UNLESS NOTED OTHERWISE. POUNDS SHOULD BE EDIBLE WEIGHT):

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	HARVESTED #	HARVESTED UNITS	RECEIVED Y/N	GAVE AWAY Y/N
RAZOR CLAMS	Y N	Y N		GAL	Y N	Y N
500612002				4		
SOFT SHELL CLAMS	Y N	Y N		GAL	Y N	Y N
500614002				4		
UNKNOWN CLAMS	Y N	Y N		GAL	Y N	Y N
500699002				4		
COCKLES (UNKNOWN)	Y N	Y N		GAL	Y N	Y N
500899002				4		
BLUE MUSSELS	Y N	Y N		GAL	Y N	Y N
502002002				4		
SHRIMP	Y N	Y N		LBS	Y N	Y N
503400002				2		
DUNGENESS CRAB	Y N	Y N		IND	Y N	Y N
501004002				1		
RED KING CRAB	Y N	Y N		IND	Y N	Y N
501008082				1		
TANNER CRAB (UNKNOWN)	Y N	Y N		IND	Y N	Y N
501012992				1		
	Y N	Y N			Y N	Y N

Was your household's harvest and use of marine invertebrates typical of recent years? LESS SAME MORE [ ]

If different (less or more), how and why was it different? _____

_____

LARGE LAND MAMMALS.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE LARGE LAND MAMMALS BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (UNITS SHOULD BE INDIVIDUALS):

	IN 2007 DID MEMBERS OF YOUR HH...			HARVEST																			
	USED?	HARVEST	SEX	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	UNKNOWN	UNITS	FOR FOOD (MEAT/FAT)	FOR FAT ONLY	HIDE ONLY	TOTAL	RECEIVED	AWAY
	(circle)	(circle)		(enter number by sex and month of take)													(ind...)					Y/N	Y/N
CARIBOU *CIRUNEL'KAYAK*	Y N	Y N	M														ind	DO NOT FILL OUT FOR MOOSE AND CARIBOU				Y N	Y N
			F																				
			?																				
																	1						
MOOSE *TANTUVAK*	Y N	Y N	M														ind					Y N	Y N
			F																				
			?																				
																	1						
BLACK BEAR *TAN'GERLIQ*	Y N	Y N	M														ind					Y N	Y N
			F																				
			?																				
																	1						
BROWN BEAR *KAGGELVALEK*	Y N	Y N	M														ind					Y N	Y N
			F																				
			?																				
																	1						
DALL SHEEP *PENAIQ*	Y N	Y N	M														ind					Y N	Y N
			F																				
			?																				
																	1						

Was your household's harvest and use of large land mammals typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different? _____

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

MARINE MAMMALS.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE MARINE MAMMALS BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (UNITS ARE INDIVIDUALS. POUNDS SHOULD BE EDIBLE WEIGHT.):

				NUMBER HARVESTED					
	USED*?	TRIED TO HARVEST?	SALVAGE?**	FOR FOOD	FOR HIDE ONLY	TOTAL		RECEIVED	GAVE AWAY
SPECIES	Y/N	Y/N	Y/N	#	#	#	UNITS	Y/N	Y/N
RINGED SEAL 300810000	Y N	Y N	Y N				IND 1	Y N	Y N
BEARDED SEAL 300802000	Y N	Y N	Y N				IND 1	Y N	Y N
SEAL (UNKNOWN) 300899000	Y N	Y N	Y N				IND 1	Y N	Y N
WALRUS 301400000	Y N	Y N	Y N				IND 1	Y N	Y N
BELUKHA 301602000	Y N	Y N	Y N				IND 1	Y N	Y N
HARBOR PORPOISE 300604000	Y N	Y N	Y N				IND 1	Y N	Y N
HARBOR (SPOTTED) SEAL 300806040	Y N	Y N	Y N				IND 1	Y N	Y N
SEA LION 301200000	Y N	Y N	Y N				IND 1	Y N	Y N

* Use includes meat and/or oil, and/or fur.

** For animal found dead or incidently caught in a subsistence net.

Was your household's harvest and use of marine mammals typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different?

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:	

SMALL LAND MAMMALS/FURBEARERS.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE SMALL LAND MAMMALS/FURBEARERS BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (UNITS SHOULD INDICATE INDIVIDUALS).

		TRIED TO	NUMBER HARVESTED						GAVE		
	USED?	HARVEST	FOOD	FUR ONLY	FOOD &	TOTAL		RECEIVED	AWAY	NUMBER	AVERAGE
SPECIES	Y/N	Y/N	#	#	FUR #	#	UNITS	Y/N	Y/N	SOLD	PRICE
BEAVER	Y N	Y N					IND	Y N	Y N		
220200000							1				
PORCUPINE	Y N	Y N					IND	Y N	Y N		
222600000							1				
SNOWSHOE HARE	Y N	Y N					IND	Y N	Y N		
221004000							1				
RED FOX	Y N	Y N					IND	Y N	Y N		
220804000							1				
CROSS FOX	Y N	Y N					IND	Y N	Y N		
220804020							1				
ARCTIC FOX	Y N	Y N					IND	Y N	Y N		
220802000							1				
COYOTE	Y N	Y N					IND	Y N	Y N		
220400000							1				
LAND OTTER	Y N	Y N					IND	Y N	Y N		
221200000							1				
LYNX	Y N	Y N					IND	Y N	Y N		
221600000							1				
MARMOT	Y N	Y N					IND	Y N	Y N		
221800000							1				
MARTEN	Y N	Y N					IND	Y N	Y N		
222000000							1				
MINK	Y N	Y N					IND	Y N	Y N		
222200000							1				
MUSKRAT	Y N	Y N					IND	Y N	Y N		
222400000							1				
WEASEL	Y N	Y N					IND	Y N	Y N		
223000000							1				

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	NUMBER HARVESTED FOOD #	FUR ONLY #	FOOD & FUR #	TOTAL #	UNITS	RECEIVED Y/N	GAVE AWAY Y/N	NUMBER SOLD	AVERAGE PRICE
WOLF	Y N	Y N					IND	Y N	Y N		
223200000							1				
WOLVERINE	Y N	Y N					IND	Y N	Y N		
223400000							1				
TREE SQUIRREL (RED)	Y N	Y N					IND	Y N	Y N		
222804000							1				
PARKA SQUIRREL (GROUND)	Y N	Y N					IND	Y N	Y N		
222802000							1				

Was your household's harvest and use of small land mammals typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different? _____

_____

_____

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:	

BIRDS AND EGGS.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE BIRDS OR EGGS BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N [ ] IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (UNITS SHOULD BE INDIVIDUALS).

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	# HARVESTED BY SEASON (MONTHS) SPRING A M J	SUMMER J A	FALL S O N	WINTER D J F M	UNIT	RECEIVED Y/N	GAVE AWAY Y/N
GROUSE (SPRUCE HEN) 421802000	Y N	Y N					IND 1	Y N	Y N
PTARMIGAN (UNKNOWN) 421804990	Y N	Y N					IND 1	Y N	Y N
CANADA GEESE- LITTLE "CACKLERS" 410404040	Y N	Y N					IND 1	Y N	Y N
CANADA GEESE - BIG "LESSER" 410404080	Y N	Y N					IND 1	Y N	Y N
CANADA GEESE - UNKNOWN 410404990	Y N	Y N					IND 1	Y N	Y N
WHITE-FRONTED GEESE "SPECKLEBELLY" 410410000	Y N	Y N					IND 1	Y N	Y N
BRANT "SEA GEESE" 410402000	Y N	Y N					IND 1	Y N	Y N
EMPEROR GEESE 410406000	Y N	Y N					IND 1	Y N	Y N
SNOW GEESE 410408000	Y N	Y N					IND 1	Y N	Y N
GEESE - UNKNOWN 410499000	Y N	Y N					IND 1	Y N	Y N
TUNDRA SWANS 410604000	Y N	Y N					IND 1	Y N	Y N
TRUMPETER SWANS 410602000	Y N	Y N					IND 1	Y N	Y N
SWANS - UNKNOWN 410699000	Y N	Y N					IND 1		
SANDHILL CRANES 410802000	Y N	Y N					IND 1	Y N	Y N

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	# HARVESTED BY SEASON (MONTHS) SPRING A M J	SUMMER J A	FALL S O N	WINTER D J F M	UNIT	RECEIVED Y/N	GAVE AWAY Y/N
MALLARDS 410214000	Y N	Y N					IND 1	Y N	Y N
NORTHERN PINTAILS 410220000	Y N	Y N					IND 1	Y N	Y N
GOLDENEYES (UNKNOWN) 410210990	Y N	Y N					IND 1	Y N	Y N
NORTHERN SHOVELERS 410230000	Y N	Y N					IND 1	Y N	Y N
GADWALLS 410208000	Y N	Y N					IND 1	Y N	Y N
GREEN-WINGED TEALS 410232060	Y N	Y N					IND 1	Y N	Y N
BUFFLEHEADS 410202000	Y N	Y N					IND 1	Y N	Y N
HARLEQUINS 410212000	Y N	Y N					IND 1	Y N	Y N
SCAUPS (UNKNOWN) 410226990	Y N	Y N					IND 1	Y N	Y N
WIGEON (UNKNOWN) 410236990	Y N	Y N					IND 1	Y N	Y N
OLD SQUAW 410218000	Y N	Y N					IND 1	Y N	Y N
CANVASBACK 410204000	Y N	Y N					IND 1	Y N	Y N
COMMON MERGANSER 410216020	Y N	Y N					IND 1	Y N	Y N
RED-BREASTED MERGANSER 410216040	Y N	Y N					IND 1	Y N	Y N
MERGANSER (UNKNOWN) 410216990	Y N	Y N					IND 1	Y N	Y N
BLACK SCOTERS "BLACK DUCK" 410228020	Y N	Y N					IND 1	Y N	Y N
COMMON EIDERS 410206020	Y N	Y N					IND 1	Y N	Y N
KING EIDERS 410206040	Y N	Y N					IND 1	Y N	Y N

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	# HARVESTED BY SEASON (MONTHS) SPRING A M J	SUMMER J A	FALL S O N	WINTER D J F M	UNIT	RECEIVED Y/N	GAVE AWAY Y/N
DUCKS - UNKNOWN 410299000	Y N	Y N					IND 1	Y N	Y N
COMMON SNIPE 411002000	Y N	Y N					IND 1	Y N	Y N
GULL EGGS 431212990	Y N	Y N					IND 1	Y N	Y N
MURRE EGGS 431218990	Y N	Y N					IND 1	Y N	Y N
GEESE EGGS 430499000	Y N	Y N					IND 1	Y N	Y N
DUCK EGGS 430299000	Y N	Y N					IND 1	Y N	Y N
SWAN EGGS 430699000	Y N	Y N					IND 1	Y N	Y N
TERN EGGS 431226990	Y N	Y N					IND 1	Y N	Y N
SNIPE EGGS 431002000	Y N	Y N					IND 1	Y N	Y N
CORMORANT EGGS 431204990	Y N	Y N					IND 1	Y N	Y N
UNKNOWN EGGS 439900000	Y N	Y N					IND 1	Y N	Y N
	Y N	Y N						Y N	Y N

Was your household's harvest and use of birds and eggs typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different?

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:

WILD PLANTS.

DID MEMBERS OF YOUR HOUSEHOLD TRY TO HARVEST OR USE WILD PLANTS (INCLUDING FIREWOOD) BETWEEN JANUARY 1 AND DECEMBER 31, 2007?

Y N

IF YES, PLEASE COMPLETE THE FOLLOWING TABLE (POUNDS SHOULD INDICATE EDIBLE WEIGHT).

SPECIES	USED? Y/N	TRIED TO HARVEST Y/N	AMOUNT HARVESTED #	AMOUNT HARVESTED UNIT	RECEIVED Y/N	GAVE AWAY Y/N	WHAT KIND WERE USED (EITHER HARVESTED OR RECEIVED) FOR BOTH BERRIES AND PLANTS IN 2007
BERRIES *ACSAQ*				GAL			
601000000				4			
PLANTS/GREENS/MUSHROOMS *PALURUTAQ*				GAL			
602000000				4			
WOOD *PUYURKAQ*				CORDS			
604000000				6			

Was your household's harvest and use of wild plants typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different?

OVERALL ASSESSMENT.

Was your household's overall harvest and use of subsistence resources typical of recent years? LESS SAME MORE

If different (less or more), how and why was it different?

LIME VILLAGE:	212	LIME VILLAGE COMPREHENSIVE SUBSISTENCE BASELINE UPDATE 2007	HHID:	

EMPLOYMENT.

PLEASE INDICATE THE FOLLOWING INFORMATION FOR ALL JOBS HELD BY THE EMPLOYED PERMANENT HOUSEHOLD MEMBERS 16 OR OLDER LISTED ON PAGE 1 BETWEEN JANUARY 1 AND DECEMBER 31, 2007.

FOR THOSE OVER 16 NOT EMPLOYED, PLEASE SPECIFY RETIRED, UNEMPLOYED, DISABLED, STUDENT, OR HOMEMAKER.

REMINDER: INCLUDE COMMERCIAL FISHING HERE
COMMERCIAL FISHING AND BUSINESS OWNERS - ADJUSTED GROSS AFTER EXPENSES. IF LESS THAN ZERO, ENTER 0.

PERSON ID # FROM FIRST PAGE OF SURVEY	JOB #	JOB TITLE	EMPLOYER TYPE	LOCATION city/town	WHICH MONTHS WORKED IN 2007 circle each month worked	FULL TIME	PART TIME	SHIFT - FULL TIME	ON CALL - VARIES	PERSONAL GROSS INCOME
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							
					J F M A M J J A S O N D	FT	PT	SF	OC	
		SOC	SIC							

WORK SCHEDULE: FT - Fulltime (35+ hours/week)
PT - Parttime (<35 hours/week)
Shift Fulltime (2 weeks on/off, etc.)
Oncall - Irregular, on call, comm. fishing

NOTES: ______________________________

LIME VILLAGE:	212	LIME VILLAGE SUBSISTENCE BASELINE UPDATE 2007	HHID:

OTHER INCOME.

ANSWER ALL THAT APPLY. INDICATE ANNUAL AMOUNT FOR THE PERIOD OF JANUARY 1 AND DECEMBER 31, 2007.
IT IS OKAY TO LEAVE BLANK IF NOT APPLICABLE OR TO STATE SOME AMOUNT. MARK A -8 IF AMOUNT IS UNKNOWN AND IT EXISTED.

AK PERMANENT FUND* (32)	$	/YR	ADULT TEMPORARY ASSISTANCE PROGRAM (02)	$	/YR	DIVIDENDS/INTEREST (14)	$	/YR
SOCIAL SECURITY (07)	$	/YR	PENSION/RETIREMENT (05)	$	/YR	ADULT PUBLIC ASSISTANCE (03)	$	/YR
SUPP. SECURITY INCOME (SSI) (10)	$	/YR	WORK COMP/INSURANCE (08)	$	/YR	ENERGY ASSISTANCE (09)	$	/YR
NATIVE CORP. DIVIDEND (13)	$	/YR	FOOD STAMPS (11)	$	/YR	UNEMPLOYMENT (12)	$	/YR
						OTHER: _____ (____)	$	/YR

*[AK PERMANENT FUND 2007: $1,654.0 2- $3308 3- $4962 4- $6616 5- $8270 6- $9924 7- $11578 8- $13232 9- $14886 10- $16540

FOOD:

PLEASE ESTIMATE YOUR MONTHLY EXPENSES TO PURCHASE FOOD: $_____/MONTH

WHAT PERCENTAGE OF ALL THE MEAT, FISH, AND BIRDS THAT YOU ATE IN THE LAST YEAR WAS FROM WILD RESOURCES? [33]
___ (1) NONE ___ (2) 1-25% ___ (3) 26-50% ___ (4) 51-75% ___ (5) 76-99% ___ (6) ALL

BBNC DIVIDENDS ARE PAID OUT QUARTERLY	
JANUARY & APRIL =	$2.40 SHARE
JULY & DECEMBER =	$2.75 SHARE
TOTAL PER SHARE 2007:	2(2.40) + 2(2.75)= $10.30
100 SHARES=	$1,030.00
200 SHARES=	$2,060.00
300 SHARES=	$3,090.00
400 SHARES=	$4,120.00

DO YOU HAVE ANY OTHER QUESTIONS, COMMENTS, OR CONCERNS?

BE SURE TO FILL IN THE STOP TIME ON THE FIRST PAGE!!!!

INTERVIEW SUMMARY:

APPENDIX B: CONVERSION FACTORS

Appendix B.–Conversion factors.

Resource	Conversion to pounds
Chum salmon	4.88
Coho salmon	5.10
Chinook salmon	11.09
Pink salmon	2.99
Sockeye salmon	4.29
Landlocked salmon	1.50
Spawning sockeye salmon	2.00
Unknown salmon	– 8.00
Herring	6.00
Herring sac roe	7.00
Herring spawn on kelp	7.00
Smelt	6.00
Capelin (grunion)	3.25
Unknown smelt	3.25
Pacific (gray) cod	3.20
Walleye pollock (whiting)	1.40
Unknown cod	3.20
Flounder	3.00
Unknown flounder	3.00
Lingcod	4.00
Unknown greenling	1.00
Pacific halibut	23.50
Black rockfish	1.50
Rougheye (red) rockfish	4.00
Unknown rockfish	2.00
Sablefish (black cod)	3.10
Slimy sculpin (bullhead)	0.50
Unknown shark	9.00
Unknown sole	1.00
Stickleback (needlefish)	0.20
Wolffish	0.50
Alaska blackfish	0.07
Burbot	1.00
Arctic char	1.40
Dolly Varden	1.40
Dolly Varden - freshwater	1.40
Dolly Varden - saltwater	1.40
Lake trout	1.40
Arctic grayling	0.70
Northern pike	2.80
Sheefish	5.50
Unknown sturgeon	34.00

-continued-

Resource	Conversion to pounds
Longnose sucker	1.50
Rainbow trout	1.40
Steelhead trout	1.40
Unknown trout	1.40
Broad whitefish	4.00
Least cisco	0.40
Humpback whitefish	1.75
Round whitefish	1.00
Black bear	58.00
Brown bear	340.00
Caribou	150.00
Moose	540.00
Dall sheep	104.00
Beaver	8.75
Coyote [a]	0.00
Red fox	0.00
Red fox - crossphase	0.00
Arctic hare	5.60
Snowshoe hare	2.00
River otter	0.00
Lynx	4.00
Alaska marmot	5.00
American marten	0.00
Mink	0.00
Muskrat	0.75
Porcupine	8.00
Arctic ground (parka) squirrel	0.50
Red (tree) squirrel	0.50
Weasel	0.00
Gray wolf	0.00
Wolverine	0.00
Harbor seal	56.00
Harbor seal - freshwater	56.00
Harbor seal - saltwater	56.00
Unknown seal	56.00
Sea otter	0.00
Steller sea lion	200.00
Walrus	560.00
Beluga whale	831.00
Bufflehead	0.40
Canvasback	1.10
Gadwall	0.80
Unknown goldeneye	0.80

-continued-

Appendix B. Page 3 of 4.

Resource	Conversion to pounds
Mallard	1.00
Merganser	0.60
Northern pintail	0.80
Scaup	0.90
Unknown scaup	0.90
Scoter	0.90
Black scoter	0.90
Northern shoveler	0.60
Green-winged teal	0.30
Wigeon	0.70
American wigeon	0.70
Unknown wigeon	0.70
Unknown duck	0.78
Brant	1.20
Cackling Canada goose	1.20
Dusky Canada goose	3.60
Lesser Canada goose [b]	1.20
Unknown Canada goose	1.96
Snow goose	2.30
White-fronted goose	2.40
Unknown goose	2.40
Tundra (whistling) swan	6.00
Unknown swan	6.00
Sandhill crane	8.40
Common snipe	0.10
Unknown loon	3.00
Tern	1.00
Arctic tern	1.00
Grouse	0.70
Unknown ptarmigan	0.70
Duck eggs	0.15
Unknown duck eggs	0.15
Goose eggs	0.30
Unknown goose eggs	0.30
Swan eggs	0.30
Unknown swan eggs	0.30
Seabird and loon eggs	0.30
Gull eggs	0.30
Unknown gull eggs	0.30
Tern eggs	0.05
Unknown tern eggs	0.05
Unknown eggs	0.15
Butter clam	3.00

-continued-

Resource	Conversion to pounds
Freshwater clam	3.00
Gaper (horse) clam	3.00
Pacific littleneck (steamer) clam	3.00
Arctic surfclam (pinkneck clam)	3.00
Pacific razor clam	3.00
Softshell clams	3.00
Unknown clams	3.00
Cockle	3.00
Unknown cockle	3.00
Dungeness crab	0.70
King crab	2.30
Red king crab	1.00
Tanner crab	1.60
Unknown Tanner crab	1.60
Unknown crab	1.57
Unknown mussel	1.50
Octopus	4.00
Scallop	1.00
Unknown scallop	1.00
Shrimp	0.04
Shrimp	1.00
Berries	4.00
Plants / greens / mushrooms	4.00
Wood	0.00

a. Although the resources with a conversion factor of 0 are a portion of the total harvest of wild resources, then are given a conversion factor of 0 because they are not usually consumed.

b. Both *Branta canadensis taverner* and *B. canadensis parvipes*.

APPENDIX C: SUMMARY OF STUDY FINDINGS

Appendix C.–Summary of study findings.

Subsistence Harvests and Uses of Wild Resources in Lime Village, Alaska, 2007

An Overview of Study Findings

Division of Subsistence
Alaska Department of Fish and Game

September 2010

Background

The following is a brief overview of research conducted by the Division of Subsistence of the Alaska Department of Fish and Game (ADF&G) on subsistence harvests of all resources by residents of Lime Village. The study period covers January 1 to December 31, 2007. Funding for this project was provided by Stephen R. Braund and Associates (ADF&G Agreement Number IHP-06-050). Phase I of this study, to document subsistence uses and harvests as well as demographic and other economic data for the study year of 2004, took place in the communities of Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth in 2005. These findings are reported in *Subsistence Harvest and Uses of Wild Resources in Iliamna, Newhalen, Nondalton, Pedro Bay, and Port Alsworth, Alaska, 2004* (ADF&G Division of Subsistence Technical Paper No. 302). Phase II expanded the study to 5 additional communities: Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok for the 2005 study year. These findings are reported in *Subsistence Harvests and Uses of Wild Resources in Igiugig, Kokhanok, Koliganek, Levelock, and New Stuyahok, Alaska, 2005* (ADF&G Division of Subsistence Technical Paper No. 322). This study was part of phase III to examine subsistence baseline information in King Salmon, Naknek, South Naknek, and Lime Village in 2007. The findings from this study will be presented in two reports: one for Lime Village and one for King Salmon, Naknek, and South Naknek.

Methods

The primary data gathering method was systematic household surveys using the ADF&G Division of Subsistence standard data gathering instrument. The surveys were conducted face-to-face with community residents. The goal was to interview representatives of all households in Lime Village. In total, 7 households were interviewed, 64% of the year-round resident households. With the help of local research assistants, household interviews were conducted to collect harvest and use information for all wild resources. Each household had accompanying mapping conducted as well, for each resource, including use area and/or harvest location, amount of harvest, and month of harvest. Participation was voluntary, and individual and household-level data are confidential as are mapped harvest locations for large land mammal species. In addition, subsistence users were asked to discuss their observations about resource use and abundance and their concerns relating to subsistence resources and their continuing opportunities to harvest subsistence resources.

Findings

In 2005, virtually every person in Lime Village participated in subsistence activities and used wild resources. Subsistence harvests were large and diverse. Estimated wild resource harvests were the largest yet recorded for this project; an estimated 936 pounds usable weight per person. The mean household harvest was 2,272 pounds of usable weight.

Figure 1 shows the composition by wild resource harvests by category for 2007. The composition of the harvest varied by resource category with salmon and large land mammals constituting the greater portion of the harvest. Table 1 shows the top ten specific resources harvests and used by Lime Village households in 2007.

Figure 1. - Lime Village composition of wild resource harvests, pounds usable weight, 2007.

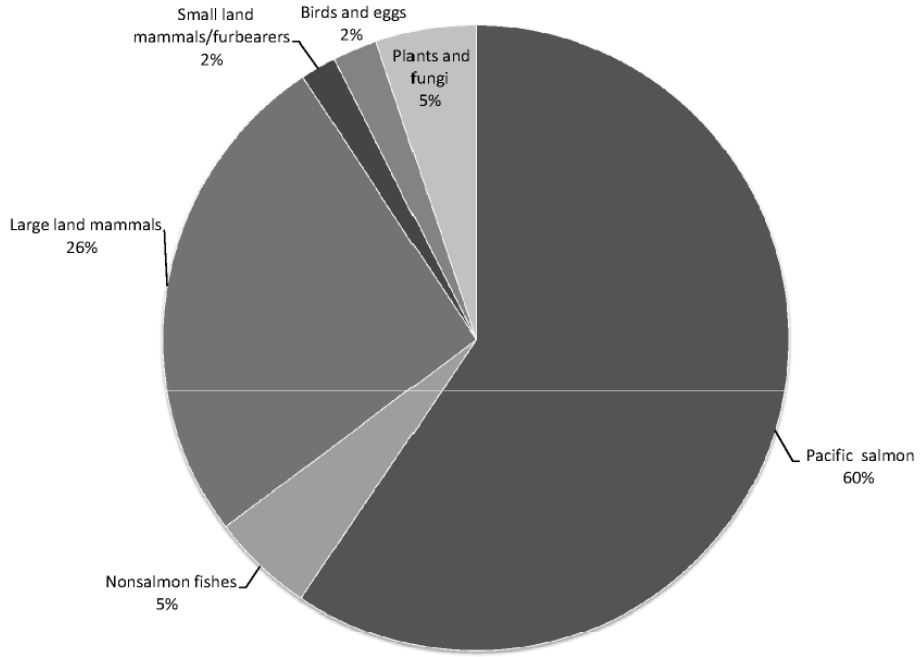


Table 1. – Top ten resources harvested and used, Lime Village, 2007.

Harvest			Use		
Rank	Resource	Pounds per capita	Rank	Resource	Percentage of households using
1.	Sockeye salmon	275.1	1.	Sockeye salmon	100.0%
2.	Caribou	158.8	2.	Northern pike	100.0%
3.	Chinook salmon	141.6	3.	Chum salmon	85.7%
4.	Chum salmon	107.1	4.	Coho salmon	85.7%
5.	Moose	63.5	5.	Chinook salmon	85.7%
6.	Berries	44.0	6.	Caribou	85.7%
7.	Coho salmon	32.1	7.	Porcupine	85.7%
8.	Northern pike	24.4	8.	Berries	85.7%
9.	Whitefish	21.2	9.	Wood	85.7%
10.	Black bear	20.5	10.	Beaver	71.4%

Source ADF&G Division of Subsistence household survey, 2008.

Every household in Lime Village used subsistence foods in the 2005 study year. Most households (95%) engaged in some sort of subsistence activity in 2007 (see Figure 2). For Lime Village the per capita harvest of 936 pounds per person is almost 3 lb of wild resources per day. Although the bulk was salmon and large land mammals, almost all households used other fish and wild plants, and many used birds, bird eggs, and small game. Sharing of these resources bound households together in networks of mutual support and obligation. Further, subsistence activities and uses created a context in which people shared traditional knowledge about harvest locations, fish and wildlife populations and behavior, and respectful relationships with the natural world. In short, subsistence hunting, fishing, and gathering were a vital component of the Lime Village economy and way of life in 2007, as they have been for centuries.

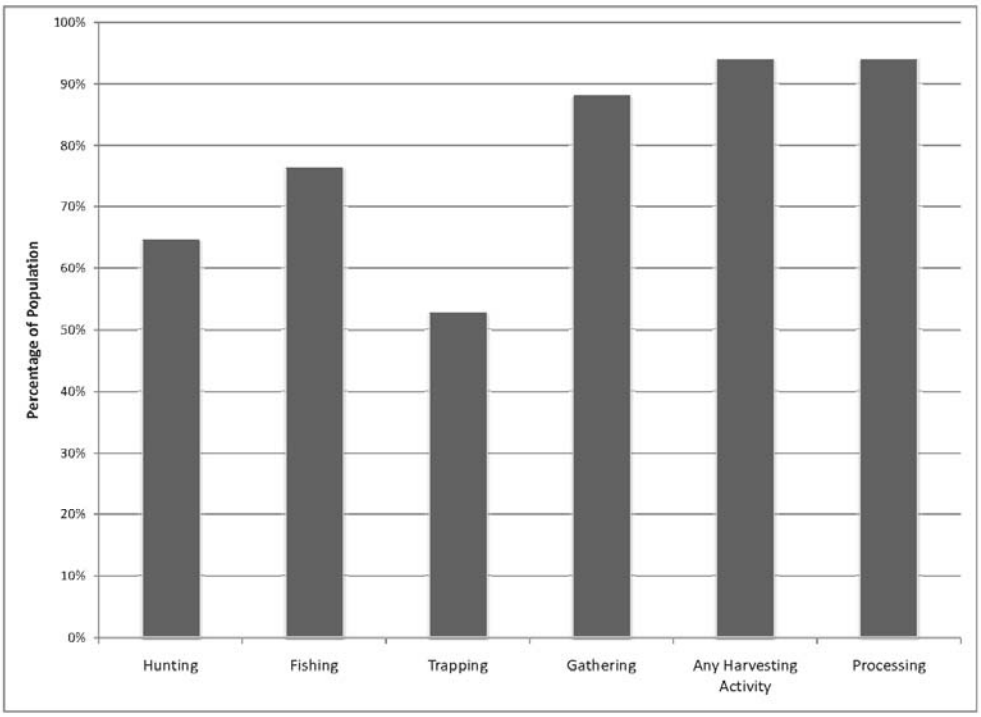
Continuing Research

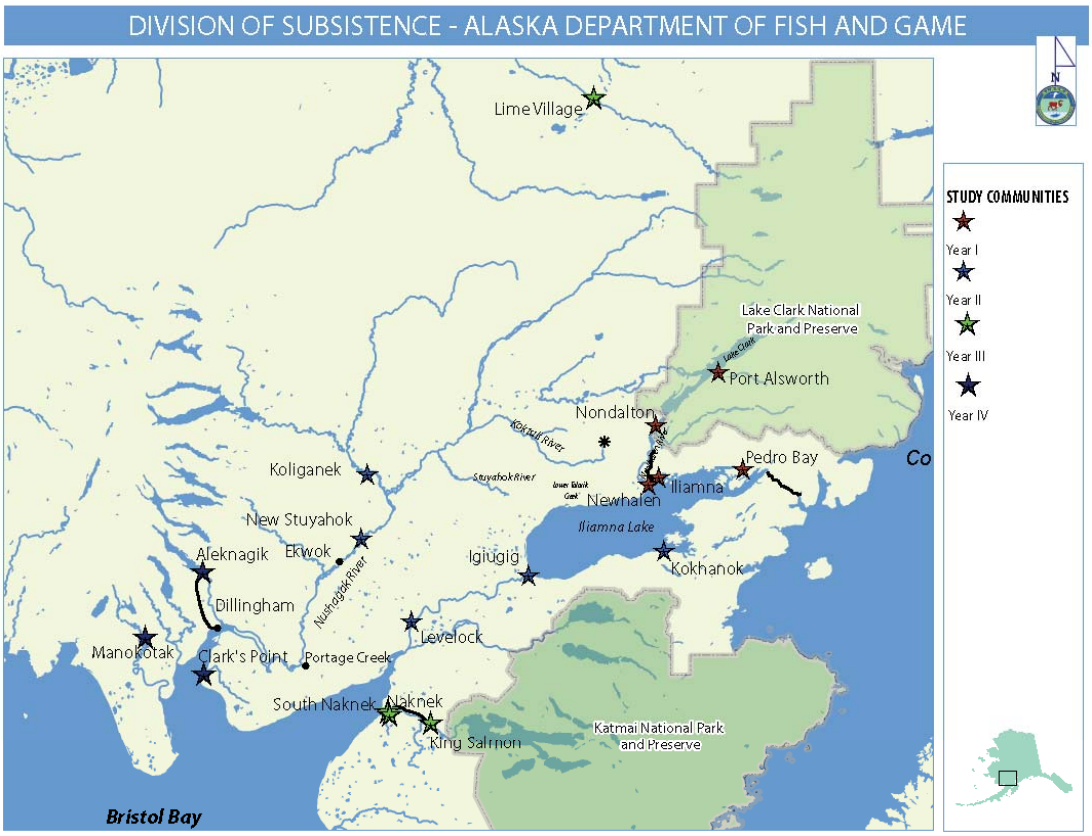
The Division of Subsistence, in cooperation with Stephen R. Braund and Associates and local communities, has continued research for this project. In March 2009, subsistence harvest and use surveys were conducted Aleknagik, Clark's Point, and Manokotak (see map).

For More Information:

Complete results for this project appear in *Subsistence harvests and uses of wild resources in Lime Village, Alaska, 2007. (D. L. Holen and T. Lemons. 2010. Alaska Department of Fish and Game, Division of Subsistence Technical Paper No. 355, Anchorage).* Technical Paper series reports are available through the Alaska State Library and on the Internet: *www.subsistence.adfg.state.ak.us.*

Figure 2. - Participation in harvesting of wild resources, Lime Village, 2007.





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