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Customary Trade and Barter in Fish in the Seward Peninsula Area, Alaska

By

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August 2007

Alaska Department of Fish and Game **Division of Subsistence**

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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	use 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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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/geninfo/publctns/techpap.cfm

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Abstract

This project documented subsistence barter and cash trade of subsistence foods in six Seward Peninsula Area communities: Brevig Mission, Elim, Nome, Saint Michael, Shaktoolik, and Stebbins. Federal and Alaska laws define customary trade as the limited, non-commercial exchange of fish and wildlife resources for cash. Although recognized in law, customary trade had not been allowed by regulations until recently. At the time of this study, cash trade was allowed in federally managed fisheries in the Seward Peninsula Area, but prohibited in state-managed fisheries.

In the six study communities, 88 households were identified as participating in either trade for cash or barter, about 23% of the households in the five smaller communities. Seventy three households were surveyed. Nineteen individuals were interviewed about trade and barter, in particular, about historical exchange patterns. Thirty three of the 73 surveyed households (45%) reported trading for cash during the past year, while 38 households (52%) reported bartering subsistence foods during the same time. On the surveys, 141 reciprocal exchanges were reported: 75 trades for cash in which $7,806 was paid for 2,561 edible pounds of subsistence foods, and 66 barters in which respondents exchanged about 2,315 lb of subsistence food and other goods for about 3,854 lb of similar goods from their barter partners.

When trading subsistence foods for cash, small transactions were most commonly reported; 66% of the transactions involved $100 or less, and the largest single transaction reported was $400. Summing all reported cash trades for each household during the study year, 42% of the trading households reported annual trade totals of $100 or less. Only 9% of households reported trade totals in excess of $500 per year.

In March, 2007, the Alaska Board of Fisheries adopted a new regulation providing for customary trade in the Norton Sound-Port Clarence Area.

Key Words: customary trade, barter, fish, Norton Sound, Port Clarence, Chinook salmon *Oncorhynchus tshawystscha*, sockeye salmon, *Oncorhynchus nerka*, coho salmon, *Oncorhynchus kisutch,* pink salmon, *Oncorhynchus gorbuscha*, chum salmon, *Oncorhynchus keta*, king crab, *Paralithodes camtschaticus*, herring, *Clupea pallasi*, Brevig Mission, Elim, Nome, Saint Michael, Shaktoolik, Stebbins

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1
Introduction

This report describes customary patterns of trade and barter involving subsistence-caught fish in six communities in the Seward Peninsula Area of Alaska. In law and regulation, customary trade and barter are terms of art with specific meanings. "Customary trade" is the limited, noncommercial sale of subsistence-caught fish for cash. "Barter" is the limited, noncommercial exchange of subsistence-caught fish for items other than cash. Both customary trade and barter are among the subsistence uses recognized by federal and state law.

Other than sharing within extended family networks, customary trade and barter often were the only ways to obtain certain highly valued Native foods (Figure 1-1). These foods – not available through commercial markets – usually were found in limited areas or processed in special ways. They included, for example, hooligan oil from Haines, Dolly Varden trout from Kivalina, herring eggs on spruce from Sitka, and seal oil from Shishmaref. These products were distributed through various noncommercial exchanges, some permissible under state and federal regulations, some not permissible, and some whose legal status was unclear. The nature and extent of customary trade in these products was not well documented, and the need to characterize and provide for customary patterns of trade in regulation was an issue recognized in the Federal Subsistence Fisheries Implementation Plan (Norris 2002:256,267).

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Figure 1-1. Dried salmon in Elim. Dried salmon were the most commonly exchanged subsistence food in the Seward Peninsula area.

Using survey and interview data from six differently situated Northwest Alaska communities as case examples (Figure 1-2), this report is intended to provide information about the nature and extent of customary patterns of trade and barter to the public, Regional Advisory Councils, federal staff, and the Federal Subsistence Board, as well as State of Alaska managers. The residents of the six study communities – Brevig Mission, Elim, Nome, Saint Michael, Shaktoolik, and Stebbins – were federally eligible subsistence users with federally recognized customary and traditional uses of all fish and all shellfish in Norton Sound (50 CFR 100.24 - 2006). The survey instrument collected information about all reciprocal exchanges, whether they involved rural or non-rural residents, in-

Figure 1-2. Northwest Alaska. Six communities in the Seward Peninsula area were included in the study: Brevig Mission, Nome, Elim, Shaktoolik, Saint Michael, and Stebbins.

cluding exchanges between subjects in the study community and urban Alaskans.

This research was funded by the U.S. Fish and Wildlife Service Resource Monitoring Program (FIS Study No. 04-151 *Customary Trade in Fish in the Seward Peninsula Area*). Parallel studies were conducted concurrently by other investigators in Bristol Bay (FIS Study No. 04-454) and in the Yukon River area (FIS Study No. 04-265).

Background

In common usage and in literature, the general term "trade" refers to many different kinds of reciprocal exchanges, including barters, purchases, and sales. In this historical section, following the literature, the term "trade" encompasses all reciprocal exchanges. The specific term "customary trade," following laws and regulations, means the limited, noncommercial exchange of subsistence-caught fish and wildlife for cash in Alaska. In the results section of this report, the term "cash trade," is used to describe purchases and sales of subsistence foods that may be customary trade, but have not been formally recognized in regulation.

Trade in wild, renewable resources has a long history in Alaska. Long before contact with Europeans in the 18th century, thousands of indigenous Alaskans gathered each year at specific sites to trade, such as Fort Simpson (south of Ketchikan), Old John Lake (near Fort Yukon), Noochuloghoyet Point (confluence of Tanana and Yukon Rivers), Pastolik (on the Yukon River delta), Port Clarence (west of Nome), and Sisualik (west of Kotzebue) (Clark 1974; Nelson 1899:228-232; Simon 1998:77; Smith and Mertie 1930:100; Turck and Turck 1992). People exchanged country foods like dried fish and seal oil, as well as furs, shells, copper, and even jade (Langdon and Worl 1981:81-93).

In addition to the trading fairs, many individuals had trading relationships such as the one specifically described by Huntington (1966:16) between a Kobuk *Iñupiat* man and his Koyukukon Athabaskan grandfather, as generally described by Burch (1970) for Northwest Alaska *Iñupiat* and by Clark and Clark (1976) for Interior Athabaskans. In 1885, Krause observed that "besides hunting and fishing, the Tlingit devotes the greatest part of his energy to trade" (1956:126).

From the literature and interviews, Simon compiled an extensive summary of 19th and 20th century trade across the Bering Strait (Simon 1998:76-92). Simon's particular interest was reindeer, but trade in reindeer hides was a major activity in the early Bering

Strait economies. Reindeer were highly valued for their durability and color. Before 1892 reindeer were only available in Siberia and the only way for Alaskans to get reindeer hides was to trade other goods, which they did. For the Chukchi, Alaska served as a source of furs, sea mammal products (e.g. meat, oil, hides, manufactures), driftwood, wooden manufactures (e.g. boat frames and bent-wood boxes), beaded tobacco pouches, and raw materials for stone-tool manufacture…or finished tools themselves" (Simon 1998:80). Simon quoted Bogaras' report of cash trades in Alaska trade goods in the early nineteenth century: "In 1837, according to data contained in the official records found among the archives of Kolyma, there were sold at the fair 100 beavers, 395 martens, 30 lynxes, 31 marten garments, 13 muskrat garments, etc., all from America, since these animals are not found in Asia." (Bogoras 1904-09:56, cited in Simon 1998:78).

Chukotkan reindeer herders lived too far from the coast and were too involved with herding to undertake long trading journeys, which meant the herders were "rarely those who actively engaged in trading expeditions to the coast" (Simon 1998:82). Rather, there developed a specialized group of Chukchi of coastal people who began as reindeer herders and then specialized in long-distance trading, whom Simon referred to as the "Trading Chukchi" (Simon 1998:82). On the Alaska side, "access to Chukchi reindeer products generally was restricted to a relatively small number of wealthy *Iñupiaq umialit* as trade items entered Alaska via Cape Prince of Wales particularly, and the Diomede Islands and King Island, as well as through Alaskan trade fairs like those held at Sisualik in Kotzebue Sound or Point Spencer in Port Clarence" (Simon 1998:98). Partnerships developed between Bering Strait *Iñupiat* and Chukotkan Natives (Bogoras 1904-1909:53; Jackson 1895:51-52; Nelson 1899:229, Oquilluk 1973:215-216; Ray 1975-97-98; all cited in Simon 1998:76 ff.). After Yankee whalers entered the Bering Sea in 1849 and new, highly valued trade goods became available, the profits to be had in trade were considerable. Some Siberian *Yupiit* and Coastal Chukchi "became so wealthy that they purchased schooners of their own and imported frame structures from San Francisco for use as warehouses to store all of their trade goods" (Simon 1998:85). Simon concluded that "a complex network of socioeconomic relations existed on the Chukchi Peninsula up to the beginning of the 20th century which was based on the interdependency between reindeer herding and coastal sea mammal hunting in the Bering Strait Region."

Opportunities to profit from trade in furs, whale oil, whale bone, ivory, and salmon attracted Europeans to Alaska. Fish stocks and

game populations that had been able to sustain indigenous subsistence activities, including trade, were not sufficient to meet the new international demands. Along Alaska's coasts, especially, unsustainable harvesting practices by the Russian-American Company, Yankee whalers, and American salmon canneries had devastating effects on fish, on wildlife, and on indigenous Alaskans (Naske and Slotnick 1987:28, 57, 186-187; Mitchell 1997:99-149, Pagnan 2000:469).

Similar ecological disasters unfolded across the continent, where "many populations of North American game animals disappear(ed) before the guns of the commercial hunter" (King 1978:254). By the end of the 19th century, the adverse affects of market hunting and fishing had become impossible to ignore. Following the adoption of the Lacey Act in 1900, individual states gradually adopted laws prohibiting the commercial sale of fish and game (King 1978:254). When the new State of Alaska adopted hunting, fishing, and trapping regulations after statehood in 1959, the sale of fish and wildlife was generally prohibited, except for trapping and commercial fishing.

The laws and regulations that curtailed market hunting still provided for trapping and commercial fishing. But they made few, if any, provisions for customary and traditional patterns of trade. In protecting the species for which large commercial markets existed, like salmon and herring, the laws also banned person-to-person cash exchanges of species for which little or no commercial demand existed, such as dried whitefish and burbot.

The legal status of customary trade began to change with the Marine Mammal Protection Act in 1972, the Alaska subsistence law in 1978, and the Alaska National Interest Lands Conservation Act in 1981, all of which included provisions that allowed limited, noncommercial exchanges of subsistence foods, by-products, and crafts for cash. The current legal definition of customary trade comes from the legislative history of the Alaska National Interest Lands Conservation Act (ANILCA), which recognizes "customary trade" as a subsistence use. The term is not further defined in ANILCA, but in a report to the full Senate, the Committee on Energy and Natural Resources wrote:

> The Committee does not intend that "customary trade" be construed to permit the establishment of significant commercial enterprises under the guise of "subsistence uses." The Committee expects the Secretary and the State to closely monitor the "customary trade" component of the definition and promulgate regulations consistent with the intent of the subsistence title. (U.S. Senate 1979:234)

ANILCA does define "barter" as the exchange of fish or wildlife or their parts, taken for subsistence uses for other fish or game or their

parts, or for other food or for non-edible items other than money if the exchange is of a limited and noncommercial nature. (16 USA 3113) Absent a definition in ANILCA, the Federal Subsistence Board has defined customary trade as follows:

> Customary trade means exchange of cash for fish and wildlife resources regulated in this part, not otherwise prohibited by State or Federal law or regulation, to support personal and family needs, and does not include trade which constitutes a significant commercial enterprise. (50 CFR 100.4)

The state definition is similar:

> "Customary trade" means the limited noncommercial exchange, for minimal amounts of cash, as restricted by the appropriate board, of fish or game resources; the terms of this paragraph do not restrict money sales of furs and furbearers. (AS 16.05.940)

In simple terms, then, customary and traditional exchanges of small quantities of subsistence-caught fish and wildlife for cash are "customary trade." Similar exchanges for items other than cash are "barter." Both barter and customary trade were recognized as subsistence uses under federal and state laws by 1981, and the U.S. Senate expected the Secretary of the Interior and the State of Alaska to develop consistent regulations shortly after 1981.

On the one hand, barter was permitted from the very beginning of both state and federal subsistence management. On the other hand, customary trade in subsistence-caught fish was not provided for in federal regulation until 2003, more than 20 years later. At this writing, customary trade in fish was provided for in state regulation for only one species in one area – herring roe on kelp in southeast Alaska – and that provision followed a lawsuit. At this writing, customary trade in game still is prohibited by both federal and state regulation. The state recently allowed the sale of brown bear parts taken in predator control efforts, but customary trade was not a factor in that decision. (Selected, current federal and state laws and regulations regarding customary trade appear in Appendices 2 and 3.)

Regardless of its legal status, limited customary and traditional patterns of trade among Alaska Natives persisted throughout the booms and busts of European, Asian, and American commercial enterprises in Alaska (Figure 1-3). In 2006, customary patterns of trade were an integral and long-standing part of Alaska's family-based subsistence traditions. Such trade was a way for families to distribute subsistence harvests to people outside of their usual sharing and bartering networks. Customary patterns of trade also provided traditional foods to individuals and families who were

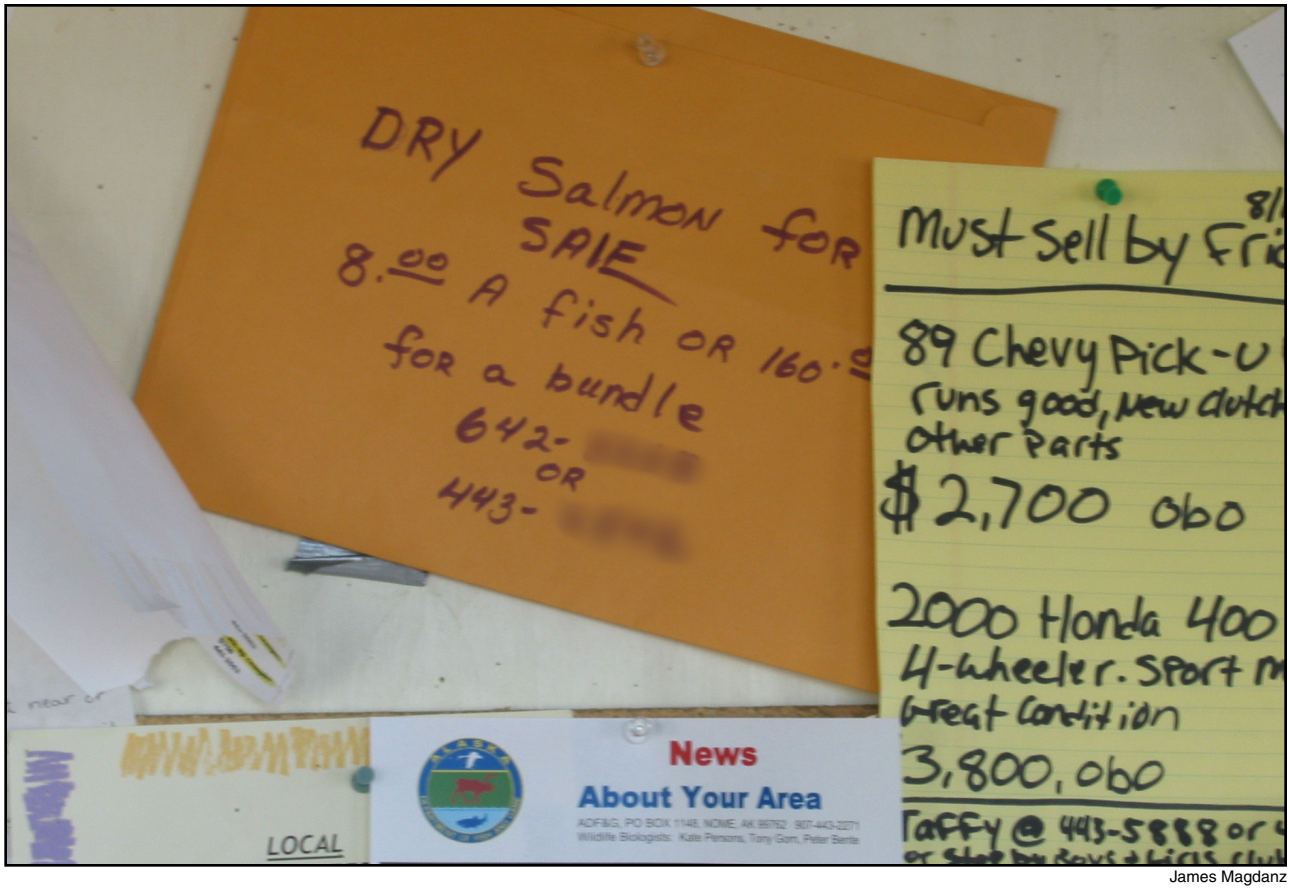

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Figure 1-3. Subsistence fish for sale in Nome, August 2002. A handwritten sign on a gorcery story bulletin board in Nome advertises dry salmon for sale. If the salmon came from a federal subsistence fishery, this sale would be allowed by federal regulation as customary trade. If the salmon came from a state subsistence fishery (as was most likley in this case), this sale would be prohibited by state regulation.

unable to harvest. Many of the exchanged foods, such as dried whitefish, seal oil, and whale muktuk, were not available through commercial channels. This trade was not conducted for profit, nor was it conducted in isolation from other subsistence activities. This trade occurred continuously throughout Alaska, involved limited amounts of cash, and usually presented no conservation issues.

Rationale and Literature Review

Shortly after the federal and state subsistence laws were adopted, Langdon and Worl (1981) prepared an overview of subsistence distribution and exchange in Alaska that remains the most thorough summary of current knowledge. Their objective was to summarize the theory of anthropological economics and review Alaska literature relevant to subsistence distribution and exchange. Langdon and Worl posed five research questions about distribution and exchange in Alaska.

- To what extent do subsistence distribution and exchange contribute to group or individual survival?
- To what extent do group cultural practices involve subsistence distribution and exchange?

- To what extent is group autonomy and social existence related to subsistence distribution and exchange?
- To what extent does subsistence distribution and exchange affect material well-being differentials among group members?
- To what extent do subsistence distribution and exchange disrupt or endanger fish and animal populations?

Since then, the ubiquitous sharing of wild foods throughout rural Alaska has been well documented. While 83% of rural Alaska households harvested fish, 95% used fish obtained through distribution and exchange (Wolfe 2000:2). While 60% of households harvested wild game, 86% used wild game. By far the most common type of exchange was simple sharing.

Beyond simple sharing, however, only a handful of Alaska studies explored subsistence distribution and exchange in any detail (Wolfe et al. 2000:3). The state's standard subsistence socio-economic survey asks whether households "received" or "gave away" fish and game, but not the amounts exchanged or whether households bartered or customarily traded. Magdanz, Utermohle, and Wolfe (2002) provided detailed accounts of distribution and exchange relationships among households in Wales and Deering but, again, the amounts of wild food exchanged were not reported.

Recent discussions of proposed federal customary trade regulations illustrated how little information was available about the nature and extent of customary trade in Alaska. With one exception (Schroeder and Kookesh 1990), there were no published reports describing which fish stocks were utilized, how much fish was traded, under what circumstances customary trade occurred, or how regulations might be affecting the nature and extent of customary trade.

Customary trade involved many different fish stocks under federal jurisdiction throughout Alaska. Customary trade also involves non-fish species under federal jurisdiction, in particular seal oil, bowhead whale muktuk, and belukha whale muktuk. Some of these other facets of customary trade have been described in reports prepared for the Alaska Boards of Fisheries and Game (Magdanz 1988, Magdanz and Loon 1990, Magdanz and Wolfe 1988, Wolfe and Case 1988).

When cash trades involve high-value resources like Chinook salmon strips, salmon roe, or herring roe, there is the potential for the trade to become a "significant commercial enterprise." Exactly what constitutes a "significant commercial enterprise" is not defined; the boundaries between customary trade and commercial harvests are still evolving in law and regulation. In southeast Alaska, for example, plaintiffs filed a lawsuit to require the Federal Subsistence

Board to issue a collective permit allowing the harvest of 1,000 pounds of herring roe on kelp per household from marine waters in southeast Alaska as "customary trade" (Peratrovich v. United States, United States District Court No. A92-734-CV). The existing state regulation in that fishery provides for the sale of up to only 32 pounds per person or 158 pounds per household (5 AAC 01.730, 5 AAC 77.762). In that case, the Federal Board's position was that the affected waters are in state jurisdiction, deferring the issue of whether 1,000 pounds of roe sales would constitute a "significant commercial enterprise." Controversy also has developed on the Yukon River surrounding the use of salmon roe. As noted by Case and Halpin (1990:54), "The Board of Fisheries in 1988 declined to authorize the sale of roe as a type of 'customary trade' under the state subsistence law, which was a potential way to allow the sale of roe as a by-product of the subsistence fishery."

Research into customary patterns of trade in Alaska usually has been associated with controversial situations where high value subsistence resources potentially were involved in "significant commercial enterprises." These include the herring roe situation documented by Schroeder and Kookesh (1990) and the salmon roe situation documented by Wolfe and Case (1988), and a quickly developing export trade in caribou antlers in Northwest Alaska documented by Magdanz and Loon (1990). It is likely that these were anomalous situations, compared with most customary patterns of trade in Alaska.

This project studied cash trade in what were believed to be more representative situations: six communities of varying sizes trading a variety of fish species with different trading partners located throughout Alaska. The majority of fish involved in these reciprocal exchanges were salmon, but barter and trade also occurred with other fish and shellfish species. Salmon harvests and other finfish harvests occurred primarily in the summer, while shellfish harvests and some finfish harvests occur in winter and spring. These harvests occurred throughout Norton Sound and Port Clarence, in both federal and state waters.

In addition to cash trades, the survey instrument documented barter (the exchange of subsistence-caught fish for other goods or services). The distinction between customary trade (cash) and barter (no cash) was clear, but some barters edged close to customary trade. Exchanges of wild foods for commercial goods like coffee, gasoline, or ammunition clearly would be barter. But exchanges of wild food for credit at a village store might be considered customary trade, even if the end result (coffee, gasoline, ammunition) was the same. Individuals concerned about violating state prohibitions

on the sale of subsistence-caught fish might barter for commercial goods instead of selling the fish. Thus, asking about barter as well as customary trade provided a more complete summary of exchange patterns of subsistence-caught fish.

Trade and barter often occur far from and long after the harvest. A single exchange could involve fish harvested under both state and federal jurisdiction. It can be difficult, for research, for management, and for enforcement, to determine whether trade products originated in federal or state jurisdictions. To a greater extent than with most stock status or harvest monitoring studies, a customary trade study involves overlapping federal and state agency interests, as well as the interests of the general public.

Customary trade regulations were not well understood by the public. What the regulations defined as "barter" (the exchange of subsistence goods for other items), many Alaskans called "trade" or even "customary trade." What the regulations defined as "customary trade" (the exchange of subsistence goods for cash), many Alaskans called "selling fish." This study explained these regulatory distinctions to the study communities in community meetings and to the individual respondents during interviews.

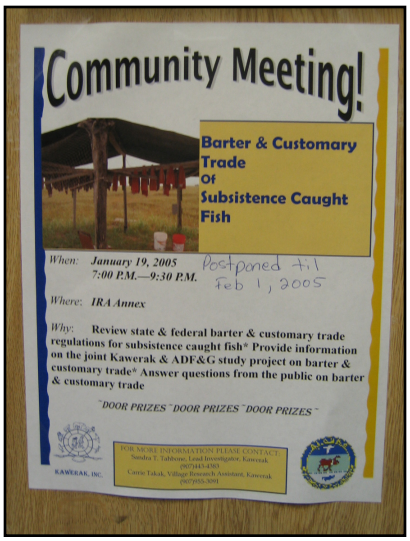
The study was complicated – and probably limited in some cases – by respondents' fears of state enforcement action. Despite promises of confidentiality, some residents believed to be involved in customary trade declined to participate, perhaps because they were afraid of being cited for the sale of subsistence-caught fish. In some communities – Saint Michael and Brevig Mission in particular – respondents seemed to set aside these fears to provide a substantially complete description of customary patterns of trade.

Presentation

In this report, Chapter 2 summarizes the methods used. Results appear in Chapter 3, which discusses the characteristics of the study sample, summarizes customary patterns of trade and barter in each of the study communities, and discusses the overall pattern of exchanges involving Seward Peninsula communities. The final chapter, Chapter 4, summarizes the results, includes a historical perspective, and offers several recommendations.

2
Methods

This project was intended to (1) document customary patterns of trade and barter in six study communities, and (2) to explain trade and barter regulations to local rural residents. Documenting customary patterns of trade and barter was accomplished primarily with household surveys and key respondent interviews. The surveys documented the household's network of trading partners and the species involved in barter and customary trade. The interviews gathered historical information about customary patterns of trade, explored motivations for being involved in customary trade, and discussed how customary trade could best be regulated. Regulations were explained during surveys, interviews, and community meetings. Figure 2-1 shows a poster advertising the community meeting in Shaktoolik.



James Magdanz

Figure 2-1. Community Meeting Poster. A poster in the IRA office in Shaktoolik announces a community meeting to discuss customary trade and barter.

Long before this project was conceived, the researchers had been interested in distribution and exchange in Northwest Alaska. For this project, we consulted field notes and clippings on the subject gathered during the previous 20 years. The annual Northwest Alaska salmon harvest survey project, conducted from 1993 through 2004, also provided context for understanding customary patterns of trade and barter in fish.

This chapter discusses the personnel involved in the project, consultations and capacity development, study samples, data collection, and data analysis.

Personnel and Schedule

The principal researchers included James Magdanz for the Alaska Department and Fish and Game, and Sandra Tahbone and Austin Ahmasuk for Kawerak, Inc. Data analysis was conducted by David Koster, Brian Davis, and Magdanz, all with the Alaska Department of Fish and Game.

After the proposal was submitted to the U.S. Fish and Wildlife Service Fisheries Resource Monitoring Program in 2003, principal investigator Sandra Tahbone resigned from Kawerak. In her absence, Austin Ahmasuk worked on project administration tasks for

Kawerak during summer 2004. Sandra Tahbone rejoined Kawerak in October 2004 to work specifically on this project. She resigned again in June 2005 after the initial round of fieldwork was complete, and Ahmasuk resumed his role in the project for Kawerak, and supervised the fieldwork in Saint Michael and Stebbins. Community assistants included Matilda Nayokpuk (Brevig Mission), Carrie Takak (Shaktoolik), Joel Sacheus (Elim), and Dennis Bahnke (Nome) (Figure 2-2).

James Magdanz

Figure 2-2. Matilda Nayokpuk. In each study community, Kawerak hired a local researcher to assist the principal investigators in arranging and conducting the surveys and interviews. In Brevig Mission, Matilda Nayokpuk was the local researcher.

The project began later than expected, partly because of staff vacancies and partly because of other projects competing for researchers' time. The community approval and cooperative agreement tasks were conducted in Fall 2004. The survey instrument was developed on schedule, but revisions suggested by Bristol Bay researchers delayed completion until the first week of December. The first interviews were conducted in Brevig Mission on December 8, 2004. Fieldwork in the first four communities was completed on March 31, 2005. Fieldwork in the two supplemental communities began September 8, 2006, and was completed on September 18, 2006.

Consultations

In the course of the project, researchers engaged in several types of consultation. First, we corresponded and consulted with researchers involved with two other customary trade projects (FIS Study No. 04-454 for Bristol Bay, and FIS Study No. 04-265 for the Yukon River). The Bristol Bay and Seward Peninsula projects employed similar methods, so during latter 2004, Magdanz circulated three revisions of the survey instrument to researchers in both projects and to USF&WS project managers. On November 5, 2004, USF&WS anthropologist Amy Craver convened a teleconference of the Seward Peninsula and Bristol Bay researchers to discuss procedures and progress on the two FIS projects. Occasional informal consultations continued between researchers throughout 2005. Analyst-programmer Koster conducted data analysis for both projects, providing additional coordination between the projects.

A second type of consultation occurred when Tahbone and Ahmasuk received approval, via tribal government resolutions, from Brevig Mission, Elim, Nome, Saint Michael, Shaktoolik, and Stebbins tribal governments. As part of the community approval process, Magdanz prepared a two-page project summary sheet for tribal council members and other interested community members (Appendix 1).

A third type of consultation occurred during discussions with the Unalakleet IRA. In September, 2004, Magdanz met with Henry

Oyoumick, environmental coordinator with the Unalakleet IRA, to discuss the project. Following that discussion, Magdanz drafted a cooperative agreement that would provide $10,000 to the Unalakleet IRA to pay a project supervisor, hold community meetings, and pay for local research assistants to administer the survey. On October 5, 2004, Magdanz met with the Unalakleet IRA Council to discuss establishing a cooperative agreement between ADF&G and the IRA to conduct this research. The Unalakleet IRA ultimately decided not to participate in the project. After consultations with USF&WS project managers, Sandra Tahbone approached Elim with an invitation to participate. The Elim tribal council agreed, replacing Unalakleet as the fourth study community.

Throughout the project, researchers made periodic reports on progress at the regular meetings of the Seward Peninsula Regional Advisory Council (RAC). During one such report, a RAC representative from Saint Michael inquired about including his community in the project. That led to a supplemental budget request from the researchers to the USF&WS Fisheries Resource Monitoring Program to expand the project to include the communities of Saint Michael and Stebbins.

Samples

As proposed, the project would have included four Norton Sound communities: Brevig Mission, Nome, Shaktoolik, and Unalakleet. Unalakleet decided not to participate, and was replaced by Elim. As fieldwork was being completed in 2005, Saint Michael and Stebbins asked to be included in the study. The supplemental budget request was approved; Saint Michael and Stebbins were surveyed in April 2006. The final study included five small communities – Brevig Mission, Elim, Saint Michael, Shaktoolik and Stebbins – ranging in size from 276 to 547 people, and one regional center – Nome – with 3,505 people (Table 2.1).

The proportion of households involved in trade and barter was unknown at the beginning of the study, but researchers expected it would be about 20%. The goal was to include in the sample a majority of the households in each study community that were involved in customary patterns of trade or barter of subsistence-caught fish. The sampling goal was achieved in the five smaller communities, where 69% of the involved households were surveyed. But the sampling goal was *not* achieved in Nome, where only 34% of involved households were surveyed.

In the five smaller study communities, samples were selected in three stages. First, in 2003 a filter question on the annual Northwest

TABLE 2-1. SURVEY SAMPLES, BY COMMUNITY

	Number of People	Number of Households	Sample for Filter Questions	Expected Sample Fraction	Expected Sample Size[1]	Actual Sample Size	Survey Dates
Brevig Mission	276	66	66	20%	13	8	Dec 8, 2004 - Dec 12, 2004
Elim	313	71	71	20%	14	16	Mar 28, 2005 - Mar 31, 2005
Nome	3,505	1,184	-	-	50	12	Jan 7, 2005 - Feb 1, 2005
Saint Michael	368	85	85	20%	17	19	Sep 8, 2006 - Sep 16, 2006
Shaktoolik	230	57	57	20%	11	3	Jan 1, 2005 - Feb 3, 2005
Stebbins	547	98	98	20%	20	15	Sep 8, 2006, Sep 15, 2006
All Communities	5,239	1,561	377		125	73	

[1] - Based on the assumption that 20 percent of households were engaged in customary trade or barter, except in Nome.

Alaska salmon survey asked households if they were involved in customary trade or barter. Households that responded "yes," were added to a list of involved households. Of the 803 households in the 10 surveyed communities, 62 households (8%) reported customary trade and barter. From these survey responses, researchers compiled a list of 39 trading households in the five smaller study communities. Twenty three households in the other five surveyed communities were not contacted again. Second, in community meetings held in Brevig Mission, Elim, and Shaktoolik immediately prior to survey administration, attendees were asked whether their households bartered or traded. If they did, they were added to the list of involved households. Third, in Stebbins and Saint Michael (where surveys were conducted three years after the 2003 salmon survey and included all subsistence foods, not just fish) researchers contacted each household again by phone and asked if they were involved in customary trade or barter. The second and third stages of sampling identified an additional 49 involved households. The goal was to survey all households involved in trade or barter of all subsistence foods.

The final list of involved households in the smaller communities included 88 households. Researchers attempted to contact all 88 households, but some were unavailable and some refused (particularly in Shaktoolik where 8 of 13 involved households did not want to participate in the survey). The final survey sample included 61 households, or 69% of the households reporting involvement with customary trade or barter and 16% of the total households in the study communities (Figure 2-3). In compensation for the high rate of survey refusals in Shaktoolik, researchers interviewed nine

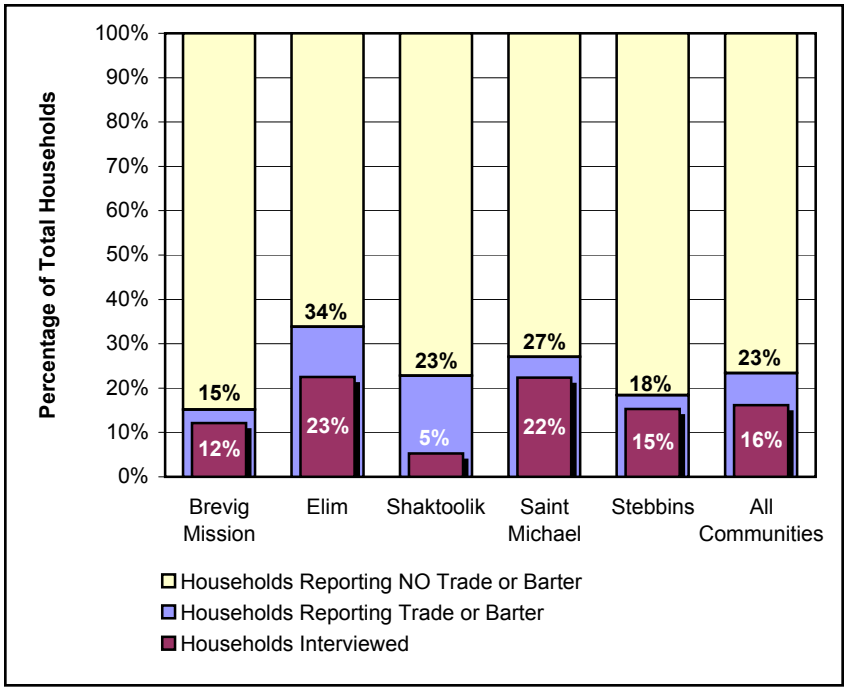


Figure 2-3. Samples in the five smaller communities. Households were selected for this study based on self reports of involvement in customary trade or barter. Self-reported involvment ranged from 15% of all households in Brevig Mission to 34% of all households in Elim. In the five smaller communities combined, 88 of 377 households (23%) reported involvement in customary trade or barter. Of those 88 involved households, researchers surveyed 61 households (69%). This figure does not include Nome.

individuals, more than twice as many as in any other study community.

In Nome, researchers relied on a two-stage, non-probability sampling technique: a purposive sample of the 35 households who reported being involved in trade in a 2001 survey, and a subsequent snowball sample of households not included in the purposive sample. The 2001 Nome sample was a non-representative, purposive sample biased towards known fishing households. The percentage of all Nome households involved in trade would be expected to be less.

In the 2001 survey in Nome, 35 of 158 surveyed households (22%) reported being involved in trade or barter for salmon (Magdanz et al. 2003). In the snowball sampling process, if a respondent household identified local trading households not previously identified, then these households were added to the sample list. The Nome sample was expected to be about 50 households, but some of the 35 households were unavailable and the snowball sample did not identify 15 or more additional trading households. When fieldwork in Nome concluded, the Nome sample included only 12 households.

Data Collection

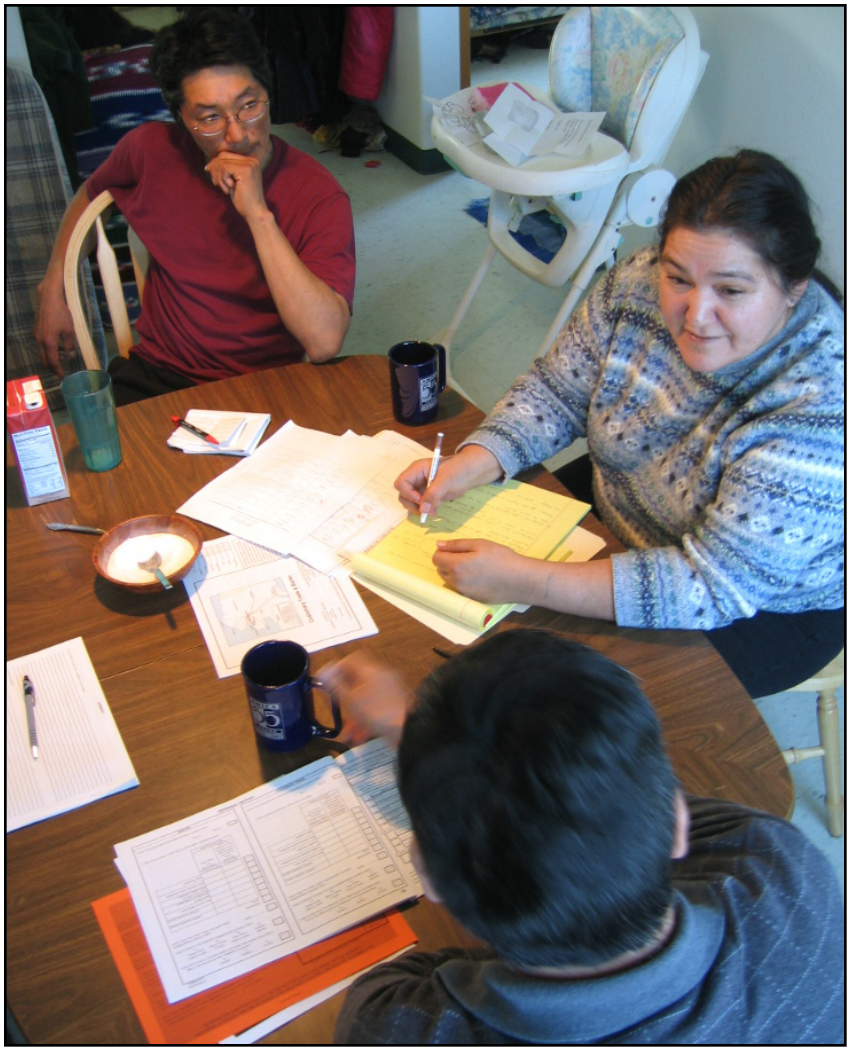
Fieldwork began with a community meeting to explain the project, discuss customary trade regulations, answer questions about trade and barter, and explore community perspectives on customary

James Magdanz

Figure 2-4. Community Meeting. Sandra Tahbone discusses customary trade and barter during a community meeting in Shaktoolik in February, 2005.

trade (Figure 2-4). A presentation used at all community meetings appears as Appendix 4.

In each community, researchers hired one community research assistant. The community research assistants had worked on previous study projects implemented by the Kawerak Subsistence Program or by ADF&G. Working with the field assistants, researchers reviewed the list of households that reported involvement in barter or customary trade, either on the annual Northwest Alaska salmon survey in 2003 or at the community meeting. Researchers and assistants then attempted to contact each household on the list, obtain informed consent, and administer a survey. Surveys usually were conducted in respondents' homes, and used a standard survey form (Figure 2-5, Appendix 5). The survey forms contained questions formatted to follow social network data gathering methods used by the Division of Subsistence over the last ten years. Researchers also conducted open-ended interviews with key respondents,



James Magdanz

Figure 2-5. Survey administration. Joel Saccheus and Sandra Tahbone administer a customary trade survey to a respondent in his home in Elim in March, 2005. Most surveys were conducted by appointment in respondents' homes. Each survey lasted, on the average, about 29 minutes. Surveys usually were conducted by a team that included a local researcher and one of the principal investigators.

usually taking notes during the interview with a laptop computer (Figure 2-6).

Some procedures in Saint Michael and Stebbins differed from the other communities. At the beginning of the project, researchers were not sure how well the survey instrument would work or how long it would take. In case the survey was slow to administer, researchers limited it to fish only. But in the first four communities, the typical survey lasted 25 minutes. Researchers decided to expand the survey instrument to include all subsistence foods, not just fish. This would allow an assessment of the proportion of trade and barter that involved fish, at least in Stebbins and Saint Michael.

Following data collection, forms were reviewed for completeness and accuracy by the surveyor. Responses were coded following standardized code book conventions used by Division of Subsistence to facilitate data entry. All data were entered twice, and compared programmatically for inconsistent data entry. Double data entry ensures more accurate transfer of information from the coded sur-

Sandra Tahbone

Figure 2-6. Brevig Mission Interivew. Matilda Nayokpuk and James Magdanz talk with Elmer Olanna, manager of the store in Brevig Mission and a member of the Seward Peninsula Regional Advisory Council.

vey forms into the database, and is a standard practice within data processing for the Division of Subsistence.

Once all the data had been entered, staff within the Information Management Section set up database structures within an MS SQL Server to hold the survey data. The database structures included rules, constraints, and referential integrity to insure that data has been entered completely and accurately. Data did not pass to the processing phase until inconsistencies between the twice-entered data set were eliminated. Initial processing included the performance of standardized logic checks of the data. Logic checks are often needed in complex data sets where rules, constraints, referential integrity do not capture all of the possible inconsistencies that may appear.

Data Analysis

SPSS and Microsoft Excel were used for analysis of the survey information. For each community, data analysts summarized

TABLE 2-2. CONVERSION FACTORS

	Reported as "Individuals"		Reported as "Pounds"		Reported as "Gallons"	
	Edible Pounds (Raw)	Edible Pounds (Exchanged)	Edible Pounds (Raw)	Edible Pounds (Exchanged)	Edible Pounds (Raw)	Edible Pounds (Exchanged)
Fish (Unspecified)						
Unprocessed	5.0	5.0				
Dried or Smoked	5.0	4.0	1.0	0.8	5.0	4.0
Salmon (Species Not Specified)						
Unprocessed	6.0	6.0			6.0	6.0
Jarred					6.0	6.0
Dried or Smoked	6.0	4.8			6.0	4.8
Salted					6.0	4.8
Strips			1.0	0.8	6.0	4.8
Chum Salmon						
Dried or Smoked	6.0	4.8	1.0	0.8	6.0	4.8
Coho Salmon						
Unprocessed	5.2	5.2	1.0	1.0		
Dried or Smoked	5.2	4.2				
Strips			1.0	0.8	6.0	4.8
Chinook Salmon						
Unprocessed	12.4	12.4				
Dried or Smoked					6.0	4.8
Strips					6.0	4.8
Pink Salmon						
Dried or Smoked	2.1	1.7			6.0	4.8
Jarred					6.0	6.0
Fish (Other Than Salmon)						
Unprocessed	5.0	5.0			6.0	6.0
Herring						
Unprocessed	0.2	0.2				
Dried					6.0	4.8
Roe					6.0	6.0
Saffron Cod						
Unprocessed	0.2	0.2	1.0	1.0		
Halibut						
Unprocessed	20.0	20.0	1.0	1.0		
Whitefish						
Unprocessed	1.4	1.4	1.0	1.0		
Caribou						
Unprocessed	136.0	136.0	1.0	1.0		
Moose						
Unprocessed			1.0	1.0	5.0	5.0
Seal and Walrus						
Unprocessed (meat)			1.0	1.0	5.0	5.0
Seal Oil			1.0	1.0	7.0	7.0
Whale Muktuk						
Unprocessed			1.0	1.0	5.0	5.0
Ducks						
Unprocessed	1.5	1.5				
Geese						
Unprocessed	4.0	4.0				
Clams						
Unprocessed					2.0	2.0
King Crab						
Unprocessed	2.1	2.1				
Berries (All Varieties)						
Unprocessed					6.0	6.0
Greens						
Unprocessed					0.5	0.5
Fungus						
Unprocessed			1.0	1.0		

NOTE: Conversion factors for quarts, pints, and half-pints calculated from the conversion factor for gallons.

household characteristics (size, ethnicity, income category), levels of involvement in cash trade and barter, kinds of foods exchanged, amounts exchanged, and household trade and barter histories.

During the survey, transaction amounts were recorded as reported by respondents. Examples of reported amounts include: a bundle of 25 dried whole salmon, a quart ZipLoc® bag of smoked salmon strips, a gallon ZipLoc® bag of bowhead muktuk, and a five-gallon plastic bucket of berries. To facilitate comparisons, all food items were converted both to edible pounds as exchanged and to raw edible pounds. When reported amounts were volumes (gallons, quarts, pints) or individuals, reported amounts were converted to estimated edible pounds using standard conversion factors developed by the Division of Subsistence. Conversion factors appear in Table 2.2 (which also summarizes the kinds of transactions documented by this study). When dried fish were exchanged, the exchange amount was divided by 0.80 to estimate a raw edible weight, on the assumption that fish lost about 20% of their raw weight when dried (Bannerman and Horne 1969).

Researchers used SPSS and Excel to restructure the survey data into a visual network analysis format, and then read the data into NetDraw, a social network analysis program (Borgatti 2002). In NetDraw, researchers graphed the flow of foods in barters and trades, by resource category, for each community. Trade and barter networks were exported from NetDraw to Pajek (another network analysis program), then exported from Pajek as EPS network graphs. The EPS graphs were edited for publication in Adobe Illustrator. The analyses were not network analyses in a formal sense. Network software was used to visually explore and then to illustrate the flow of foods and cash within and among communities, but not to calculate network statistics.

While the data for some communities (Brevig Mission, Elim, Saint Michael, and Stebbins) were considered reasonably complete, the data do not describe the complete trade and barter network in the Seward Peninsula area. Samples in Nome and Shaktoolik, where two out of three households declined to participate, were incomplete. Researchers did not contact trade and barter partners (alters), and not all Seward Peninsula communities were included.

3
Results

Previous surveys indicated that 123 households in the 6 study communities were involved in either cash sales or barters of subsistence fish. Of those 123 involved households, 73 households (59%) completed surveys for this study. Nineteen individuals participated in interviews and discussed additional aspects of trade and barter, in particular, historical exchange patterns. On the surveys, 141 reciprocal exchanges were reported, 75 trades for cash in which $7,806 was paid for 2,561 lb of subsistence foods, and 66 barters in which respondents exchanged about 2,315 lb of subsistence food and other goods for about 3,854 lb of similar goods from their barter partners.

Surveys were conducted in 6 of the 14 Seward Peninsula area communities. Reports of trade and barter amounts in the study communities were not expanded to estimate amounts in unsurveyed households or unsurveyed communities. In four communities, the sample was limited to households involved in fish exchanges. In two communities (Shaktoolik and Nome) the samples were exceedingly small, perhaps due to respondents' concerns about the legality of customary trade. Thus the findings should be viewed as *patterns* of trade and barter rather than as *estimates* of the total volume of trade and barter in the Seward Peninsula area, which is certainly more extensive than reported here.

This chapter summarizes the results of the surveys and interviews. The first section describes demographic and economic characteristics of the surveyed households. It compares the characteristics of the surveyed households with households in the community as a whole (using census data for each community), and discusses how the households involved in customary trade or barter were similar to or different from the other households in their communities. Subsequent sections summarize the survey results and interviews on customary patterns of trade and barter for each of the six study communities, and for the region as a whole. Research efforts were more successful in some communities than in others; possible reasons for the different results also are discussed.

The households in the sample were involved in reciprocal

Customary Trade
The *cash sale* of fish and wildlife taken for subsistence, but not a significant commercial enterprise.

Barter
The exchange of *other goods* for fish and wildlife taken for subsistence.

Sharing
Giving away fish and wildlife taken for subsistence, without expecting anything to be given in return.

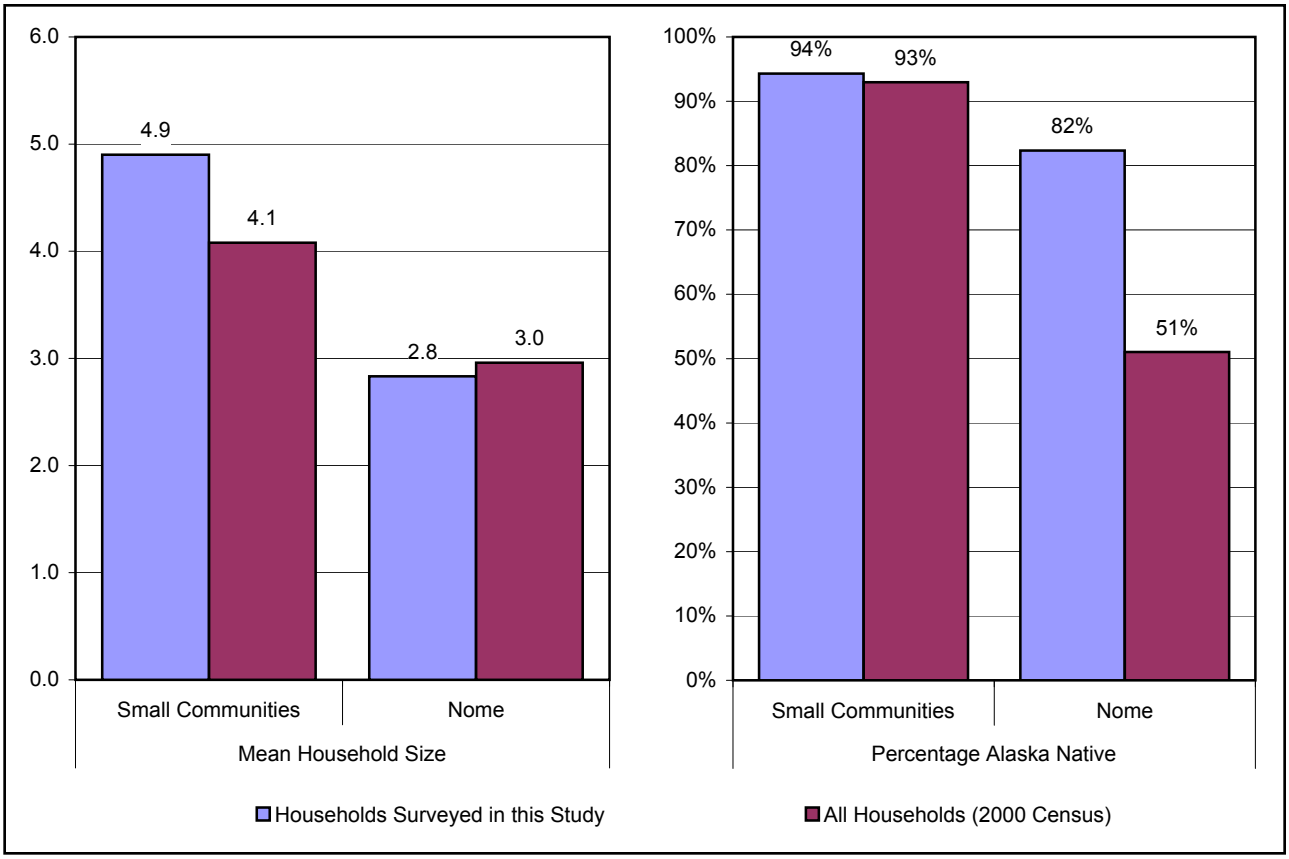


Figure 3-1. Demographic characteristics of the study households. Households involved in customary trade and barter in the small study communites – Brevig Mission, Elim, Saint Michael, Shaktoolik, and Stebbins – were slightly larger than average. Study households in Nome were of average size. The biggest difference between the study households and other households was their ethnic composition in Nome, where 82% of the sample was Alaska Native compared with only 51% of the Nome population.

exchanges, that is, they exchanged cash for subsistence goods (customary trade) or they exchanged subsistence goods for other goods or services (barter). Sharing, in which no short-term return is expected, is not a "reciprocal exchange" and was not a subject of this study.

Characteristics of the Surveyed Households

On the first page of the survey, respondents were asked a short series of questions about their household's demographic and economic characteristics, including number of residents, number of adults, number of Alaska Natives, annual income range, and number of commercial fishing permit holders. The purpose was to determine whether households involved in reciprocal exchanges were similar to, or different from, other households in the study communities.

In the smaller communities – Brevig Mission, Elim, Saint Michael, Shaktoolik, and Stebbins – the sampled households were slightly larger than other households, with an average of 4.9 persons per household, compared with 4.1 in the 2000 Census (Figure 3-1). Average household sizes in Nome were similar to the 2000 Census. In the smaller communities, sampled households contained almost exactly the same proportion of Alaska Natives as households in

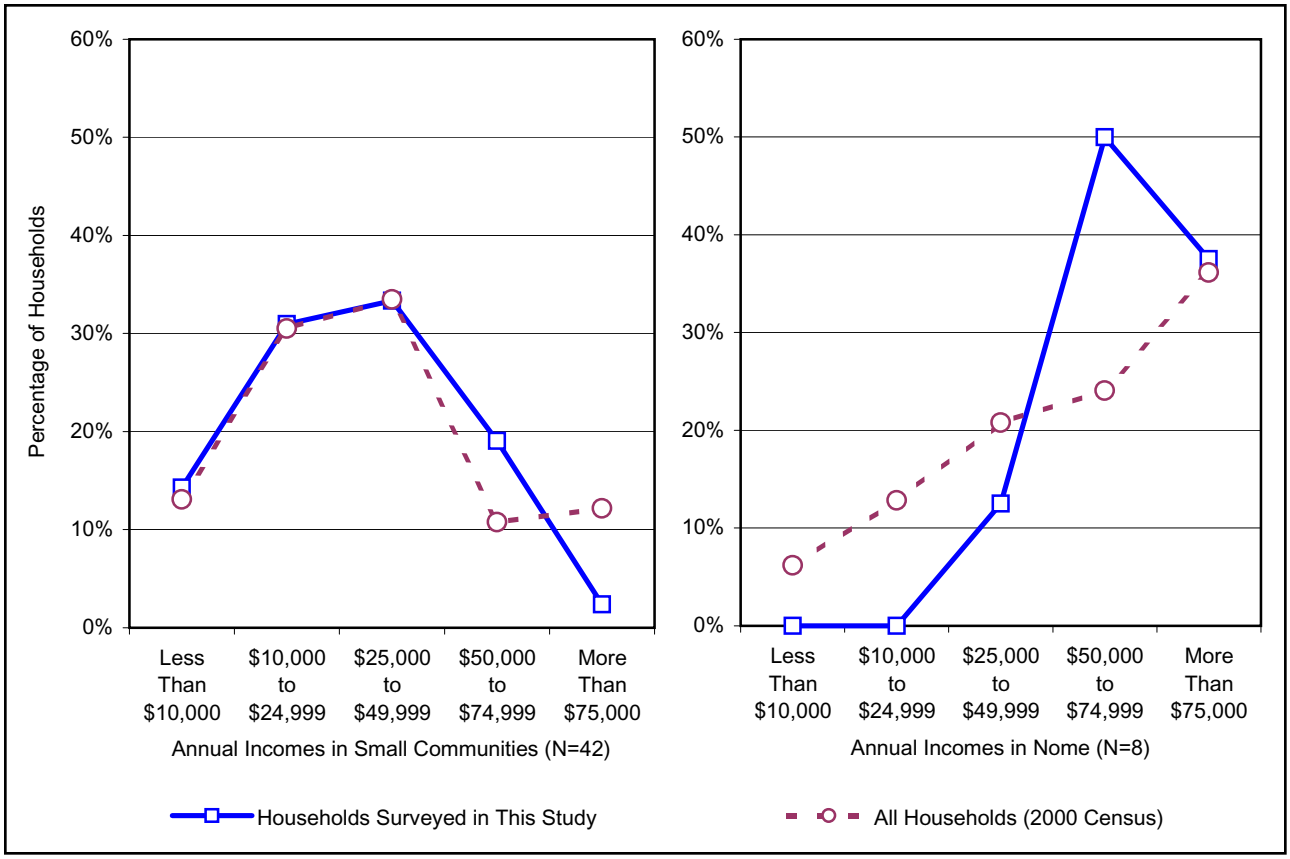


Figure 3-2. Income ranges of the study households. In the smaller communities (left), households involved in customary trade and barter reported income ranges similar to those reported in the 2000 Census. The small number of income responses in Nome (8 households) may account for the differences between the sample and all households. For the communities as a whole, note that half the households in Nome had incomes of $50,000 or more, while less than one quarter of the households in the smaller communities had similar incomes.

the 2000 Census. In Nome, the proportion of Alaska Natives was significantly larger, 82% in the study sample, compared to 51% in the census (U.S. Census 2000).

Respondents were asked to select an income range that best described their households' annual incomes. Figure 3-2 compares the survey responses to incomes reported by the 2000 Census. In the smaller communities, the sample and the 2000 Census included the same proportions of households with incomes ranging up to $50,000. The sample included a larger proportion of households with incomes of $50,000 to $74,999, and a smaller proportion of households with incomes of $75,000 or more in the smaller study communities. The highest income households usually were teachers, who were typically short-term residents. In Nome, sampled households' incomes were different from the incomes reported in the 2000 Census. The Nome sample was exceedingly small; differences may result more from the size of the sample than from significant differences in the characteristics of households involved in trade and barter.

In the smaller communities, the 61 surveyed households held 16 commercial fishing permits or 0.26 permits per households, compared with 0.30 permits per household for the communities as a whole. For salmon, 16% of the surveyed households held

commercial permits, compared with 15% of all households. For herring, 7% of the surveyed households held commercial permits, compared with 13% of all households. In the Nome sample, 8% of the survey households had commercial permits, compared with 7% of all households. The sample as a whole contained a slightly smaller proportion of commercial fishing households than the population as a whole. The difference was attributable primarily to Shaktoolik, where commercial fishing households were under-represented. The three households in the Shaktoolik sample were associated with only one commercial fishing permit, representing 0.33 per household. The 60 households in Shaktoolik as a whole held 45 commercial permits in 2003, or 0.75 permits per household.

While the study sample was not exactly representative of the general population, it was similar. In the smaller communities, households involved in trade and barter tended to be larger than other households, but had a similar proportion of Alaska Natives. Involved households' incomes were similar to other households in the communities, except that high income households (primarily transient teachers) were not represented. With the exception of Shaktoolik, commercial fishing households were represented in the sample. The observed differences were not surprising. Trade and barter occurred most often for foods favored by Alaska Natives – dried salmon, whale muktuk, seal oil – so Alaska Natives would be expected to be more frequently involved in wild food reciprocal exchanges. Larger households have more labor available to harvest subsistence foods, more mouths to feed, and might have more surpluses to barter or trade. Transient, high-income workers would not be expected to be as involved in trade or barter as more settled persons with more modest incomes. Because of the small sample in Nome, sample bias, if any, was unclear. For the sample as a whole, the characteristics of households involved in trade and barter were not significantly different from population as a whole, and the observed differences (larger households, more Alaska Natives) were as expected.

Brevig Mission

Brevig Mission lies on the northern shore of Port Clarence, 105 kilometers (65 miles) north-northwest of Nome. In 2000, the community was home to 276 people, 91% Alaska Native or American Indian (U.S. Census 2001:63). Brevig Mission was the first community surveyed in this project. Of 66 total households, 10 households reported involvement in trade or barter (15%) and 8

households were surveyed (12% of all households and 80% of involved households).

Port Clarence is the only place in the Seward Peninsula Area where one can find significant numbers of sockeye salmon. As many as 85,000 sockeye salmon return through Port Clarence to Salmon Lake each summer (Kohler et al. 2005:22). At the time of this study, the sockeye salmon run was harvested only by subsistence and sport users, and primarily by residents of Brevig Mission, Teller, and Nome. Dried sockeye salmon were rare on the Seward Peninsula, providing Brevig Mission residents with a valuable resource to exchange with residents of other Seward Peninsula communities. Brevig Mission was selected for this project partly because of a history of exchanges involving bundles of whole dried sockeye salmon.

On December 7, 2004, about 40 Brevig Mission residents – including federal Regional Advisory Council member Elmer Seetot Jr. – attended a public meeting on customary trade in the community building. The "20-minute" PowerPoint® presentation on trade and barter stretched into an hour with questions and comments. Several of the people at the meeting reported personal histories of trade and barter. Most people at the meeting seemed to understand that "customary trade" meant the sale of subsistence goods for cash, that customary trade generally was allowed in federal fisheries but not in state fisheries, that federal fisheries were scarce around Brevig Mission, and that changes to state regulations were possible.

During the three days after the meeting, researchers surveyed seven households, interviewed each respondent briefly, and interviewed two key respondents at length. The surveys and interviews described a small but active trade in dried sockeye and pink salmon, mostly to residents of other Northwest Alaska communities.

Of the eight households interviewed, three households reported selling subsistence-caught fish for cash. One household reported two sales and two households reported one sale each, for a total of four trades. There were six buyers (some buyers were couples). Five were women, and five were in their 50s and 60s (age was unknown for the sixth). Five lived in other Northwest Alaska communities (two each in Kotzebue and Shishmaref, one in Gambell), and one lived in Anchorage (Figure 3-3). In an unexpected pattern that was to recur in other study communities, respondents said that the sales in the study year were their first sales to those particular buyers and in three cases the respondents had never met the buyers. The sales were arranged by telephone, and the fish and money were exchanged by air freight and mail.

All six sales involved dried salmon, pink salmon in four cases

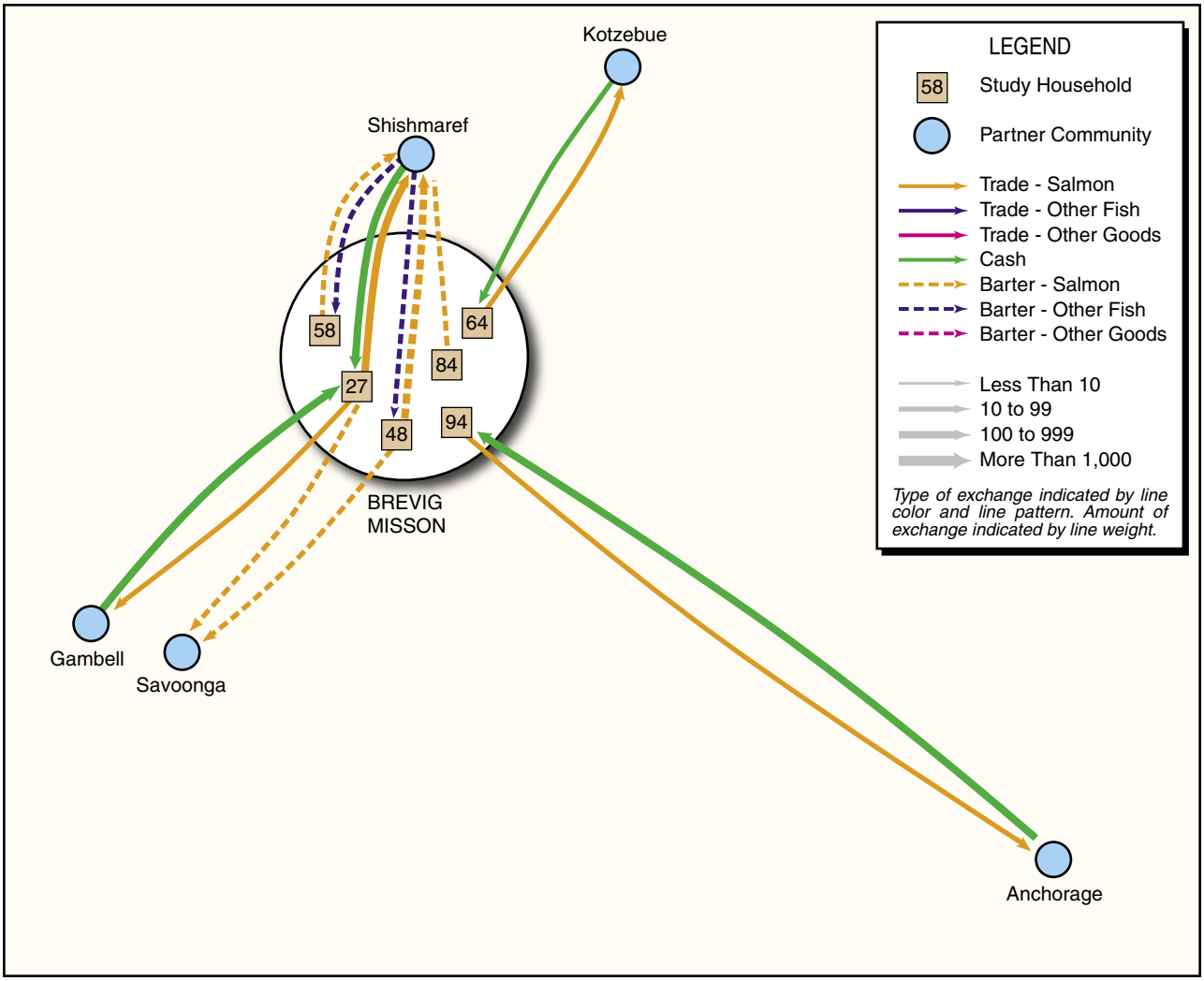


Figure 3-3. Trade and Barter Network, Brevig Mission, 2004.

and sockeye salmon in the other two cases. The reported sales for the community totaled $545, and the average sale was about $90. Transaction amounts ranged from $20 (for four dried pink salmon) to $150 (for 15 dried sockeye salmon). Sixty-four pink salmon sold for prices ranging from $5 to $10 each; 18 sockeye salmon sold for $10 each. No fresh or frozen fish were sold. Figure 3-4 summarizes sales and barters in Brevig Mission in 2004.

Of the eight households interviewed, four households reported barters of subsistence-caught fish, all exchanges of salmon for marine mammal products (bowhead muktuk, seal oil, walrus). One household reported three barters, and the other three households each reported one barter, for a total of six barter transactions. Barter partners included two Savoonga men, two Shishmaref men, one Shishmaref woman, and one Shishmaref partner unknown to the respondent. All the barter partners were in their 50s, 60s, or 70s.

The average barter included about 38 lb of salmon exchanged for about 27 lb of other subsistence foods. Of the 383 lb of salmon

bartered, 323 lb (84%) were dried, and 60 lb (16%) were salted. No fresh or frozen fish were bartered. The amounts of bowhead whale received were not reported, so bowhead whale does not appear in Figure 3-4.

Of three types of exchanges – sharing, bartering, and trade – simple sharing probably accounted for the majority of fish exchanged. The survey documented about 242 lb of salmon traded and about 383 lb bartered (less than 100 salmon combined) for the whole community. In an interview, one respondent reported distributing that many salmon from his own family's harvest, mostly through sharing. He said they harvested an extra 100 to 150 salmon a year for distribution. "We'd try to get two or three bundles for each household (in his extended family) each year," he said. "We'd put up four or five extra bundles, most of which I shared with others. Most of them were relatives; just about the whole Peninsula is related today." In Brevig Mission, one of the three trading households reported only a single cash transaction in the year, a pattern observed throughout the study.

During interviews, researchers asked one Brevig Mission respondent if he had ever sold dried fish. "Only once I did," he said. "Down at Wales, for cash." Then, however, he related a series of cash transactions. The first "was in September about 10 or 12 years ago. I sold a man a bundle at about $3.00 per lb, which is $5 to $7 a fish." He continued, "One time I took some half dried fish to Wales and sold them the same way. $5.00 a fish. Dried ones are lighter. Most of them went to the store. I put one or two bundles aside for the ones that didn't want a whole bundle; they just wanted three or four, about ten bucks a fish. The store bought a bundle and a half, not many. Now the only time, before I lost my big boat, I took a few to Diomede. Most of them I sold to Wales." Researchers asked him why he sold those fish. "I had to take care of some bills. There was something I couldn't get without cash. I wasn't working for a couple years during that time. I wasn't able to get any more unemployment benefits."

Then he remembered, "another time, come to think of it, there was one person in Shishmaref (who) traded cash for dried fish." Asked if he thought barter and trade had changed over the 60 years of his life, he replied, "I don't see all that much difference. People might trade with their friends, if they need cash. 'Hey, I need some cash.' Then they might have something to sell or trade for. 'You pay my fare, I'll give you something.'" Then he reconsidered, "In them days, more people traded (i.e. "bartered") more than they do today. Not as many people trade today. In the older days, if a person

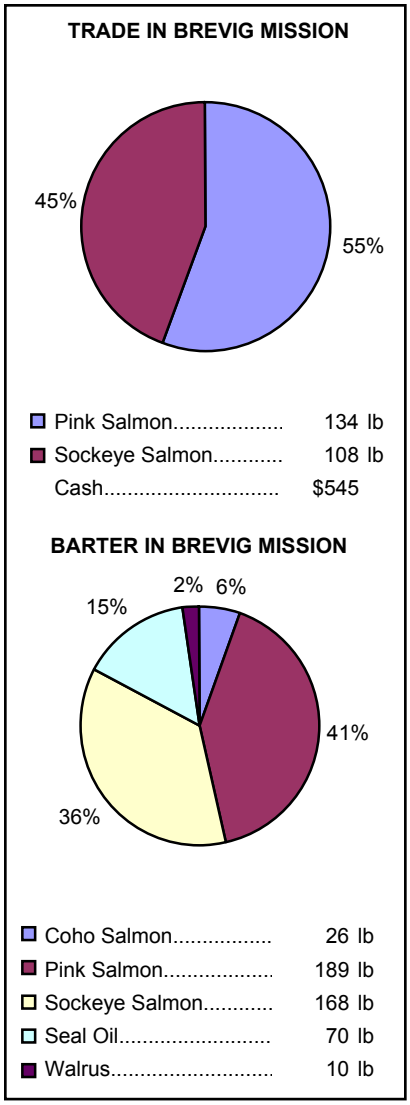


Figure 3-4. Trade and Barter Amounts, Brevig Mission, 2004. Respondents were asked only about trades and barters involving fish. Two trades of fish for bowhead muktuk were reported, but the amounts of bowhead involved were not reported.

needed help with something and the other guy helped him out, then the person gave some meat or fish in return."

One couple interviewed said people from other villages called them directly to buy bundles of dried salmon. "They always just call when they want dry fish. It's not because we need the money, but when they call," he said.

Asked how many calls they got each year, she said, "We always have lots."

"Five or ten calls a year," he continued. "But all of them, we don't (sell to), because we've got to use them. They're lots of work, and we've got to eat them, too." Rarely did they receive calls from outside the region. Once, they received a call from Anchorage, but the caller never followed through and no sale occurred. Otherwise, calls came from communities in the Seward Peninsula Area: Shishmaref, Wales, Diomede, and Nome. They said potential buyers learned about them from their friends. "They'll ask someone, 'Where did you get those fish?' Then people give my phone number out, when they know I am at camp fishing."

Salmon were the only fish species reported in trades and barters on the survey, so researchers asked if other species were ever traded or bartered. "Aged herring," one respondent said, and then volunteered that people don't do that anymore. "Put them in a container, put in a pit in the gravel, cover them up, let them sit there all fall. By winter, they'd get fermented. Sometimes people would trade those." He said a few whitefish were traded, but very rarely were northern pike traded. "Diomeders sell crab, and other people from different villages," he said. "I did it once, box of ptarmigan for box of crab."

Asked if people ever acted as middlemen trading or barter away fish they had received in trades or barters themselves. "No," he said emphatically ("Naaaw"). An exception was the Teller Commercial Company, a privately owned store in nearby Teller that was no longer in business in 2004. Owned by the Blodgett family, Teller Commercial Company used to purchase locally caught and traditionally processed fish for their inventory, then resell them to mostly local customers during the winter.

"When I was a small boy," recalled another respondent, "the warehouse used to be full of dried fish. I remember she (Mrs. Blodgett) would hang up signs, and ask people personally if they had fish to sell. Most of them bartered their salmon for supplies. There was a certain price. In those days, there were 35 fish per bundle. For humpy (pink salmon), it was 35 salmon (per bundle). For red (sockeye salmon) and chum (salmon), it was 30 fish per bundle.

"My grandparents sold a few fish here and there. He used to

make smoked strips and sell them to Teller Commercial, 1-lb bags. He used to sell them by the whole salmon, too. Catch the fish, fillet it, drain it, brine it for a day, dry for a couple days, strip them, then smoke them for two, three days to a week. It wasn't that often he made strips. Just when he had extra and the weather was nice. He used to smoke herring, whitefish, salmon. He either consumed them or traded them. Most of it was kind of bartering. For whitefish and herring it was mostly for family consumption within a certain time, because we didn't have any way of preserving them."

This same respondent thought that "customary trade is mostly outside the community. In the community, it's mostly sharing, or delayed bartering. Within the family, it's mostly sharing. Customary trade is usually outside the family." The survey results for Brevig Mission agreed with his observation. All the reported exchanges – sales and barters – occurred with people outside Brevig Mission. This was not the case in other study communities.

Elim

Elim lies on the northern shore of Norton Bay, 152 kilometers (94 miles) east of Nome. In 2000, the community was home to 313 people, 93% Alaska Native or American Indian (US Census 2001:118). Of 71 total households, 24 households reported involvement in trade or barter (34%), and 16 households were surveyed (23% of all households and 67% of involved households).

Researchers conducted a community meeting on the evening of March 28, 2005, which was attended by about 25 residents. At each meeting, researchers asked attendees to sign in and indicate whether they were involved in barter and trade. At the Elim meeting, 11 households identified themselves as trading or bartering, in addition to the original 13 trading-bartering households that identified themselves on the 2003 salmon survey. The final survey sample included 5 of the original 13 households and all 11 of the additional households. The day after the meeting, researchers began the household surveys.

Surveys continued for three days until March 31, 2005. Although Elim had 13% more people than Brevig Mission, the survey sample was twice as large and twice as many kinds of subsistence foods were exchanged. But the total amounts exchanged were only slightly greater in Elim, thus on the average Elim exchanges involved smaller amounts of subsistence food and cash. Barter was much more frequently reported than customary trade.

Three Elim households reported exchanges of subsistence foods for cash, including four purchases and one sale. One household

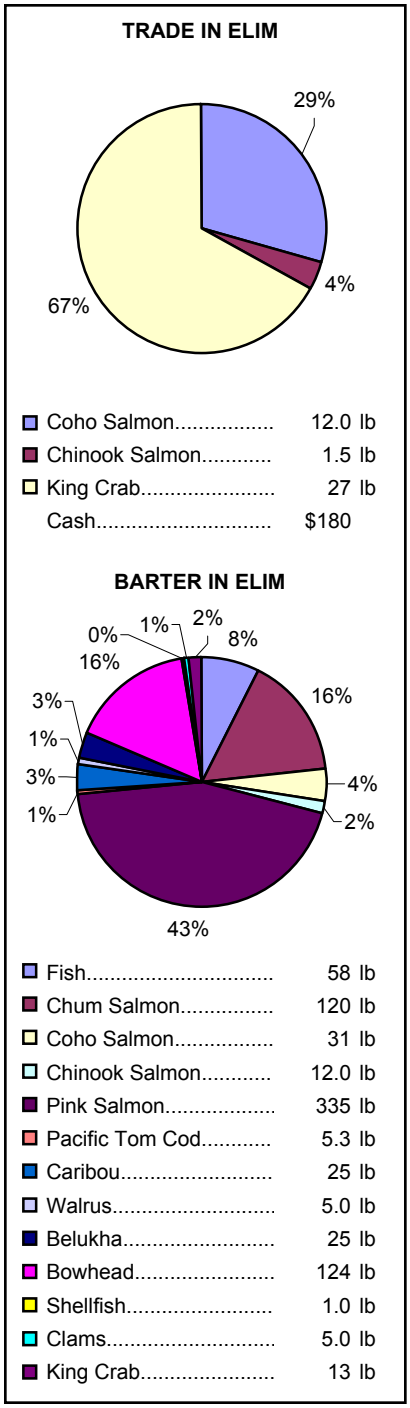


Figure 3-5. Trade and Barter Amounts, Elim, 2004. Respondents were asked only about trades and barters involving fish.

James Magdanz

Figure 3-6. King Crab, Elim, 2005. Sandra Tahbone holds king crab caught near Elim. In other communities, salmon were the most frequently sold subsistence fish, but in Elim king crab were the most frequently sold subsistence fish, while salmon were more often bartered.

reported two purchases and one sale; two households reported one purchase each. All the purchases and sales were with other households in Elim, in contrast to Brevig Mission where all the cash transactions were with households in other communities. Three of the transactions were with men; two were with women. All the partners were in their 30s or 40s, a generation younger than for Brevig Mission.

Three of the cash transactions involved king crab; a total of 27 lb sold for $115. The two other cash transactions involved salmon. A quart of Chinook salmon strips (estimated at 1.5 lb) sold for $25 and a gallon of coho salmon strips (estimated at 6 lb) sold for $40. Figure 3-5 (top) summarizes trades in Elim.

Nine households reported a total of 17 barter transactions. In contrast with trades in Elim, which involved mostly king crab, barters in Elim involved mostly dried fish. A total of 752 lb of subsistence foods were bartered. The most commonly bartered subsistence food was pink salmon, with 335 lb (44% of the barter total), followed by

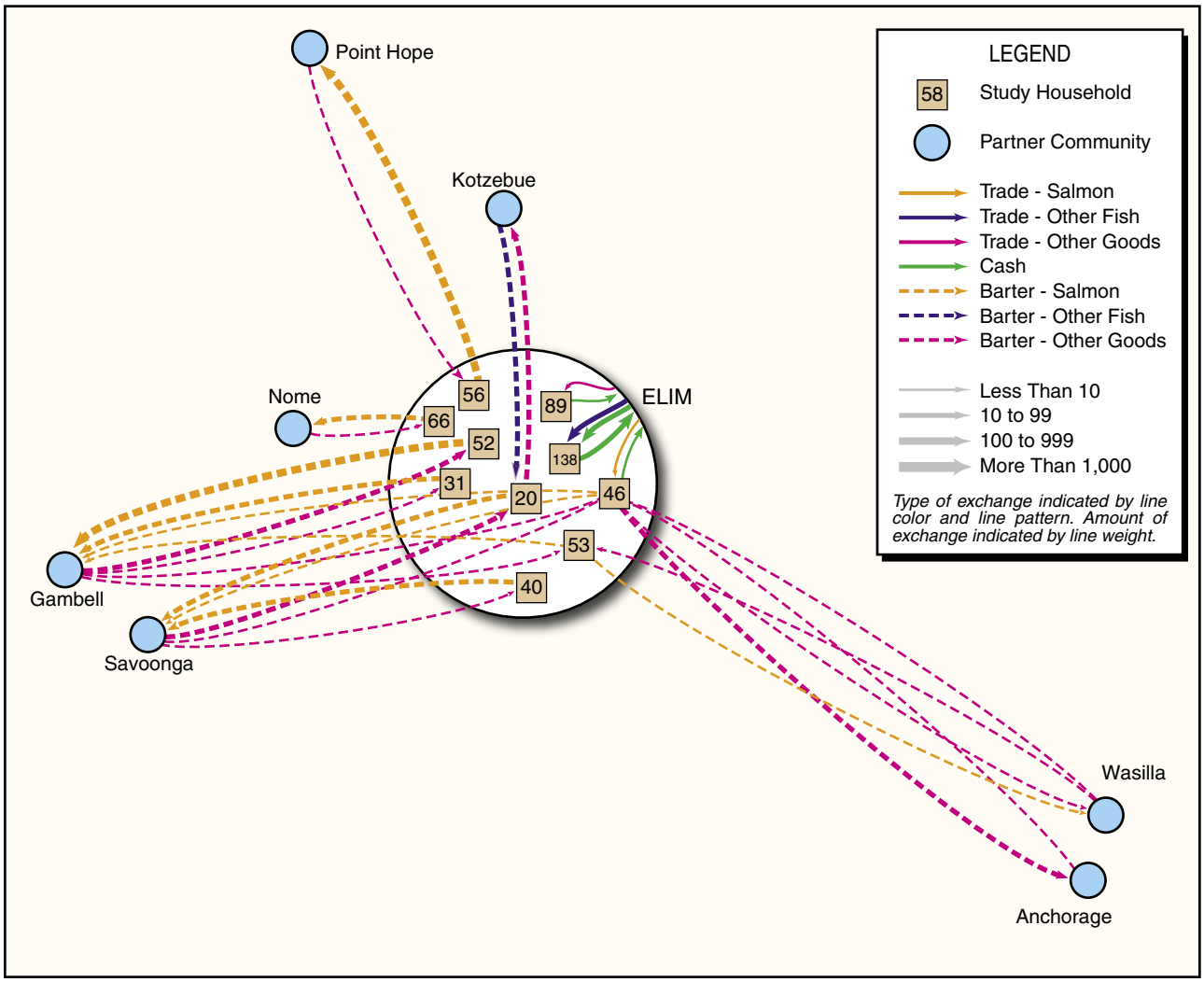


Figure 3-7. Trade and Barter Network, Elim, 2004. Unlike the other study communities, all cash sales of subsistence foods occured among households in Elim, while all the barter occurred with households in other communities. The most common barter pattern was salmon-for-muktuk with Gambell and Savoonga.

124 lb of bowhead whale (17%) and 120 lb of chum salmon (17%). Only about 13 lb of king crab were bartered, about half as much king crab as was traded. Bartered amounts ranged from 1 to 105 lb of subsistence food, and averaged about 20 lb per transaction. The most commonly bartered amount (median) was 10 lb.

All the barters were with partners in other communities; seven communities were mentioned (Figure 3-8). From Gambell and Savoonga, Elim households received 81 lb of bowhead muktuk. Another 40 lb of bowhead muktuk came from Point Hope, and 3 lb came from Wasilla. Five lb of walrus came from Nome, and 30 lb of other fish came from Kotzebue (the species was not specified, probably sheefish).

One respondent said that he bought king crab for $7 each to take to Shaktoolik. “They were not for my personal use,” he said. “I gave them to my cousin, who shows me where the caribou are at. It’s like “barter” for caribou.” Later, the same seller needed gas money and had five more crab he wanted to sell for a total of $20. “I sent

those down to my cousin in Shaktoolik for the same reason," the respondent said. "Both cases were me saying "thanks" for his help in hunting caribou, butchering them, showing me where the good fat ones were." This was the only documented case in the study involving a redistribution of purchased subsistence foods; this may happen more often than reported. Note that these transactions were not resales, but purchases and then barters. The same respondent reported selling a gallon of smoked coho salmon strips for $40 "to get my baby some diapers. That was the only time I sold smoked fish," he said.

One respondent remembered trade in dried salmon during the 1960s, when it was used for dog teams. Some families put up about 15 bundles for trade (50 salmon per bundle). They left them at camp until freeze up, then went back to get them and bring them to the store. The Elim store would give them a credit for the 15 bundles, which they used for sugar, flour, and other staples. At the time, one dried salmon was worth one dollar in credit.

James Magdanz

Figure 3-8. Elim, March, 2005. Shore-fast ice of Norton Sound, visible on the left in this picture, provides a platform for setting crab pots through the ice to catch king crab. Locally caught king crab accounted for 79% of the fish and shellfish (in edible pounds) bought and sold by Elim respondents in 2004.

In Elim, researchers did not ask systematically about trade in subsistence foods other than fish, but several respondents volunteered information on the subject. Asked when he started selling crab, one respondent said, "As long as I can remember." Then he said that berries were the most frequently sold wild food. A quart of blueberries (*Vaccinium uliginosum*) in 2005 was worth $15 to $20 in Elim. Crowberries (blackberries, *Empetrum nigrum*) were less expensive; a gallon of crowberries was worth about $30.

Another common trade item was seal oil from Shishmaref, usually purchased in five-gallon buckets for $150 (in 2005). One respondent told surveyors, "Three times I bought 5 gallons of seal oil from Shishmaref, $150. We used to go to Merc (U.S. Mercantile, a former grocery store in Nome that sold local wild foods) to get dry fish. It used to be good when Merc was there to buy black meat and seal oil. I still would buy seal oil from Shishmaref."

Although researchers did not ask respondents whether they thought customary trade should be permitted, some respondents

volunteered their opinions on the subject. One elder woman in Elim said, "I don't feel like selling. If you need to trade, trade" she said, meaning barter. Her husband commented, "If the government quit sending them money, maybe they would quit" buying subsistence foods. Another respondent said, "I could never sell fish, even if I am low on cash. I could never take cash for fish you could just get. It's not right in my heart." However, this same respondent had no qualms about buying seal oil or muktuk.

Two other respondents took an opposing view. One respondent said, "It needs to be regulated, but I don't see anything wrong." In the midst of an interview, another Elim respondent commented, "This thing (customary trade) should have been around a few years ago." He thought the survey should have included "caribou, moose, belukha, seal, and anything else in the area" that was bartered or traded. (Later in the project, this was done for Saint Michael and Stebbins).

Nome

Nome lies on the north shore of Norton Sound, 903 kilometers (561 miles) west-northwest of Anchorage. In 2000, the community was home to 3,505 people; 51% were Alaska Native or American Indian (US Census 2001:253). Of 1,184 total households, 35 households reported involvement in trade or barter (3%), and 12 households were surveyed (1% of all households and 34% of involved households).

Compared with the other five study communities, Nome has a large, mixed, and transient population. Nome serves as the regional transportation center for the Seward Peninsula area, with daily jet aircraft service to Anchorage and even more frequent air taxi service to all the other communities in the Seward Peninsula Area. Alaska Natives from other Seward Peninsula communities who moved to Nome to work might be inclined to purchase subsistence foods, or barter for food from home.

Nome, being ten times larger than the other communities in this study, presented a sampling challenge. In 2001, ADF&G and Kawerak researchers surveyed 158 Nome salmon fishing households for another project (Magdanz et al. 2003). In anticipation of this project, the survey included a question about trade and barter. Thirty five of the 158 surveyed households reported purchasing, selling, or bartering subsistence-caught fish, and formed the initial sample for this project. But of those 35 households, only 12 households were surveyed. Although researchers held a community meeting in Nome as in the other study communities, only three members

of the public attended and no additional trade or barter households were identified. Consequently, the Nome sample was incomplete, comprising only 1% of the community's households. The data presented here should be considered a minimal assessment of trade and barter patterns in Nome.

On the survey, 3 of the 12 surveyed Nome households reported purchasing subsistence-caught fish for cash in 9 separate transactions. In three cases, the trade partners were men in their 30s and 40s. In the other transactions, the trade partners were women in their 30s, 40s, and 60s. None of the selling households were related by kinship to the purchasing households. The purchases involved 558 lb of sockeye salmon and 600 lb of unspecified salmon, which sold for a combined total of $1,195 (Figure 3-9, top).

Reported transactions in Nome were both similar to and different from typical transactions in the other study communities. Nome transactions were similar in that they all involved dried or smoked salmon. Nome transactions were different in that the average Nome transaction involved an estimated 129 lb of salmon, while the average village transaction involved only about 18 lb of salmon. Most Nome transactions (7 of 9) were bundles of dried whole salmon (18 to 50 salmon) instead of single dried fish or the ZipLoc® bags of strips typical in the other communities (except for Brevig Mission). And Nome transactions were different in that each of the three households that traded for cash reported multiple purchases. One household reported two purchases, the second household reported three purchases, and the third reported four purchases. So not only were Nome purchases larger, Nome households made more of them.

None of the surveyed Nome households reported selling subsistence-caught fish. In four salmon purchases reported on the survey, however, respondents said their trade partners (who did not participate in the survey) lived in other Nome households (Figure 3-10). The respondents said that none of the salmon purchased in Nome actually originated in Nome, which was not surprising because Nome salmon stocks have been depressed and strictly regulated for several decades. In six transactions, the salmon were harvested by a Brevig Mission resident. In the other three transactions, the salmon were harvested near Nenana, Shaktoolik, and Teller. Without surveys from the source households in Nome, it was not known if they were middlemen, buying and then reselling fish, or family members delivering fish for village relatives. Researchers were aware of one situation in which Nome residents delivered fish caught by relatives in one of the Port Clarence communities. One

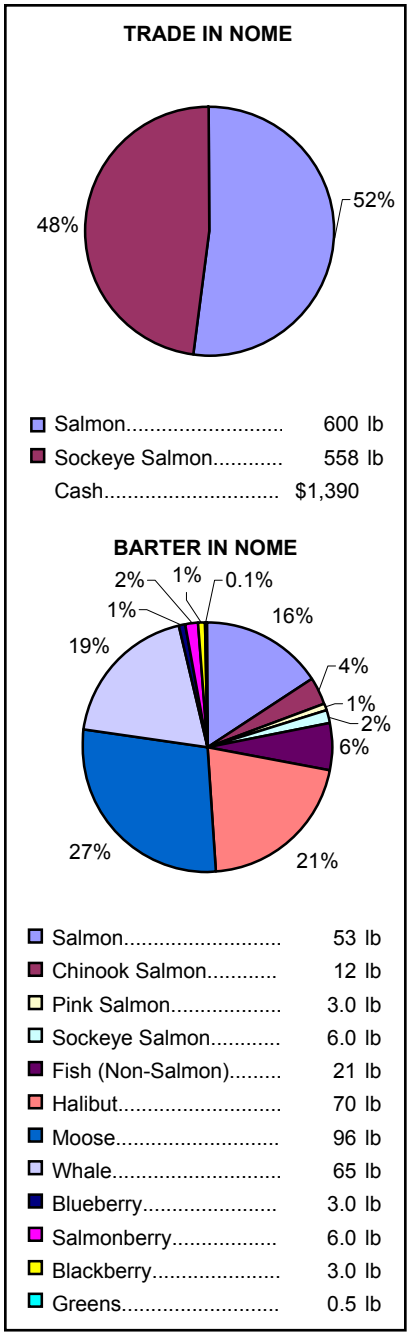


Figure 3-9. Trade and Barter Amounts, Nome, 2004. Respondents were asked only about trades and barters involving fish.

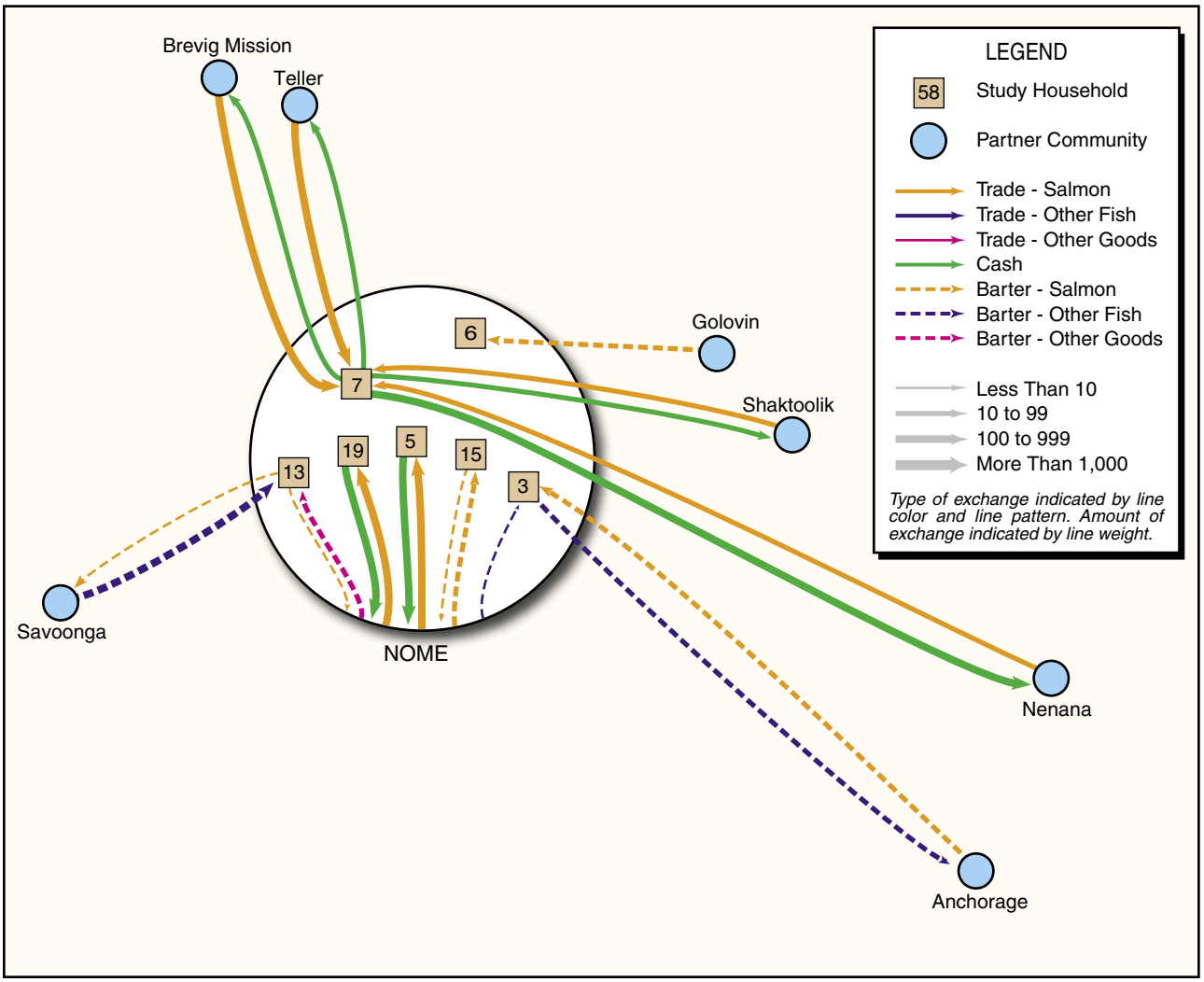


Figure 3-10. Trade and Barter Network, Nome, 2004. The Nome sample was small (12 households). Almost certainly, more trade and barter occurred in Nome than is depicted here.

family said they had been involved in cash exchanges of fish since before the road to Teller was built (about 1964).

Of the 12 households interviewed, 4 households reported 9 barters of subsistence-caught fish. The barters were more diverse than the trades, involving 75 lb of salmon, 91 lb of other fish, and 174 lb of other subsistence foods, mostly moose and whale. A Savoonga household bartered about 64 lb of whale and 50 lb of halibut for 7 quart-size ZipLoc® bags of dried salmon (about 1 lb per bag). The 96 lb of moose came from another Nome household in exchange for 6 half-pint jars of smoked salmon. One Nome household bartered a gallon of salmonberries, two quarts of blueberries, and two quarts of blackberries for a pint of canned salmon, two whole fresh salmon, and two gallons of "fish" from an Anchorage household. In contrast with trades, where all the fish were dried, in the barters most of the fish were either fresh or frozen (77% of the edible raw weight bartered).

One respondent felt the survey did not capture all her history

of customary pattern of trade. She thought customary trade was an important aspect of subsistence. When fishing was poor in Nome, she remembered that her father would buy subsistence-caught fish from Teller, one or two bundles for $25 a bundle. Another respondent said she was thankful to be able to get dried fish through barter and trade. She worked and was unable to put up fish. Given that fishing is hard work and it costs money to put up fish, she thought the current prices were very reasonable. She hoped the government would continue to let them buy dry fish. But one respondent held the opposite view. He thought some people were making a profit from subsistence fishing, and that should not be allowed.

Shaktoolik

Shaktoolik lies on the eastern shore of Norton Sound, 203 kilometers (126 miles) east of Nome. Shaktoolik was the smallest community in this study, with 230 people, 94% Alaska Native or American Indian (US Census 2001:315).

Fieldwork in Shaktoolik began with a community meeting on the evening of February 1, 2005, attended by about 30 people. At the meeting, seven households identified themselves as being involved in trade or barter, in addition to six households that had identified themselves on the 2003 salmon survey. Researchers knew that some Shaktoolik families consistently harvested large numbers of Chinook salmon in their subsistence nets, and researchers expected to document an active trade in smoked salmon strips for cash. Of 57 total households, 13 households reported involvement in trade or barter (23%), but only 3 households were surveyed (5% of all households and 23% of involved households). Eight declined to be surveyed or interviewed, one household had moved away since 2003, and one household could not be contacted. It was unfortunate that only 3 of the 13 involved Shaktoolik households consented to be surveyed for this study. The survey data for Shaktoolik, as for Nome, probably do not fully represent the community pattern of trade and barter. Partly to compensate for the limitations of the survey sample, researchers assembled a focus group of Shaktoolik elders and moderated a two-hour discussion with the elders on customary patterns of trade and barter. The elder group and other interview data described an active history of trade in fish for cash.

During the first Shaktoolik survey, researchers commented that they had heard about trade for cash in Shaktoolik, but that only a handful of Shaktoolik households had consented to the survey. “Some of them want to keep it secret,” the respondent suggested.

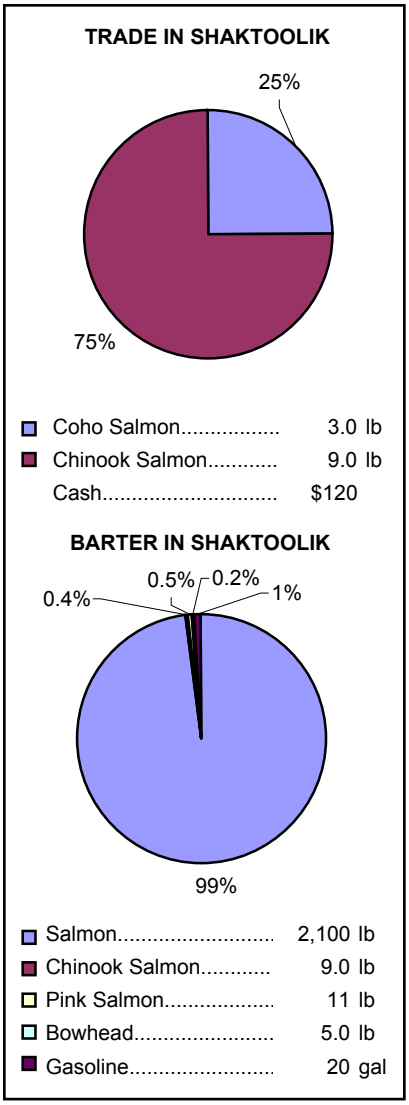


Figure 3-11. Trade and Barter Amounts, Shaktoolik Respondents, 2004. Respondents were asked only about trades and barters involving fish. Only 3 of 13 involved households completed surveys, so these data are incomplete.

"It's fear of regulation, lack of knowledge. They don't want to disclose something that might get them into trouble."

Of the three households surveyed, one household reported two purchases of smoked salmon strips during the past year. In his first purchase, the respondent bought two quarts of Chinook salmon strips for $30 each; in the other purchase he bought one quart of Chinook salmon strips and one quart of coho salmon strips, again for $30 each (Figure 3-11). Both purchases were from another Shaktoolik household (Figure 3-12).

Of the three households surveyed, one household reported three barters during the past year. In one transaction, the respondent bartered about five whole dried pink salmon and three quarts of Chinook salmon strips for about five pounds of muktuk from Gambell. In the other two transactions, the respondent provided gasoline to a neighbor for two trips to fish camp, and received a share of the salmon harvested, a total of about 350 salmon or 2,100 lb. This trade led to a discussion with the researchers about motivations for trading and bartering (see below).

In interviews, almost every respondent mentioned the community "fish cache," the Native store warehouse at the original Shaktoolik town site. It was "almost as big as my house," one man told researchers, "but the ceiling was high, maybe 10 feet more than my house. It was on stilts, and made out of spruce. They stored all the fish they got from the people. That place down there would be packed right up to the top."

A 55-year-old woman remembered that when her family came back from fish camp in the fall, "My dad would store his share of the fish in our cache." Her family transported and stored the dried fish in bundles, about 20 bundles with 50 chum salmon each, or 1,000 salmon a year. "If we needed staples like flour, sugar, milk," she said, "then he would take some bales of fish to the store and trade it for what we needed."

A 40-year-old man had similar childhood memories. His family had a 21-foot boat, with "bundles stacked high, high as the boat could hold without dropping them in the water. We brought them back and stored them in our own storage house. They went in our own cache, but some went into the store cache. Some went to our dogs, and some went to trade." He remembered how the warehouse was filled with bundles and bundles of salmon. "You could go in there and recognize whose dry fish was there."

"Some was used for human consumption, some for dogs, some for trading," one woman said. "My Dad had a lot of dogs. I seem to remember him bringing three bundles right off the bat to the

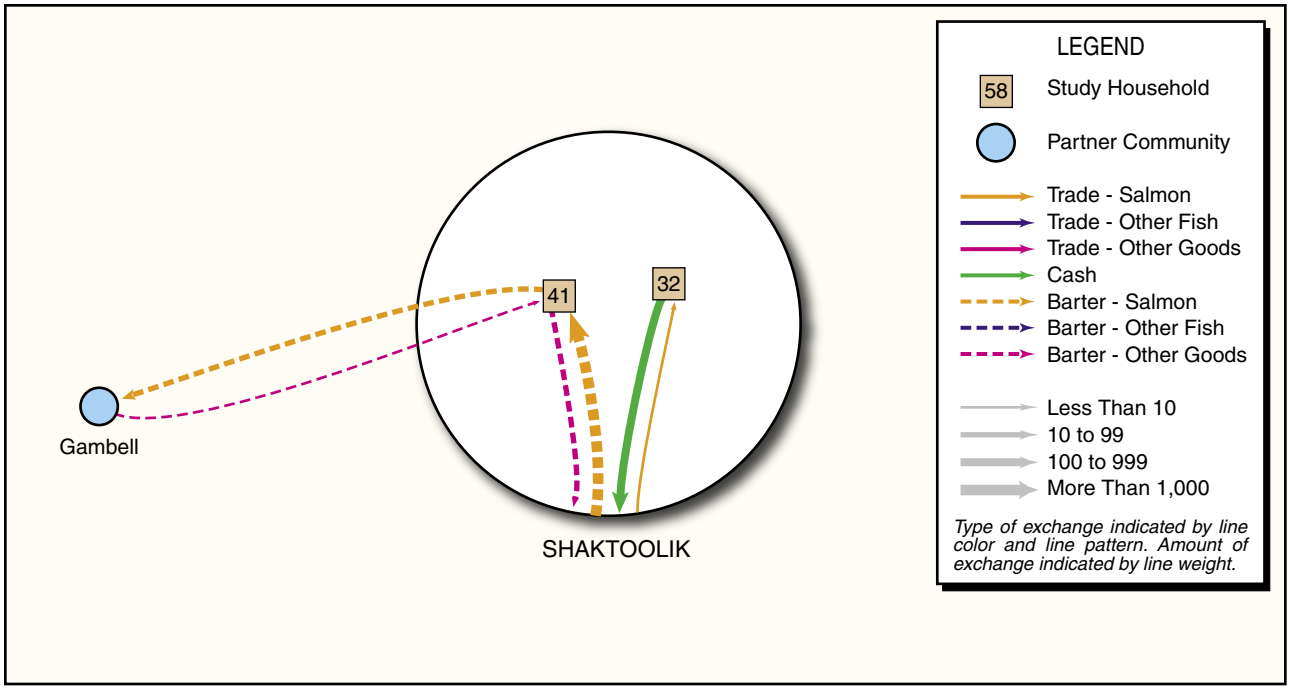


Figure 3-12. Trade and Barter Network, Shaktoolik, 2004. As in Nome, the Shaktoolik sample was small (3 households). Almost certainly, more trade and barter occurred in Shaktoolik than is depicted here.

store, and then a time or two after that, trading off more fish for other stuff."

When one of the churches had a conference, "all the communities would coordinate their efforts to make sure they had enough dog food to feed all the dogs," one respondent remembered. "If the Conference had the money, they would buy the fish. 'We need blubber.' 'We need tomcod.' 'We need to make sure everybody has enough dog food when they all get to Shaktoolik.' Once, when a church conference was scheduled in Unalakleet, they sent an airplane to Shaktoolik to pick up dried fish and blubber. A respondent recalled that villagers told the pilot, " 'Maybe you're taking too much.' He took off and barely made it off the old strip, and then crashed down the beach. But they fixed it up, and he flew out of here."

Respondents agreed that trade of dried whole salmon for cash declined with the advent of the snowmobile. "When the snowmachine came, people didn't have a need for dogs anymore, and they didn't need the surplus fish anymore," she said. "That's how I seem to remember that."

Where trade for dried whole salmon declined in Shaktoolik, trade for Chinook salmon strips has increased. Chinook salmon were a relatively recent resource in Shaktoolik. When they first began to show up in the Shaktoolik River about 50 years ago, people "really didn't know what to do with king salmon," said one respondent. "They were too big. Even in a seine, they let them go. They didn't know how to process them. It took a lot of work to make king salmon strips. So they just put away humpback and dog salmon and silver

salmon." The Chinook salmon they either ate fresh, or salted and put away in barrels.

Another respondent agreed that Shaktoolik residents started making salmon strips relatively recently. "They didn't start making those until, gosh, I might have been eight or ten, in the late 1950s. They did them very very differently. They were very time consuming. I don't know if any other families did that. It had to be watched over very carefully. I don't know where they adopted those methods from. I remember *Sokpiliak*, they called him. I was at his camp when I first saw them."

In addition to chum and Chinook salmon, there also was trade for cash and barter involving sheefish. "Bert Beltz used to come down here with a load of sheefish from Selawik Lake. He would land at each village. He would bring them to the store, and everybody would go over there and buy what they can." He didn't sell them to the store, however. "He sold it directly. The store was just a place to congregate and buy the sheefish."

From the interviews in Shaktoolik (as well as in Brevig Mission and Elim), it seemed that in the 1950s and 1960s trade in fish for cash often involved stores or entrepreneurs, while in the 1990s and 2000s trade was mostly between individuals. Nothing like the Shaktoolik fish warehouse existed in the Seward Peninsula area in 2005.

Researchers asked respondents how they came to trade with certain individuals. One respondent with a regular barter partner in Gambell said that relationship started with sharing. "We went to a regional basketball tournament at Stebbins, and I took three bags of smoked king strips. A Gambell man said he wanted to buy fish. I said I wouldn't sell them. I just gave them to him. Then my son went over to Gambell to play basketball. He gave my son muktuk to bring home, and said he wanted to trade. Now once a year we send him three bags of smoked king strips, and he sends us a bag of black muktuk."

Another Shaktoolik respondent told how he established a trading relationship with one of his salmon sources in Shaktoolik. "He gave me some strips to sample at his house," he said. "I went to one of his kid's birthday parties, and there were some strips that he had made. I had heard that he was selling, too. I said I'd like to get some more. I knew he was selling, from other people in town." Asked whether he or the seller initiated the transaction, the respondent said, "I offered to buy. In some cases, he offered to sell."

One Shaktoolik respondent spoke at length about why people trade subsistence-caught foods for cash. For him, trade resulted from an awareness of one's friends' and neighbors' circumstances. "You are always conscious of the cost," he said. "Even if muktuk

is given to you, you are always aware of how much it cost to get. It wasn't free. It cost them money for gasoline, and whatever. If you got a little money in your pocket, you give it to them anyway, even if they don't ask for it. You always make an offer," he said.

"If you have a broken motor, (you) make a little hint, 'I need a part on there. Can you give me a hand on that, too?' Somebody walks down the street and says, 'Man, you got some good fish down here.' You don't talk about money, you talk about need. 'I got a broken motor. I need a new net.' You leave it up to the person, you never ask for any money. You just let them know what your situation is. I just need something right now, a good trout net, a good salmon net, and you leave it to the other person to respond to that need. There is no money talk, there is need talk."

"Sometimes families that don't have any resources, except getting money from the state, they will come over with berries to sell. I know they need the money to buy fuel. I'll buy their berries if I have the money, because I know they need it. I have no hesitation with that."

"When you give somebody something, they are aware of the cost it takes to put that up. (When) they try to give you money, (your) first response is, 'No, no, that's alright.' They will insist. And you will say 'No, No.' And they say, 'For your gas.' And that makes it easier... Money is white people's berries, their fish, their muktuk. That's how they trade with themselves. They trade their bread for money, their gas for money. We view money differently."

Saint Michael

Saint Michael lies on the southern shore of Norton Sound, 198 kilometers (123 miles) southeast of Nome. Saint Michael and Stebbins are located on opposite sides of Saint Michael Island, and were connected by a 17-kilometer (10.5-mile) road from Saint Michael on the western shore to Stebbins on the eastern shore. The road did not connect with any other communities. In 2000, Saint Michael was home to 368 people, 93% Alaska Native or American Indian (US Census 2001:302). Both Stebbins and Saint Michael are Central *Yup'ik* communities, with strong family and personal ties to the *Yup'ik* communities of the Yukon Delta and lower Yukon River, about 80 kilometers (50 miles) to the south. Along with Elim, they are the only Central *Yup'ik* communities in the Seward Peninsula Area.

Saint Michael is intimately connected with the history of Western Alaska trade. Saint Michael's natural harbor is well protected from both Norton Sound and the Bering Sea. For more than 100

James Magdanz

Figure 3-13. Saint Michael harbor, September, 2006. St. Michael was a center of trade and transportation for western Alaska in the 19th and early 20th centuries. In the foreground above are remnants of paddle-wheel steamboats that carried passengers and freight up the Yukon River during the gold rushes.

years, until aircraft replaced ships as the primary mode of transportation in rural Alaska, Saint Michael was an important center of transportation and trade connecting communities on Alaska's western coast and in Alaska's interior with the rest of the world. Saint Michael Island was named by Russian traders in 1833, when the Russian-American Company established a trading post to support the Russian fur trade (Ray 1983:82). When the United States purchased Alaska in 1867, the Russian-American Company sold its commercial assets in Alaska. These eventually became the Alaska Commercial Company, which still operated a store in Saint Michael in 2006. During the early 20th century, Saint Michael supported the gold rushes along the Yukon River. Rusting boilers, paddle-wheel axles, and massive hardware remnants from half a dozen Yukon paddle-wheel steamships that used to ply the Yukon still lie scattered around the shores of Saint Michael harbor (Figure 3-13).

Saint Michael and Stebbins were added to this project after fieldwork was completed in the other four communities. When re-

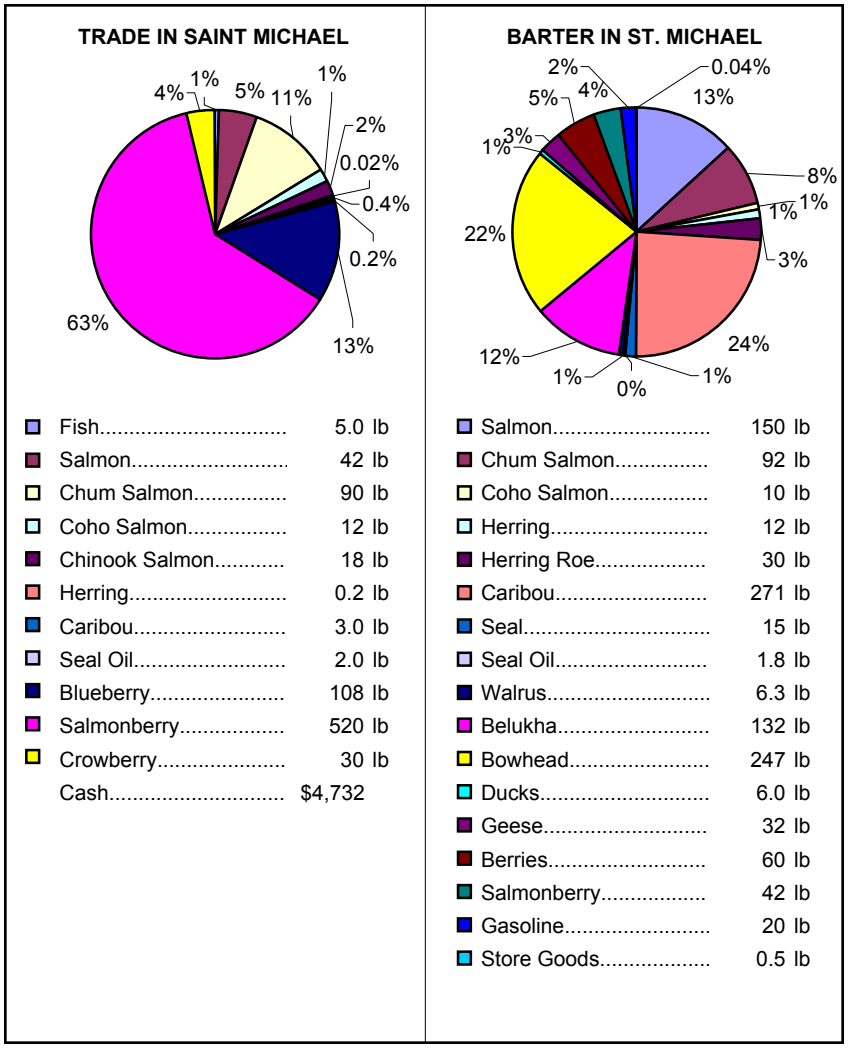


Figure 3-14. Trade and Barter Amounts, Saint Michael, 2005. In Saint Michael and Stebbins, respondents were asked about trades and barters involving all subsistence-caught foods.

searchers presented an update on the project to the Seward Peninsula Regional Advisory Council, council member Leonard Kobuk from Saint Michael asked if the project could be expanded to include Stebbins and Saint Michael. Researchers agreed to pursue this request, and the USF&WS Fisheries Resources Monitoring Program provided additional funding for work in the two communities.

Fieldwork was conducted simultaneously in Saint Michael and Stebbins. Fieldwork began on September 8, 2006, with an orientation session for the two local researchers and a presentation on the project to a regular meeting of the Saint Michael IRA Council. The first Saint Michael survey was completed that same day, and surveys continued in Saint Michael through September 18, 2006.

Of 85 total households in Saint Michael, 23 households reported involvement in trade or barter (27%) and 19 households were surveyed (22% of all households and 83% of involved households). Fourteen of the 19 surveyed households reported buying or selling subsistence foods in the past year. The volume of trade far exceeded

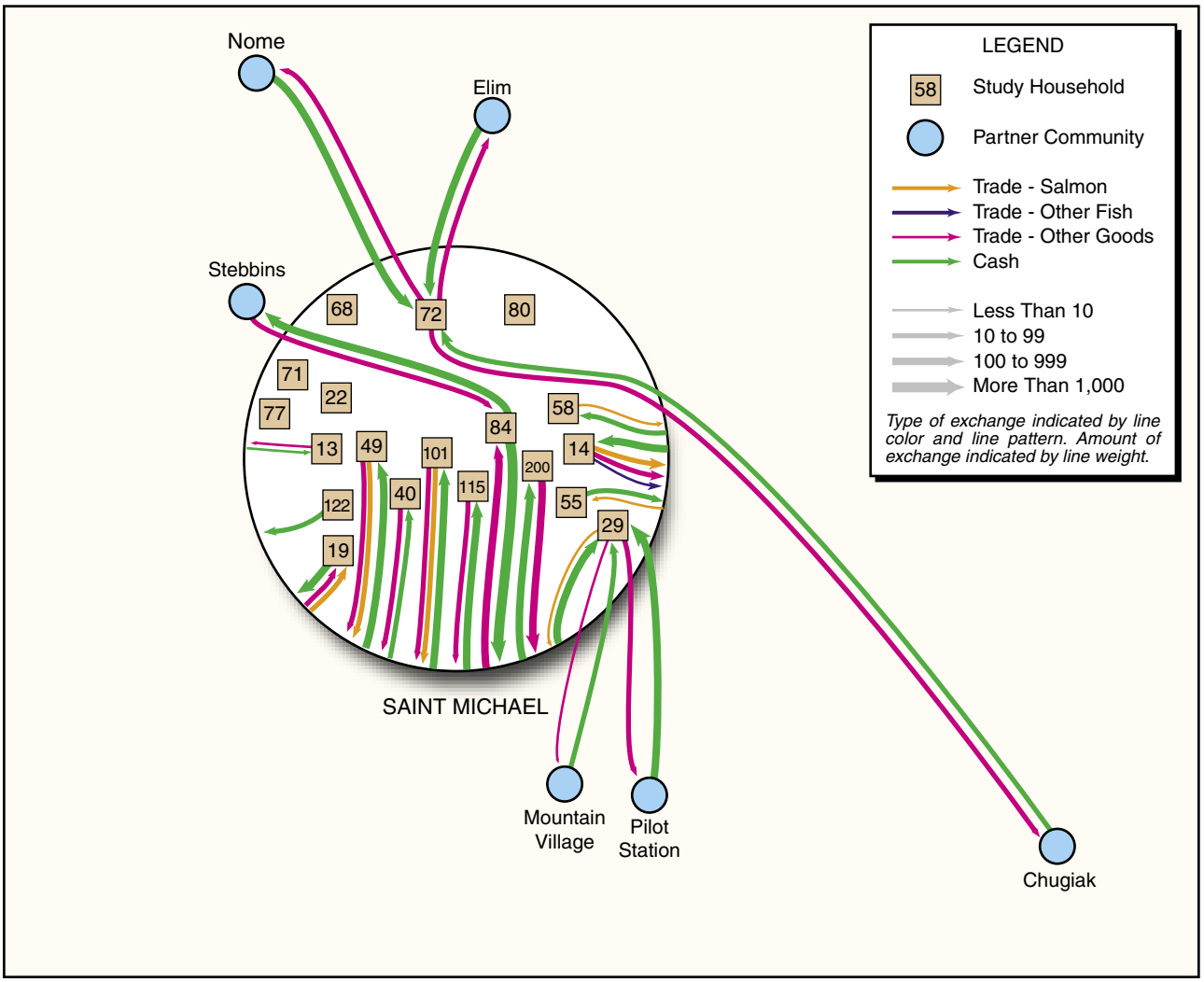


Figure 3-15. Trade Network, Saint Michael, 2005.

that reported by any other study community. Saint Michael residents reported purchases and sales totaling $4,732, or 61% of the $7,806 in purchases and sales reported in this study by all six study communities combined. Saint Michael households paid $4,032 for 633 lb of subsistence goods other than fish, 162 lb of salmon, and 5 lb of other fish. Saint Michael households sold 318 lb of berries and 14 lb of salmon for $700 in cash. Considering purchases and sales combined, salmonberries accounted for the largest portion of the trade, 520 lb, followed by blueberries, 108 lb, and crowberries, 30 lb (Figure 3-14, left). Altogether, 832 lb of subsistence foods were bought or sold; of that only 167 lb (20% of the total) were fish. Salmon trades totaled $1,655 or about $11 per lb; 105 lb of the salmon were strips.

Salmonberries *Rubus chamaemorus* were the only exported subsistence trade good: 7 gallons to Anchorage, 6 gallons to Elim, 5 pints to Mountain Village, 4 gallons to Nome, and 4 gallons to Pilot Station (Figure 3-15). Salmonberries also were the only imported

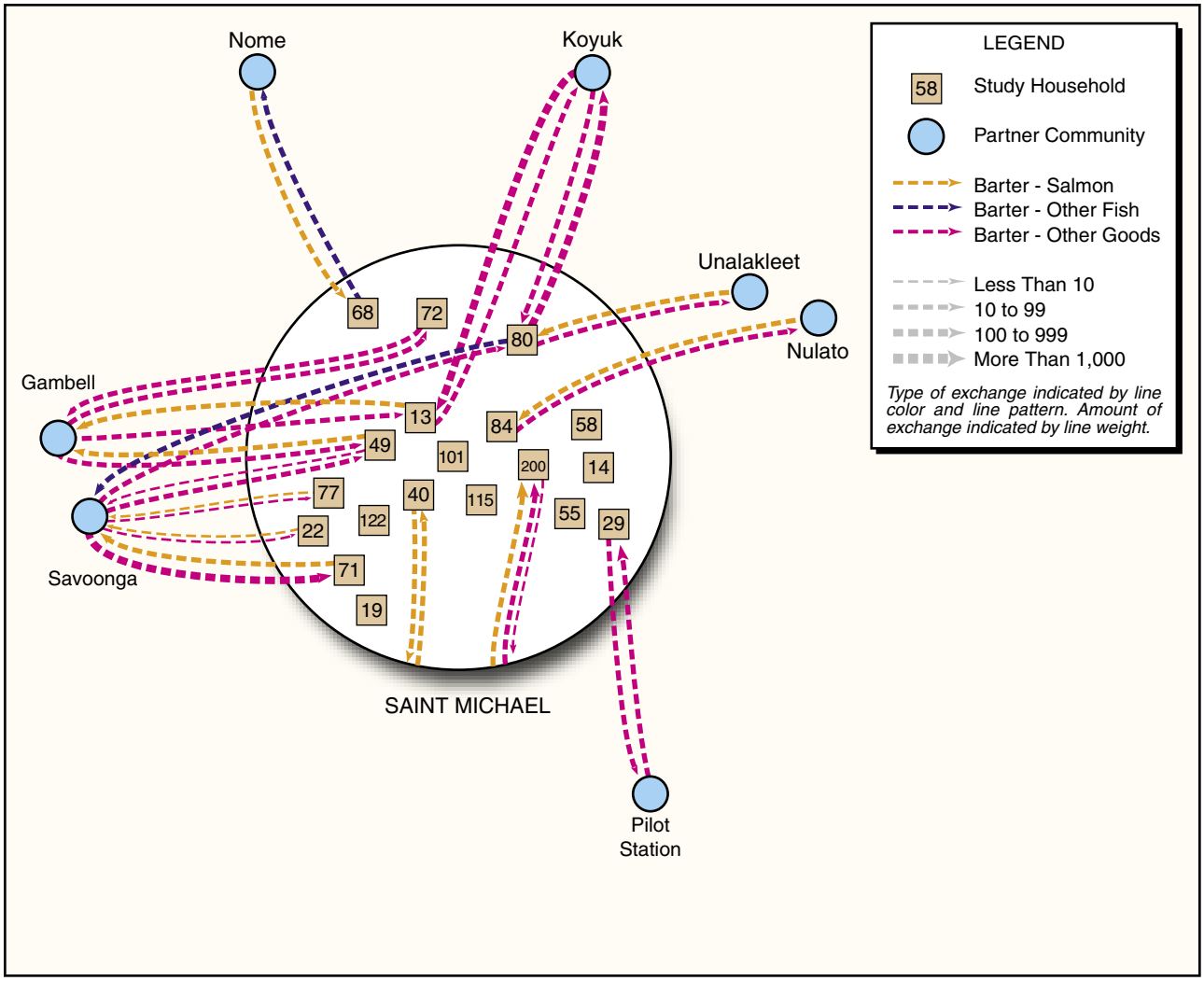


Figure 3-16. Barter Network, Saint Michael, 2005.

subsistence trade good: 5 gallons from Stebbins. All the rest of the trade for cash (berries, salmon, and other fish) occurred among households in Saint Michael.

Salmonberry prices averaged about $32.50 per gallon, and ranged from $25 to $90 per gallon. The most common price for a five-gallon bucket was $125. One respondent sold three five-gallon buckets of salmonberries for $375, another respondent paid $360 for 12 gallons of salmonberries, and another sold 6 gallons for $300. The best price (or worst price, depending on which side of the trade you held) was $90 for one gallon of salmonberries.

Turning to barter, 10 of the 19 surveyed Saint Michael households reported barter transactions during the study year. Respondents reported bartering an estimated 408 lb of meat, fish, and berries for an estimated 719 lb of similar items, for total of 1,127 lb of bartered goods. The top barter items, by edible weight, were 271 lb of caribou, 247 lb of bowhead whale, and 237 lb of salmon (Figure 3-14, right). Fish barters accounted for 279 lb (27%) of

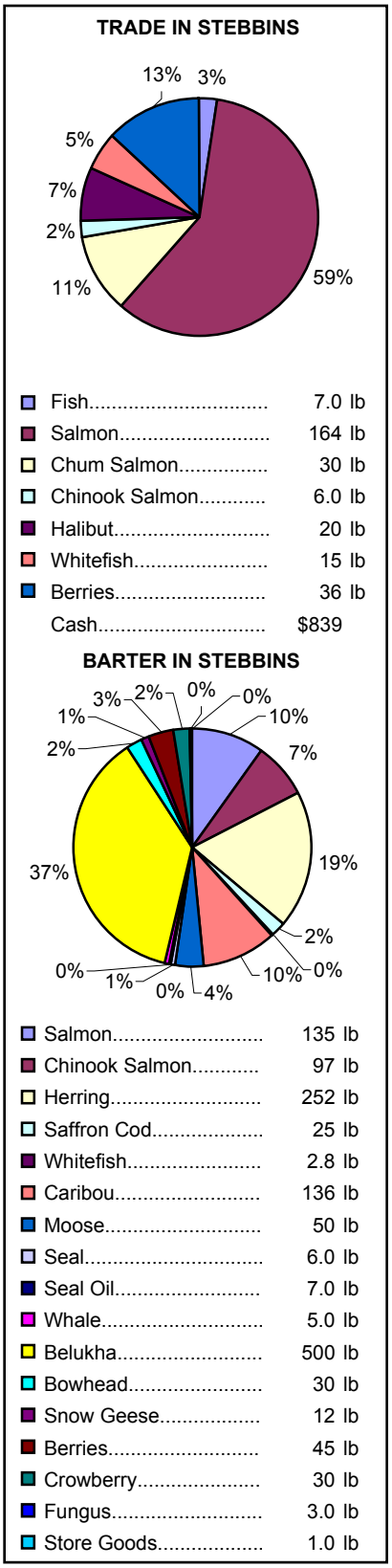


Figure 3-17. Trade and Barter Amounts, Stebbins, 2005.

the total barters, similar to the proportion of fish trades. Salmon strips accounted for 225 lb (95% of the salmon barters and 20% of all goods bartered). Compared to trade, where berries were by far the highest volume item, a more modest volume of berries were bartered, 102 lb.

Some examples of barters in Saint Michael follow. One respondent household bartered 6 geese and a 12-lb slab of belukha for a caribou from Koyuk. Another bartered 4 gallons of chum salmon strips for 120 lb of bowhead muktuk from Gambell. Ten gallons of berries from Saint Michael were bartered for 10 quarts of salmon strips from Nulato. One gallon of salmonberries was exchanged for about 40 lb of bowhead muktuk from Savoonga. In terms of edible weight, Koyuk bartered the most food to the Saint Michael respondents (271 lb of caribou), followed by Savoonga (165 lb of bowhead whale), and then Unalakleet (90 lb of salmon) (Figure 3-16).

No interviews were conducted in Saint Michael and only one interview was conducted in Stebbins because the fieldwork in Stebbins and Saint Michael had been delayed and the project was nearing its final deadline. Researchers elected to concentrate on the surveys. Comments were recorded during and after the survey, however. In one of the more interesting comments about trade for cash, one Saint Michael respondent reported on the survey, “Someone put up a sign saying we were selling, but we were not. We sold them some to shut them up.”

Stebbins

Stebbins lies on the southern shore of Norton Sound, 194 kilometers (120 miles) southeast of Nome. In 2000, the community was home to 547 people, 94% of whom were Alaska Native or American Indian (US Census 2001:327). Of 98 total households, 18 households reported involvement in trade or barter (18%) and 15 households were surveyed (15% of all households and 83% of involved households).

Fieldwork began on September 8, 2006, with an orientation session for the local researcher. The first Stebbins survey was completed that evening and surveys continued in Stebbins through September 15, 2006. Four Stebbins households had identified themselves as trading or bartering fish on the 2003 salmon survey, and 14 more households identified themselves as trading or bartering subsistence resources when queried in 2006, for a potential sample of 18 households. Of those, 15 households were surveyed.

Nine of the 15 surveyed Stebbins households reported 10 trades involving 266 lb of wild foods and $839 (Figure 3-17). Of the total

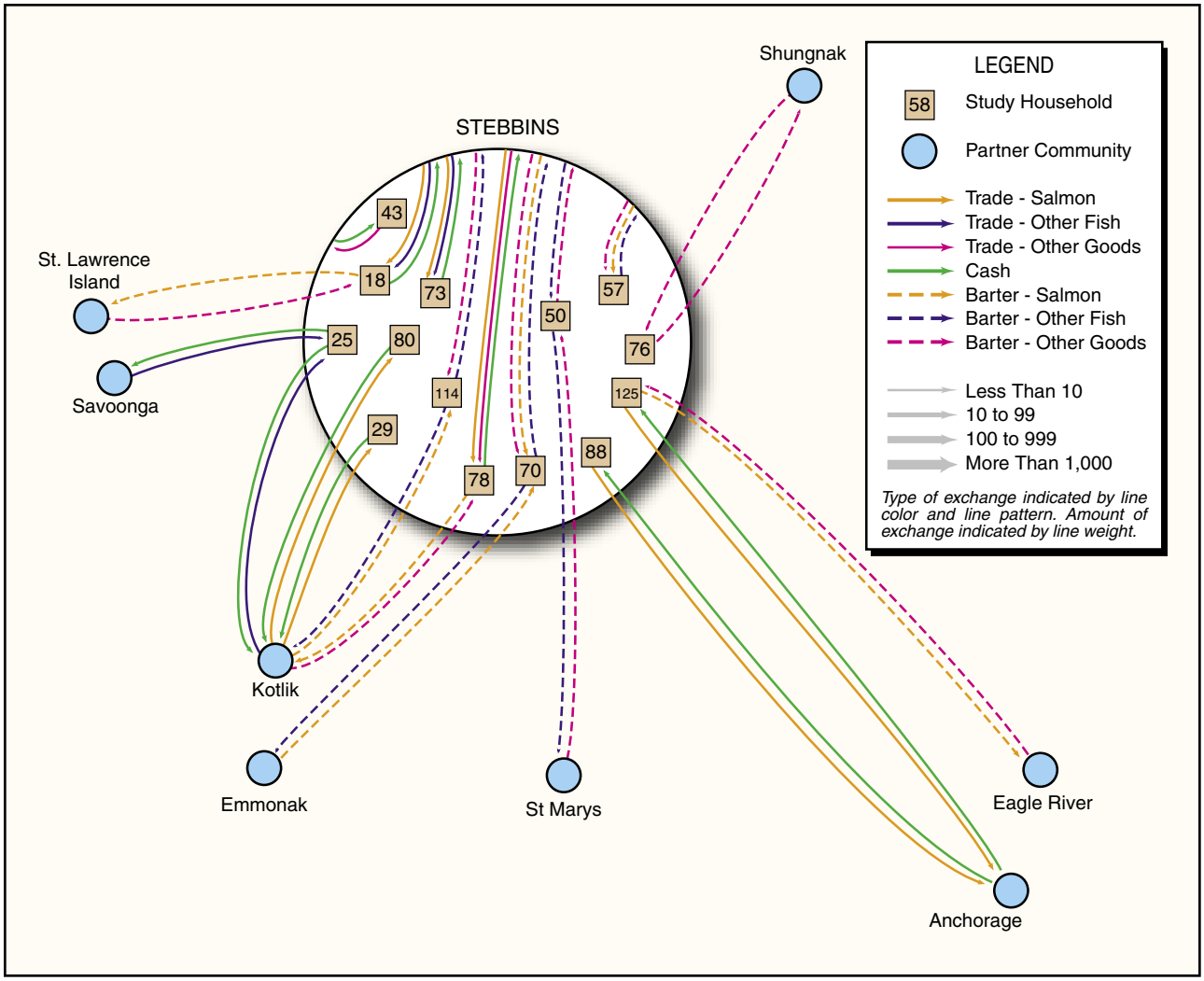


Figure 3-18. Trade and Barter Network, Stebbins, 2005.

266 lb, 182 lb (68%) were salmon, 36 lb (14%) were berries, and 20 lb (8%) were halibut. Two trades were to Anchorage; the rest were to households in Stebbins or other communities in Western Alaska (Figure 3-18).

Among the more interesting trades documented in Stebbins were: One respondent sold 3 gallons of salmon strips for $300, and another respondent sold the same amount of salmon strips for $30, both to Anchorage households. Otherwise, all the trades for cash occurred within Western Alaska: 20 gallons of strips and 5 gallons of berries were sold to another Stebbins household for $250, $15 bought 15 lb of frozen whitefish from a Kotlik household, and $20 bought 20 lb of halibut from Savoonga. Prices for salmon strips varied by more than a factor of 10, from a high of $100 per gallon to a low of only $6 per gallon.

For barter, 8 of 15 surveyed Stebbins households reported 13 barter transactions. Stebbins respondents bartered 869 lb of belukha *Delphinapterus leucas*, herring, salmon, berries, and other

subsistence foods for 468 lb of salmon, caribou, herring, moose, and other subsistence foods, for total of 1,337 lb bartered (Figure 3-17). Belukha whale accounted for 500 lb (37%), herring for 252 lb (19%), salmon for 232 lb (17%), and caribou for 136 lb (17%). Most of the barter (991 lb or 74%) occurred between households in Stebbins. Most of the rest occurred between Stebbins households and households in rural Western Alaska, and one barter occurred with a household in Eagle River (Figure 3-18). Stebbins' Yup'ik connections on the Yukon River were evident from the barters with Kotlik, Emmonak, and Saint Marys.

A Shungnak household bartered a whole caribou for approximately 500 lb of belukha from Stebbins. Another Stebbins household bartered 10 gallons of dried herring, a Stebbins specialty, for 10 gallons of salmon strips from Kotlik. In a diverse barter, one Stebbins households sent 3 snow geese, 10 quarts of salmon strips, and 10 quarts of berries to Saint Lawrence Island in exchange for about 30 lb of bowhead whale muktuk. One barter was unique in the study; a Stebbins household bartered 2 gallons of salmon strips for about 3 lb of birch fungus (*Fomes pinicola*) with a household in Eagle River. Although the surveyor did not record how the fungus was used in this case, Western Alaska Natives traditionally used birch fungus (in Yup'ik, *iqemik*) as a tobacco substitute or extender. They burned it and then mixed the ashes with snuff.

All Communities

In the previous sections, findings were presented separately for each community. In this section, additional findings and summary findings are presented for all communities in the study.

Not every household, nor even a majority of the households, in the study communities was involved in trade for cash. In the five smaller communities, 88 households identified themselves as bartering or trading, 23% of the 377 households in the study communities. When surveys were analyzed, 51 of 61 surveyed households (84%) in the smaller communities actually bartered or traded in the study year. Taking all active trading and bartering households into account, this indicates that about 20% of the households in the smaller communities barter or trade each year. Forty-six households reported barter, 31 households reported barter of fish, 30 households reported trade, and 21 households reported trade of fish. Taking all active trading and bartering households households into account indicates that about 18% of all households in the five smaller communities bartered, about 12% bartered fish, about 11% traded, and about 8% traded fish. These should be considered minimum estimates,

because the survey did not ask about all subsistence foods in Brevig Mission, Elim, and Shaktoolik, and because the refusal rate was high in Shaktoolik.

In every community except Brevig Mission, researchers asked a series of questions exploring households' personal trading histories: whether they had ever bartered or traded subsistence foods for cash, why they bartered and traded, and how long they had been bartering or trading. The personal history page was added to the survey instrument after Brevig Mission data were collected, because researchers wanted a more systematic exploration of exchange histories and motivations than interviews provided.

About one-third of the households (37%) reported only bartering, about one-third (27%) reported only trading, and about one-third (35%) reported both bartering and trading at some point during their lives. Where 30 of 65 surveyed households (46%) said they had traded in the past year, 39 households (60%) said they had traded at some point in their lives. In other words, most households that had ever traded also traded in the study year. That was less true for barter, 22 of 65 surveyed households (34%) said they had bartered in the past year, but twice as many, 45 households (69%), said they had bartered at some point in their lives. In other words, trading households traded more consistently than bartering households bartered.

Researchers asked respondents, "What is usually the single most important factor in your trades?" (Figure 3-19) Responses were almost equally divided among "I needed fish" (37%), and "I needed money" (38%). Asked a similar question about barters, a similar percentage (32%) bartered because "I needed fish." Barter respondents said they bartered because "Someone else needed fish" 26% of the time, about twice as often as that reason was selected for trades. Interestingly, 75% of the trading respondents traded to meet their own needs (for either fish or cash), while only 51% of the barter respondents bartered to meet their own needs. Although 28% of trading respondents and 53% of the bartering respondents selected "I had extra subsistence food" as one reason they traded or bartered, extra food rarely was selected as the "most important" reason. Only 3% of trading households and 2% of bartering households cited "extra subsistence food" as the most important factor. For more detail on the reasons people in each community reported for bartering and trading, see Appendix Table A6.

One might expect barter to be far more common than trade for cash; that proved not to be the case among the surveyed households. Thirty-three of the 73 surveyed households (45%) reported trading for cash during the past year, while 38 of 73 households

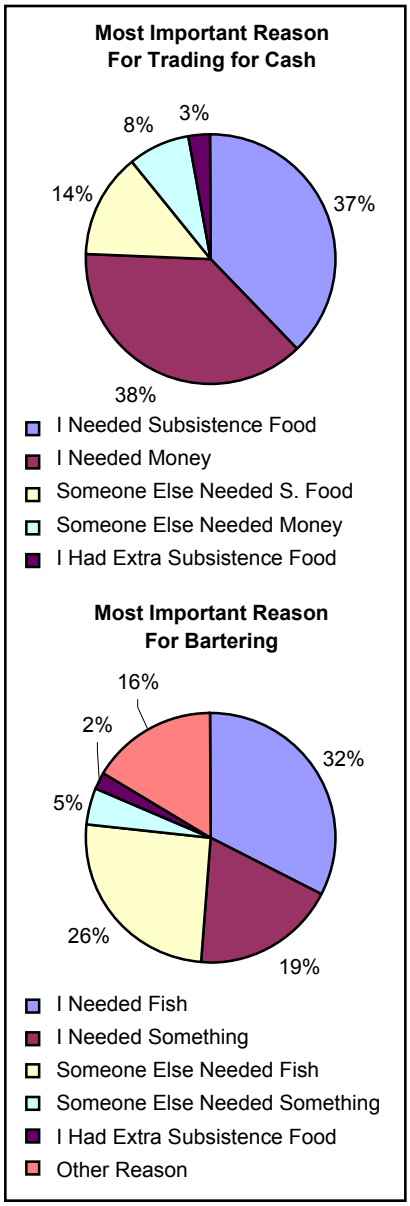


Figure 3-19. Reasons For Trading and Bartering.

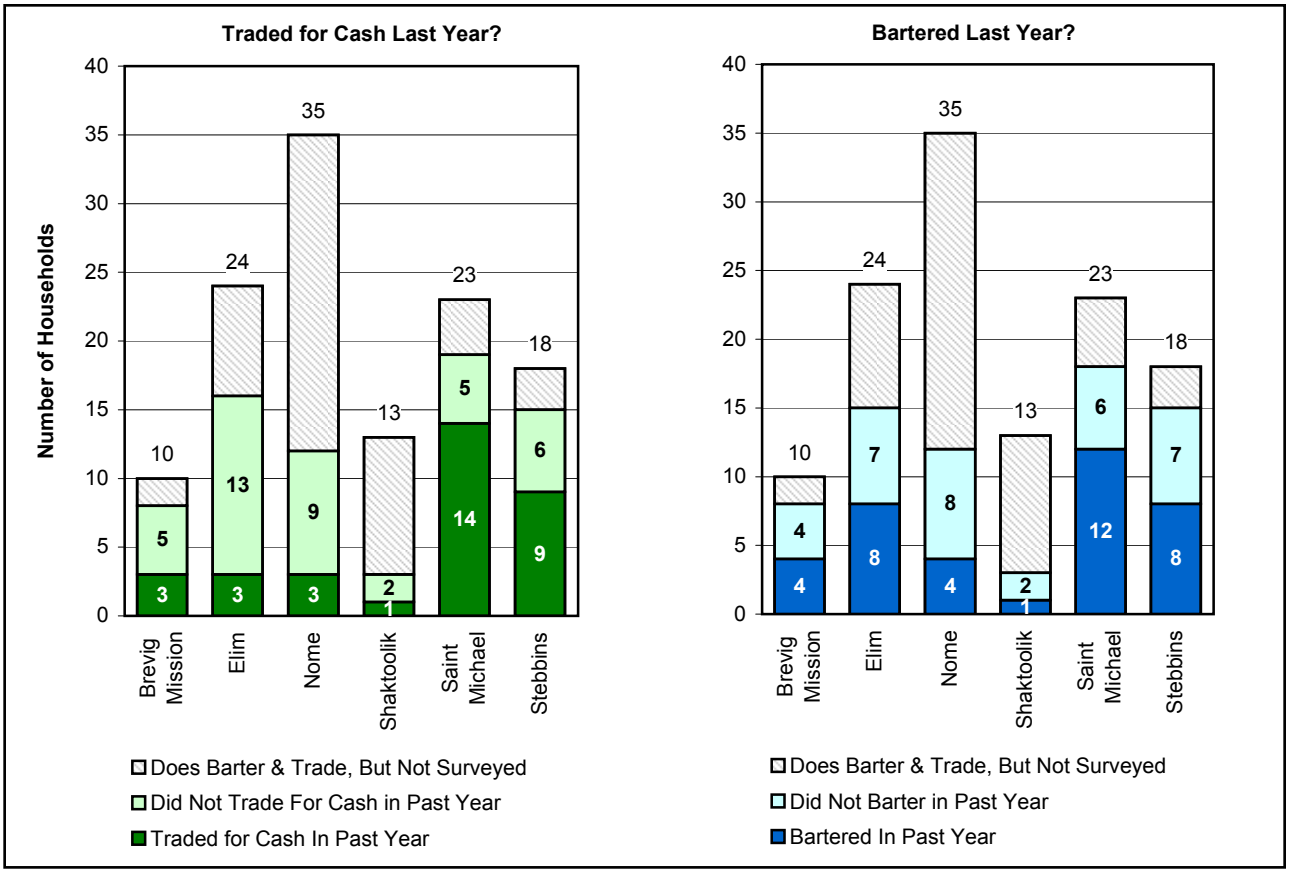


Figure 3-20. Participation in Trade and Barter During Past Year.

(52%) reported bartering subsistence foods during the same time. The difference was almost entirely in Elim, where eight households bartered and only three traded for cash (Figure 3-20). In the other communities, the number of households involved in the two activities was very similar. Figure 3-20 also shows that the samples in Brevig Mission, Elim, Saint Michael, and Stebbins were relatively complete compared with the samples in the Nome and Shaktoolik, where far fewer than half the households involved in barter and trade were surveyed.

When trading subsistence foods for cash, small transactions were most commonly reported. Thirty-two of 72 transactions (44%) involved $50 or less, and 16 transactions (22%) involved between $51 and $100 or less (Figure 3-21, left). Only 8 transactions (11%) involved more than $250. The largest single transaction reported was $400. In three cases, fish were exchanged for cash but a price was not reported. When only fish trades were considered, the percentage of trades in each dollar category was almost exactly the same. Summing all reported cash trades for each household during the study year (Figure 3-21, right), annual trade totals were $100 or less for 13 of 31 trading households (42%), between $101 and $250 for 7 households (23%), between $251 and $500 for 8 households

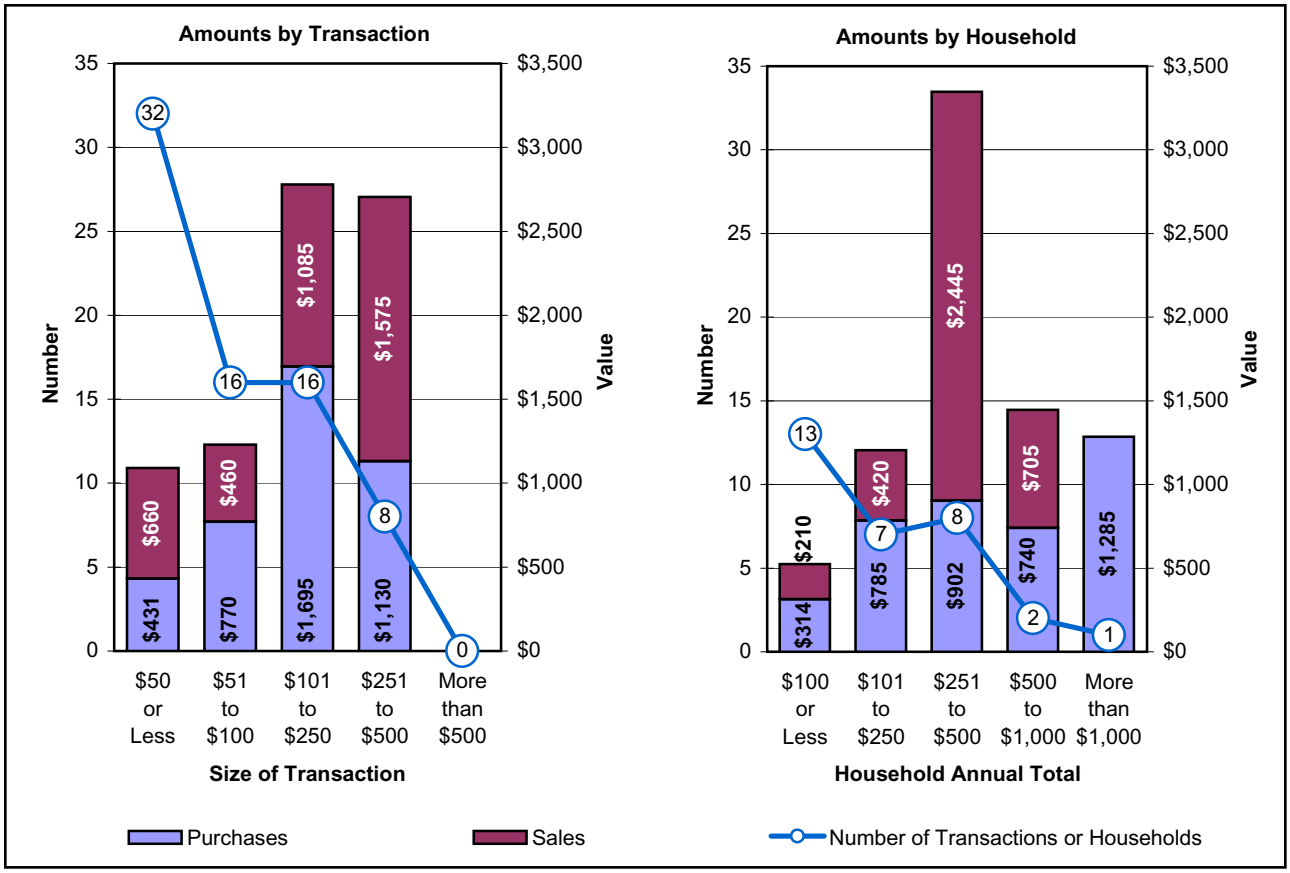


Figure 3-21. Size and Frequency of Reported Trades for Cash. Small cash trades were much more common than large trades. Almost half of the trades involved less than $50 (left). The highest dollar volume was for trades between $101 and $250. When all transactions for each household were summed, 13 households reported total annual cash trades of $100 or less (right). The highest dollar volume of total annual trades was between $251 and $500 (reported by 8 households). Only one household reported total annual trades in excess of $1,000.

(26%), between $501 and $1,000 for 2 households (6%), and in excess of $1,000 for only 1 household (3%). The highest annual household total came from Saint Michael, where 1 household spent $1,285 in 7 different transactions for salmonberries, blueberries, and crowberries. The highest annual household total for fish came from Nome, where 1 household spent $740 in 3 different transactions for salmon.

Asked how often people in their communities 'bargain or haggle" about amounts in barters and trades, most respondents said "rarely" or "never." For barters, 55% said households "never" bargain about amounts, 37% said "rarely," and only 8% said people in their community "often" bargained in barters. For trades, 43% said "never," 45% said "rarely," and only 12% said household in their communities "often" bargained in trades.

Most respondents "rarely" or "never" acted as middlemen in barters or trades. For barters, 69% of bartering households said they "never" bartered the same fish (or subsistence food) more than once. Twenty-two percent said they "rarely" bartered food twice. Only 9% of bartering households said they "often" bartered and then re-bartered subsistence foods, and all but one of those households

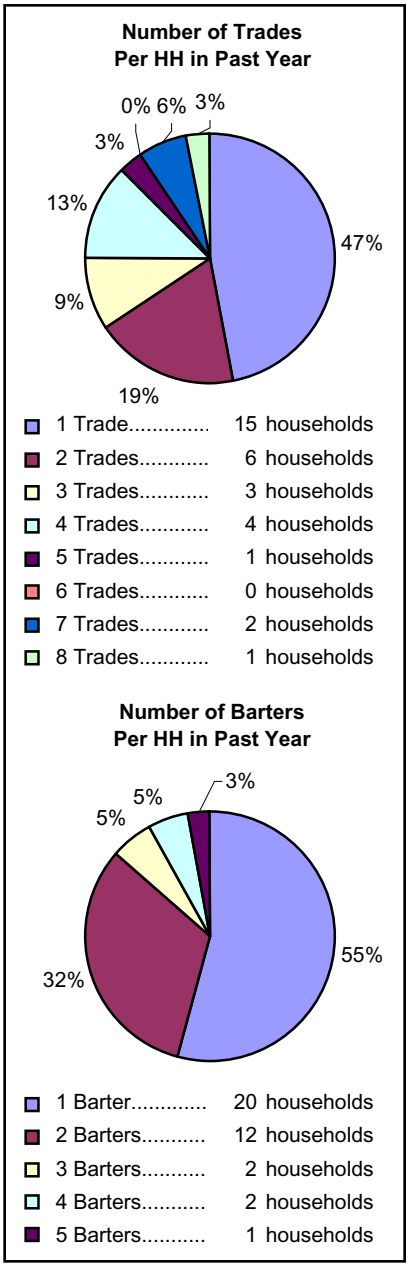


Figure 3-22. Number of Exchanges per Household in Past Year. About half the households that reported trades or barters reported only one exchange in the past year. Three or more exchanges were reported by about one fourth of the households.

was in Saint Michael or Stebbins where the survey asked about all foods, not just fish. The exception was a household in Nome.

It was even more unusual to buy and then sell the same fish or subsistence food. Only 2 of 65 trading households (3%), both in Stebbins, said they "often" bought and sold the same subsistence foods. Of the remaining trading households, 12% said they "rarely" acted as middlemen, and 85% said they "never" bought and then sold the same subsistence foods. In other words, almost all the respondents obtained food through barter or trade for their own personal or family consumption.

On the survey, 15 households (47% of 31 trading households) reported only one trade during the past year, and 20 households (55% of the 37 bartering households) reported only one barter (Figure 3-22). Two transactions were reported by 6 of the trading households (19%) and 12 of the bartering households (32%). The remaining households, about one-third of the trading and one-fifth of the bartering households, reported three or more transactions in the previous year.

Researchers asked several questions about the exchange partners for each household that traded or bartered during the study years. Gender was reported for 116 partners; 64 were women (55%) and 52 were men (45%). The typical partner was middle-aged; 54% were between 40 and 50 years of age. The typical partner (60%) was not related by kinship to the respondents' households; 15% were "friends," 41% were "not related," and 4% were businesses (that is, village stores). The most common category of relatives named as exchange partners were third-degree kin (aunts, uncles, nieces, and nephews) and fourth-degree kin (cousins). Trades and barters between first- and second-degree kin were rare, presumably because foods were simply shared with grandparents, parents, and children.

An unexpected finding was how recently respondents began trading or bartering with their partners. In 55% of the cases, the first trade with a partner happened in the year of the study. In 25% of the cases, the first barter with a partner happened in the year of the study. Sixty-three percent of the barter partners and 91% of the trading partners had first bartered or traded with the respondent during the last 10 years.

For each reported transaction, researchers asked for the location of harvest, if known. In the Norton Sound – Port Clarence Area, customary trade was prohibited under state rules and permitted under federal rules. Although respondents were aware of the differences from the community meeting and from the survey introduction, questions of jurisdiction did not seem to affect their

responses when asked about harvest locations. Although prompted for specific geographic locations of harvest, purchasers often did not know exactly where the fish were harvested. In response to the question about harvest locations, purchasers often responded with a community name, such as "Brevig Mission." Sellers usually did know harvest locations, and were more likely to respond with a geographic name, such as "Pikmiktalik River."

Figure 3-23 summarizes responses to questions on harvest locations for cash trade of fish (top) and of other goods (bottom). Harvest locations were reported for 1,838 lb of subsistence-caught fish that were traded for cash. Of that total, 1,008 lb (55%) came from Brevig Mission. An additional 242 lb (13%) came from Port Clarence or Grantley Harbor, which were near Brevig Mission. All these fish were almost certainly harvested in state-managed subsistence fisheries.

Only two communities had easy access to a federally managed subsistence fishery, Stebbins and Saint Michael, some of whose residents maintained fish camps along the Pikmiktalik River. Only 18 lb (1%) of the reported cash trades involved fish from the Pikmiktalik River. In addition, Stebbins and Saint Michael were reported as harvest locations for 179 lb of traded fish; some of those fish may have come from the Pikmiktalik fishery. In 2003, about 10% of Stebbins and Saint Michael's total salmon harvest came from the Pikmiktalik River. Interestingly, that was almost exactly the same proportion reported in cash trades from the Stebbins-Saint Michael area. Of the total 197 lb reported from Stebbins, Saint Michael, and Pikmiktalik River, 18 lb (9%) came from Pikmitalik. If all the fish reported for the three locations actually came from the Pikmiktalik River, then 11 percent of the total traded fish were from federal fisheries. If only 18 lb came from the Pikmiktalik River, then only 1 percent of the total traded fish were from federal fisheries.

Saint Michael was listed as the harvest location for 615 lb (91%) of the other goods reported for cash, which was not surprising because the survey asked about cash trades for other goods in only two communities: Stebbins and Saint Michael. A complete listing of reported harvest locations for all traded and bartered items can be found in Appendix Table A6.

Table 3-1 summarizes trade data by species for each study community, and calculates the average price per pound for all subsistence foods in the six study communities. Two features of this table are worth noting. First, the amount of cash reported for each study community varied from a low of $120 in Shaktoolik to a high of $4,732 in Saint Michael. The difference reflects the size of the samples (3 households in Shaktoolik, 19 in Saint Michael);

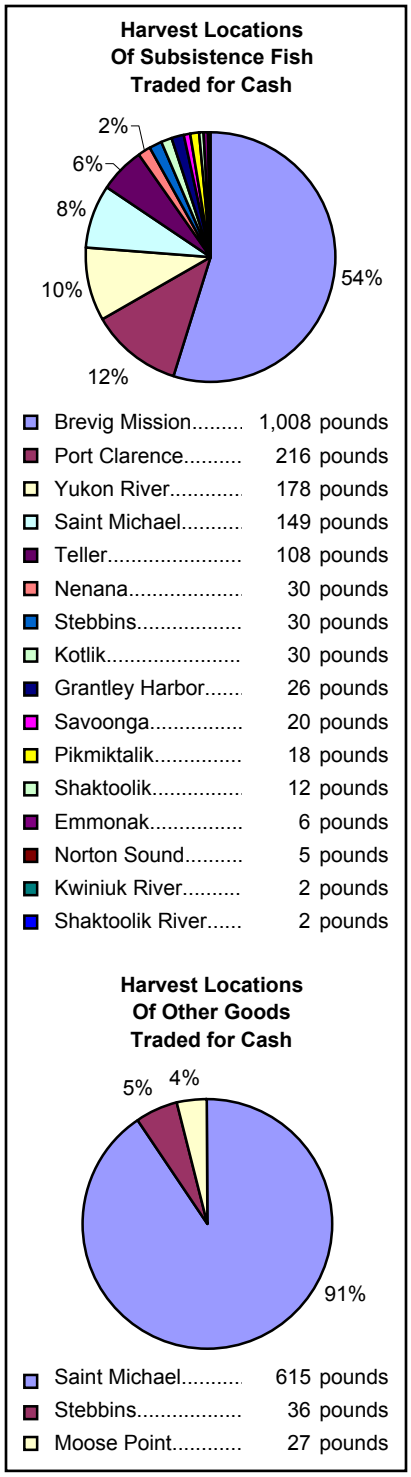


Figure 3-23. Harvest Locations of Traded Goods. Purchasers often reported harvest locations as communities, while sellers (who knew harvest locations) more often reported rivers or oceans.

TABLE 3-1. CUSTOMARY TRADE REPORTS BY COMMUNITY AND SPECIES

	Data Collected for Fish Trades Only				Data for All Trades		
	Brevig Mission	Elim	Nome	Shaktoolik	Saint Michael	Stebbins	All Communities
Subsistence Fish							
Fish					5.0	7.0	12
Salmon			600.0		42.0	152.0	794
Chum Salmon					90.0	30.0	120
Coho Salmon		12.0		3.0	12.0		27
Chinook Salmon		1.5		9.0	18.0	6.0	35
Pink Salmon	134.4						134
Sockeye Salmon	108.0		558.0				666
Herring					0.2		0
Halibut						20.0	20
Whitefish						15.0	15
Pounds (Fish) Subtotal	*242*	*14*	*1,158*	*12*	*167*	*230*	*1,823*
Cash Paid (Fish) Subtotal	*$545*	*$65*	*$1,390*	*$120*	*$1,690*	*$789*	*$4,599*
Average Price Per Pound	*$2.25*	*$4.81*	*$1.20*	*$10.00*	*$10.11*	*$3.43*	*$2.52*
Other Subsistence Foods							
Caribou					3.0		3
Seal Oil					2.0		2
King Crab		27.3					27
Berries						36.0	36
Blueberry					108.0		108
Salmonberry					519.8		520
Blackberry					30.0		30
Pounds (Other) Subtotal	*0*	*27*	*0*	*0*	*663*	*36*	*726*
Cash Paid (Other) Subtotal		*$115*			*$3,042*	*$50*	*$1,449*
Average Price Per Pound		*$4.21*			*$4.59*	*$1.39*	*$2.00*
All Subsistence Foods							
Pounds Total	*242*	*41*	*1,158*	*12*	*830*	*266*	*2,549*
Cash Paid Total	*$545*	*$180*	*$1,390*	*$120*	*$4,732*	*$839*	*$7,806*
Average Price Per Pound	*$2.25*	*$4.41*	*$1.20*	*$10.00*	*$5.70*	*$3.15*	*$3.06*

NOTE: The calculated average prices per pound above should *not* be taken as "values" for subsistence foods. These prices vary widely from replacement or substitution costs, suggesting non-market factors influenced prices. If that were not true, dried salmon would not sell for $2.25 a pound in Brevig Mission and $10.00 a pound in Shaktoolik. Valuing subsistence foods is a complex exercise (see Brown and Burch 1991, Langdon and Worl 1981, and Usher 1976).

data were not expanded to account for unsurveyed households. It also reflected the scope of the survey, which asked only about fish exchanges in Shaktoolik, and asked about all exchanges in Saint Michael. Thus Table 3-1 provides an incomplete summary of trade in Brevig Mission, Nome, Elim, and Shaktoolik. The second notable feature of Table 3-1 is the differences in the average price per pound traded, which varies from $1.20 per pound in Nome to $10.11 per pound in Saint Michael. This calculation does not control for the item being traded (e.g. Chinook or pink salmon), or the process-

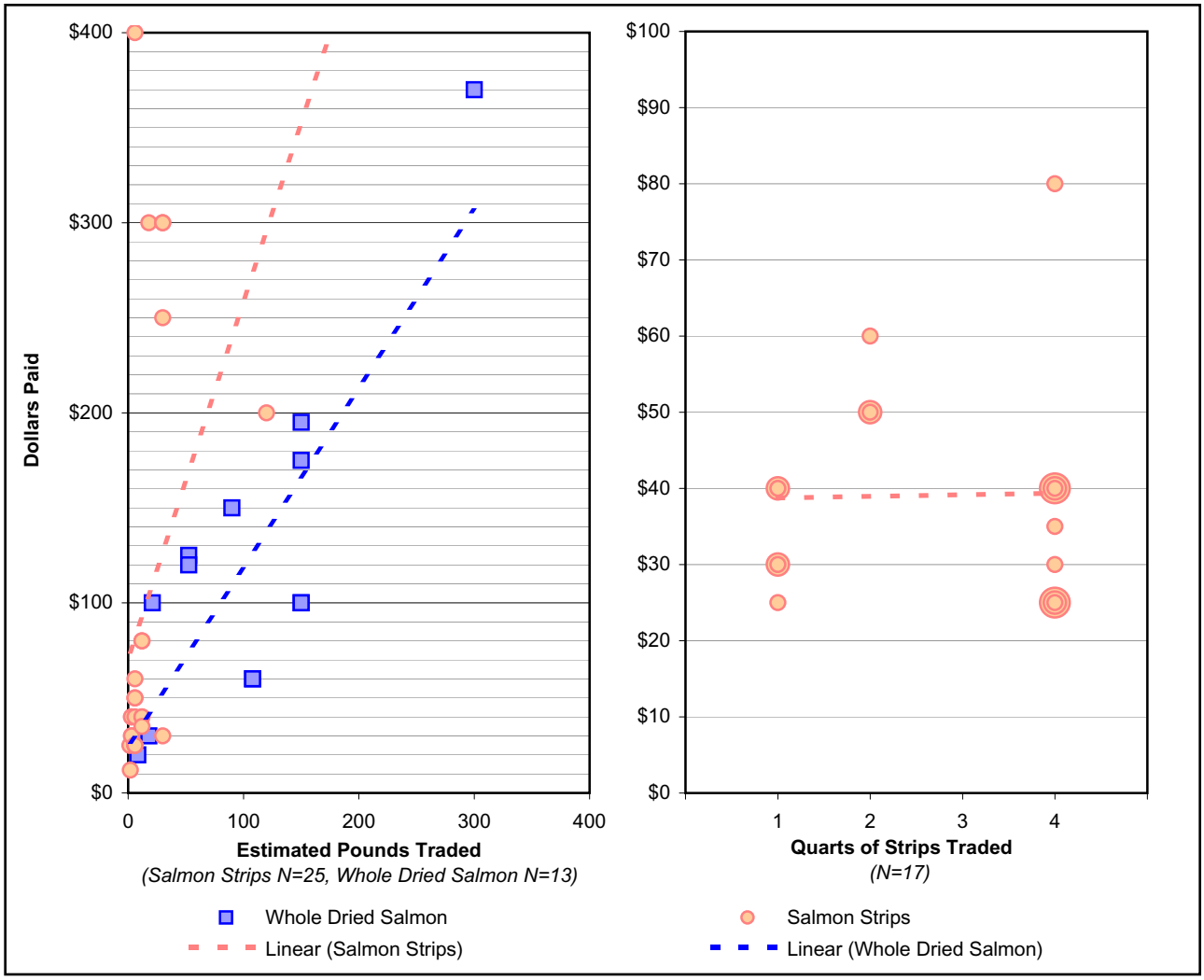


Figure 3-24. Prices Paid for Whole Dried Salmon and Salmon Strips. As expected, prices increased with pounds sold (left). The correlation between price and pounds traded was better for dried whole salmon than for strips. However, when the analysis was limited to sales involving only small quantities of strips (one gallon or less), price did not correlate with quantity. Quarts typically sold for $25, $30, or $40, while gallons typically sold for similar prices: $25, $30, $35, or $40 .

ing (e.g. strips or unprocessed), or the reputation of the source, or the social relationship (e.g. cousin or stranger) between the two trading parties.

For more detailed information on trades and barters, see the Appendix Tables, which summarize the total edible pounds exchanged, the number of items exchanged (which was greater than the number of transactions), and the dollars paid for subsistence foods in the study communities. These represent, at a minimum, the exchanges that occurred in one year's time in the six study communities. As one would expect, the amounts traded and bartered are greater for the study communities, than for the partner communities. The best data on the overall patterns of trade and barter were for Stebbins and Saint Michael, where researchers asked about all subsistence food exchanges.

One final analysis explored the prices paid for whole dried salmon and for salmon strips (Figure 3-24). As expected, prices increased with quantities for both whole salmon and for salmon

strips. For whole salmon, price and quantity were strongly correlated (0.821), while for salmon strips prices were less strongly correlated (0.535).

Interestingly, when quantities of strips were small, one gallon or less, prices and quanitities were not correlated at all (0.020). The implication was the quantity was not a very important factor in the prices paid for small amounts of strips. Since prices did vary considerably, other factors, such as the quality of the product, reputation of the producer, or relationships between the buyer and seller, must be more significant than quantity. The number of available cases was small (n=17), and included all species of salmon. If the sample was larger and if analysis could control for factors such as species, reputation, and relationships, some correlation might emerge between price and quanitity for small amounts of strips.

4
Summary and Discussion

Considering that much of the cash trade described in this report probably was prohibited by regulation, many respondents seemed remarkably candid. The obvious questions were: "Why did people talk to us at all?" and, "What did people *not* tell us?"

From community meetings and survey introductions, respondents knew that the purchase and sale of subsistence-caught fish was permitted under federal regulations but prohibited under state regulations. At most about 10%, and perhaps as little as 1%, of the reported cash trade involved fish taken in federally managed fisheries where customary trade was permitted. The remaining 90% to 99% of the fish were most likely taken in state-managed fisheries, where customary trade was not permitted. Respondents realized the study might result in state recognition of customary trade of fish in the Seward Peninsula Area. Aligning state and federal rules might simplify matters, and provide relief from worries about violating regulations. Still – as numerous sparsely-attended management meetings attested – most rural Alaska residents gave little thought to subsistence rule-making.

A most plausible explanation for the cooperation researchers enjoyed – supported by the findings and echoed by biologists and enforcement officers during this study – was that rural residents of the Seward Peninsula Area had been buying and selling small amounts of subsistence-caught fish for many years, indeed, for generations, with few adverse consequences. Thus, at least in some communities, respondents did not worry about reporting their cash trades. Also important was the degree of trust between respondents and researchers, who promised that information provided would be kept confidential and would not be used for enforcement.

In this study, the *reported* trade for cash varied widely from community to community, from a mere 12 lb of dried salmon in Shaktoolik to 1,158 lb of dried salmon in Nome. The differences in reported cash trade may reflect less about actual volume of trade and more about whether respondents felt safe providing the information. For Nome and Shaktoolik, the data appear substantially incomplete. Probably not coincidentally, Nome and Shaktoolik

receive more attention from fish and wildlife enforcement officers than the other study communities. Throughout the study period (and for decades before the study), the Alaska Department of Public Safety maintained an office in Nome with either a fish-and-wildlife-protection officer (i.e. "game warden") or a trooper assigned to fish-and-wildlife-protection duties. Shaktoolik, more so than the other study communities, had active commercial fisheries, which attracted enforcement attention.

For Nome and Shaktoolik, then, the small samples probably provide less-than-complete descriptions of patterns as well as less-than-complete accounts of trade and barter. For Brevig Mission, Elim, and Stebbins, the data describe *patterns* of cash trade and barter, and provide credible but possibly less-than-complete *accounts* of cash trade and barter. Nonetheless, the study provides a more detailed view of barter and of trade for cash than any previous effort in Northwest Alaska.

For Saint Michael, the data seemed especially complete. Saint Michael alone accounted for 61% of the dollars and 33% of the pounds of traded foods reported in all six study communities. Taking only fish trades into account, Saint Michael accounted for 37% of the dollars and 9% of the pounds of traded fish reported in the six study communities. The Saint Michael data suggested that berries, not fish, might account for the majority of cash trade of subsistence foods in the Seward Peninsula Area.

It is worth considering why the Saint Michael results might have differed from results in the other communities. Saint Michael residents may indeed have traded more (and paid more for their goods) than residents of other communities. Of all the communities in the study, Saint Michael had most extensive involvement in trade in the historical period, as evidenced by the establishment of the Russian trading post there in 1833 and by its steamship support of Yukon River gold mining in the early 1900s.

The Russians didn't pick Saint Michael just for its harbor. According to Zagoskin (quoted in Ray 1983:83), both *Tachek*, the Native predecessor community at the Saint Michael site, and *Pastolik,* the nearby fish camp still used by Saint Michael and Stebbins residents, were large indigenous trading centers. Located at the boundary between two indigenous nations, *Tachek* and *Pastolik* were perfectly situated to facilitate exchanges between the *Iñupiat* to the north and the *Yup'ik* to the south. "This trade had been engaged in long before the founding of the Anyui market in Siberia by men of the same groups who participated in the later fur trade: Sledge and King Islanders, and people from Cape Prince of Wales and Kotzebue Sound" (Ray 1983:83).

James Magdanz

Figure 4-1. St. Michael in September, 2006. The tundra on Saint Michael Island was ideal berry habitat. Saint Michaal residents bought and sold berries in larger volumes and for more cash than any other subsistence food, including salmon strips.

The Russians picked Saint Michael to insert themselves into the center of Western Alaska's 19th century indigenous trading networks. Even after the Russians established another trading station at nearby Unalakleet in 1837, "Saint Michael…remained as the main post, and Unalakleet's little palisaded huddle of buildings, its satellite" (Ray 1983:84).

Other factors also may have affected the results in Saint Michael during this study. Research in the four original study communities was initiated by the researchers, whereas research in Saint Michael and Stebbins was initiated by a Saint Michael community leader. Compare the rate of refusals in Saint Michael (1 of 23 households, or 4%) and Stebbins (0 of 18 households, or 0%) with the rate of refusals in Shaktoolik (8 of 11 households, or 73%). Some of the credit for that is due to Pauline Hunt and Adeline Pete, the community researchers in Saint Michael and Stebbins, respectively, who obviously were trusted by respondents. Moreover, the community researchers in Saint Michael, Stebbins, and Nome chose to do the surveys on their own, without ADF&G or Kawerak staff present. In the other study communities, Kawerak and ADF&G staff joined local researchers during most interviews (see Figure 2-5).

The solitary, local interviewers in Saint Michael and Stebbins

may have created a more conducive atmosphere for free exchange of information than did the three-person interview teams in other communities. However, the solitary, local approach proved less successful in Nome, where the final sample fell far short of the goal. Nome's size and social complexity presented more difficult survey challenges than the smaller communities. In short, because of the sensitive nature of the research, the different approaches of local researchers, and the varied conditions in the study communities, results were more variable in this project than in the typical subsistence harvest survey project.

If this project had a refrain, it was, "And that was the only time..." Of the 33 households that reported trades for cash, 17 (52%) reported only one sale or purchase during the past year. Of the 38 households that reported barters, 20 (53%) reported a single barter during the past year. In post survey interviews, some respondents would begin with a statement such as, "The only time I sold fish…" but then would relate a series of cash exchanges over a period of years. On the one hand, the survey data may be correct; people may typically buy or sell fish only once or twice a year. On the other hand, a low volume of cash trades should not be taken as evidence of a lack of involvement in trades; some respondents described long-standing patterns of trades reaching back to their parents and grandparents.

One interesting aspect of the results was not what *was* there, but what *was not* there: major producers of Chinook salmon strips. A few people in eastern Norton Sound were believed to be significant sources of Chinook salmon strips, that is, they sold much more than one or two or three quart bags of strips a year. If they existed, the major strip producers did not respond to the surveys in this study. In Shaktoolik, where one or more households were believed to be active in the strip trade, all the cash trade reports came from a single respondent, a person who bought strips locally. His Shaktoolik strip source either did not report any involvement in trade on the 2003 harvest survey, or reported involvement and then declined to be interviewed in this survey. To provide confidentially and to avoid any hint of enforcement, respondents were not asked to identify their trading partners by name. So researchers could not retrace trade networks person by person. Unalakleet was believed to be another source of Chinook salmon strips, and the Native Village of Unalakleet declined to participate in the study.

To address the two questions posed above: Why did people participate, and what did people *not* tell? It seemed many respondents felt secure enough to speak candidly about patterns of cash trade, but were more careful about revealing specific instances. Clearly,

some potential respondents chose not so speak about cash trade at all, and among those who chose not to speak were the more active sellers of smoked salmon strips.

With these caveats as prelude, this final chapter summarizes and discusses the results. Following the summary and discussion is a review of the regulatory situation in 2007, including the state's attempt to manage several small Northwest Alaska commercial fisheries, and the Alaska Board of Fisheries' consideration of a proposal to provide for customary trade of finfish in the Norton Sound-Port Clarence Area.

Trade and Barter in the Seward Peninsula Area

In the six study communities, a significant minority of households bartered and traded subsistence foods, including subsistence-caught fish. In the five smaller study communities, where about 23% of households traded or bartered, 11% traded subsistence foods for cash, 8% traded fish for cash, 18% bartered subsistence foods, and 12% bartered fish. In the six communities, including Nome, 141 reciprocal exchanges were reported on the surveys: 75 trades for cash in which $7,806 was paid for 2,561 edible pounds of subsistence foods, and 66 barters in which respondents exchanged about 2,315 lb of subsistence food and other goods for about 3,854 lb of similar goods from their barter partners.

The characteristics of sampled households were similar to the population as a whole, and the observed differences (larger households, lower incomes, more Alaska Natives) were not unexpected. Trade and barter occurred most often for foods favored by Alaska Natives– dried salmon, whale muktuk, seal oil – so Alaska Natives would be expected to be more frequently involved in wild food exchanges. Larger households have more labor available to harvest subsistence foods, more mouths to feed, and might have more surpluses to barter or trade. Transient, high-income workers would not be expected to be as involved in trade or barter as more settled persons with more modest incomes.

Following is summary of some of the key findings from the surveys and interviews:

- Cash trades were infrequent. Forty-five percent of the trading households traded only once in the study year and 21 percent traded twice. Similar levels of activity were reported for barter. The two most active trading households each reported seven barters. The most active barter household reported five barters.

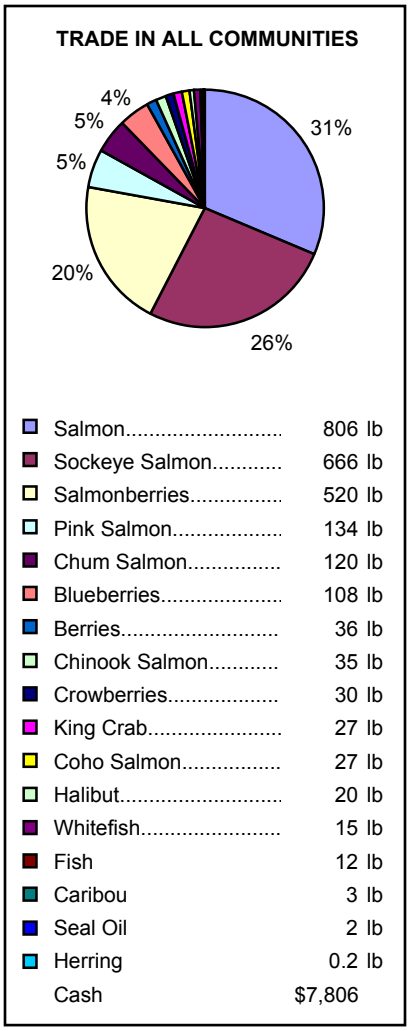


Figure 4-2. Reported Cash Trade Amounts, All Communities. Data are sorted in descending order of amounts bartered. Smoked salmon strips were often reported as "salmon" rather than a specific species of salmon. Strips were usually were made from Chinook or coho salmon, so the proportion of those species traded probably was greater than shown here.

- Cash trades were small. Forty-four percent of the transactions involved $50 or less.
- Household annual totals were low. Forty-two percent of the trading households reported total annual trades of $100 or less, and 90% reported total annual trades of $500 or less.
- Prices varied widely. For typical quantities of smoked salmon strips – a gallon or less – sale prices had virtually no relationship to quantities. A quart of strips was as likely to sell for $25 as for $40, and so was a gallon of strips.
- For some respondents, cash sales were appropriate when producers added value to the subsistence resource, such as smoked salmon strips or black meat in oil. In effect, the producer was being paid for the considerable skill and effort required, not for the raw material.
- People rarely bargained for a better price. Only 12% of respondents said that people in their communities "often" bargained in trades, and 43% said they "never" bargained.
- Middlemen were rare. Eighty-five percent of respondents said they "never" bought and then sold the same subsistence foods. Only two households (3%) said they "often" bought and then sold the same subsistence foods.
- Respondents' own needs were the most important reason for trading. Seventy-five percent of the trading respondents traded to meet their own needs for food or cash, compared with 51% of the barter respondents.
- Respondents usually did not trade with relatives. Trading partners who were relatives usually were lateral kin – aunts, uncles, nieces, nephews, and cousins – not close kin like parents, children, or siblings.
- Although respondents described parents and grandparents involved in trade and barter, respondents themselves reported being personally involved in cash trade for an average of 11 years, and being personally involved in barter for 17 years.
- Trade relationships were short term. Fifty-five percent of the trade partners first traded with the respondents in the year of the study and 91% first traded with the respondent during the previous ten years.

One explanation for the relatively short time reported for trade partner relationships and the longer time reported for customary trade activity is that customary trade relationships were more likely to be

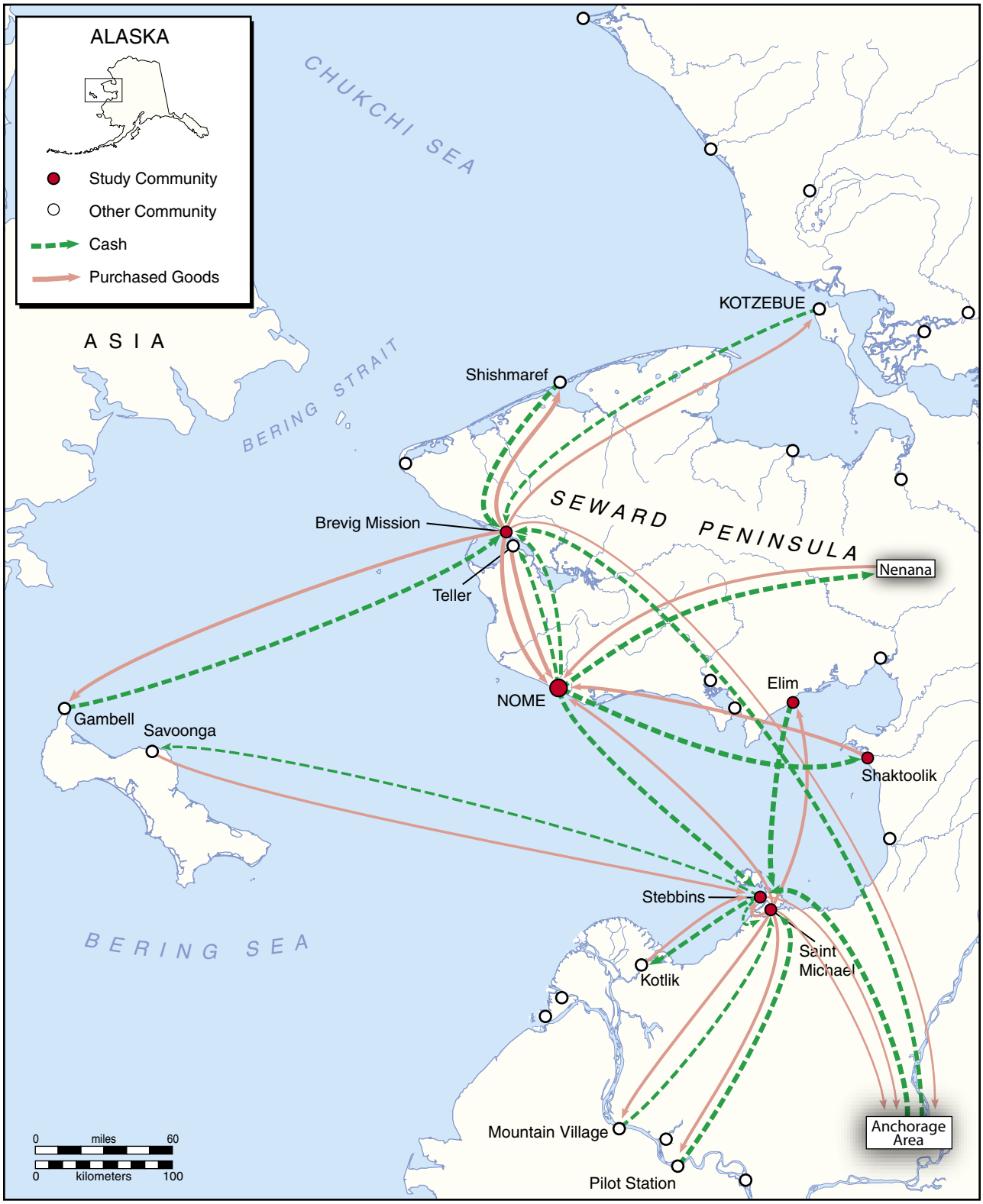


Figure 4-3. Cash Trade Map. Cash trade in subsistence food was reported in each of the six study communities. Of the $7,806 in cash reported, $450 (6%) came from communities outside Northwest Alaska. Of the 2,561 lb in subsistence foods bought or sold, 30 lb (1%) came from outside Northwest Alaska, and 150 lb (6%) came from a source unknown to the respondent. Figure does not show trade within the study communities.

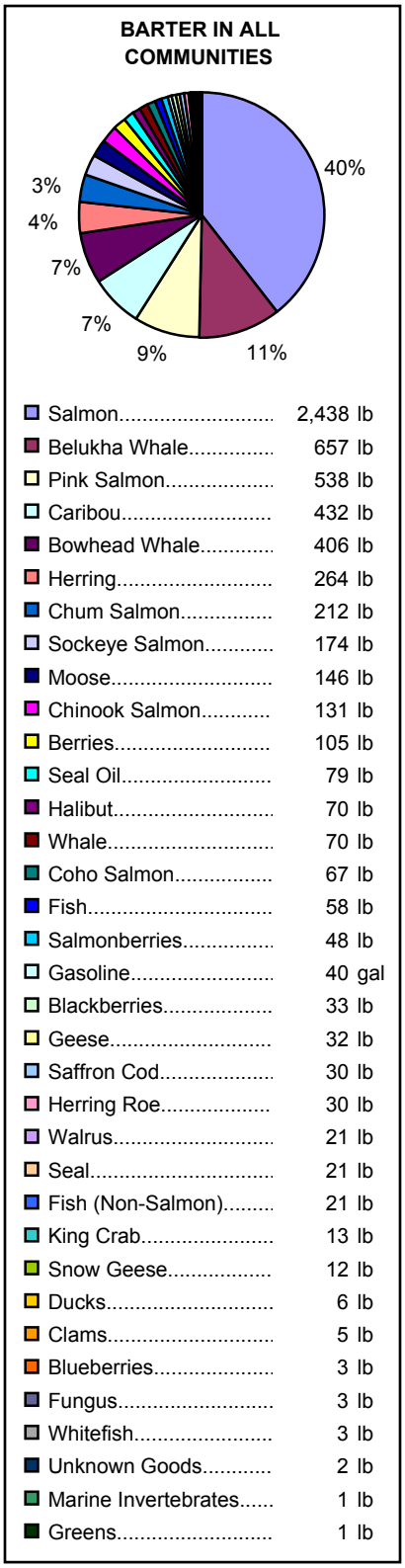


Figure 4-4. Reported Barter Amounts, All Communities. Data are sorted in descending order of total amounts bartered.

economically motivated, not personally motivated. That is, people seemed more likely to sell fish to people they had met recently, including people specifically seeking to buy or sell fish. In some cases in this study, the exchange was the *only* relationship. In these cases, respondents didn't know their partners before the exchange, and did not have other relationships with them.

In the comments portion of one Nome survey, the surveyor wrote: "This family is a working family that does not have time or money to do their own fishing. To eat traditional salmon meals they must buy it from other people who do have the means to catch them. Also, they do not know who they buy fish from."

One of the most "contentious issues" surrounding customary trade involved exchange of fish between rural and non-rural residents (Technical Review Committee 2003). In the past, indigenous trade networks spanned the Bering Strait and reached across Canada. It was reasonable to expect that "extra-regional" exchanges would comprise a majority of the cash trade for some households. That was not the case. While this study documented a few extra-regional exchanges of fish, they were a small fraction of the cash trade reported. None of the cash trade and barter reported in this study extended beyond Alaska's borders. Not only that, 93% of the traded goods and 99% of the bartered goods (by edible weight) reported in this study were exchanged between partners living in Northwest Alaska.

Figure 4-2 summarizes the cash trade reported by all six study communities. Figure 4-3 maps the flows of those trade goods to and from each study community. Figure 4-4 summarizes the barters reported by all six study communities. Figure 4-5 maps the flows of those barter goods to and from each study community. Cultural patterns were evident in the trade networks, in particular. Brevig Mission, an *Iñupiaq* community, tended to trade with other *Iñupiaq* communities to the north: Shishmaref, Kotzebue, Point Hope. Stebbins and Saint Michael, both *Yup'ik* communities, tended to trade with *Yup'ik* communities to the south: Kotlik, Emmonak, Mountain Village, Pilot Station, Saint Marys. Gambell and Savoonga's important role as the principal source of bowhead whale muktuk was evident in both barter and trade networks.

Whether selling to friends or strangers, profit did not seem to be the motive. One Brevig respondent commented that researchers should look "cost of production" for a bundle of fish. The required equipment (boats, motors, nets, racks) was expensive, and it was very hard to calculate the labor costs. He thought people were not getting the money they "deserved" for their products, because they dealt mostly with relatives and friends with similar, modest

Figure 4-5. Barter Map. Like cash trade, barter occurred primarly among communities in Northwest Alaska. Of the 6,169 estimated pounds of bartered goods, 6,098 (99%) came from communities in Northwest Alaska. In Saint Michael and Stebbins, the survey asked about all subsistence food barters; in the other communities the survey asked only about fish. Line weights are the same scale in Figures 4-3 and 4-5.

incomes.

There were a few trades which seemed very profitable. One such trade occurred in Saint Michael, where one gallon of salmonberries sold for $90. Considering how easy it was to pick a gallon of salmonberries near Saint Michael, the price suggested that a buyer was responding as much to a sellers' need for cash as his own desire for berries.

That was certainly the case in Shaktoolik, where an elder respondent told researchers: "Sometimes families that don't have any resources, except getting money from the state, will come over with berries to sell. I know they need the money to buy fuel. I'll buy their berries if I have the money, because I know they need it. I have no hesitation with that." For this elder at least, cash trade involved an awareness of others' situations:

> If you have a broken motor, you make a little hint, I need a part on there…You don't talk about money, you talk about need. "I got a broken motor. I need a new net." You leave it up to the person. You never ask for any money. You just let them know what your situation is. I just need something right now, a good trout net, a good salmon net, and you leave it to the other person to respond to that need. There is no money talk, there is a need talk…
>
> If they offer me money, I'll take it. But their need comes first. Sometimes they offer you money, and you hesitate. If they need a fish, they probably need the money, too, same time. So even if you get nothing back, you give it to them anyway.

In other words, social relationships took precedence over economic relationships. This was an interesting contrast with the Nome family above, who professed to not know the family who sold them dried salmon. Basil Sansom (1988:161) made similar observations about the price among Aboriginal Australians:

> Moving with Aborigines, I learned how to value most of the acts and things they valued in the terms they used. Price was another matter. In the way things worked, it seemed that prices belong not to a generalized system of exchange but to the particular transaction in which they vested.

In Elim, one elder respondent was reluctant to take cash for fish under any circumstances: "I could never sell fish, even if I am low on cash. I could never take cash for fish you could just get. It's not right in my heart." However, this same respondent had no qualms about buying seal oil or muktuk. His view, it seemed, was that fish were so easy to harvest compared with seals and whales. Fish harvesters added little value to their fish; therefore they should just share them.

However subsistence foods were exchanged, the exchanged foods made up a small minority of the total subsistence harvest.

Harvest surveys estimated that northwest Alaska communities typically harvested about 2,600 lb per household per year (CSIS 2006). The 73 households in this study reported trading about 35 lb of food per household and bartering about 84 lb of food per household. If respondent households' total subsistence harvests were typical, that is, about 2,600 lb annually, then cash trade would have comprised 1.3% of their total harvest, by edible weight, and barter would have comprised about 3.2%.

Discussion

In the Alaska literature, many authors have written about indigenous trade (e.g. Bogoras 1904-9; Burch 1988; Clark 1970; de Laguna 1972; Langdon and Worl 1981; Ray 1983), and a few authors have speculated about contemporary cash trade and barter. We write "speculated," because until very recently little empirical research had been conducted on cash trade and barter of subsistence-caught fish and wildlife in contemporary Alaska.

In a paper on the economic valuation of subsistence harvests, Brown and Burch asserted that "barter among subsistence hunters, or between subsistence hunters and others, has largely been replaced by cash sale in Alaska, but still occurs occasionally" (1992:230). Results from this study indicated that barter has *not* "largely been replaced by cash sale," at least in Northwest Alaska. Of the 141 exchanges documented in this study, 75 (53%) were cash trades and 66 (47%) were barter. Measured in edible pounds, the volume of barter (6,619 lb, 71%) reported was twice the volume of cash trade (2,561, 29%), which suggests that barter and cash trade occurred with similar frequency and involved similar amounts. (Because food usually was on both sides of a barter but only on one side of a trade, an equal number of similar-sized transactions would involve twice as much bartered food as traded food.)

This study suggested that Langdon and Worl were closer to the mark when they concluded that "the extensive trading networks, routes, and centers which once characterized Alaskan societies into the early historic era have disappeared. However, regionalized trading, particularly through trading partners, persists" (1981:96).

Indigenous people around the circumpolar Arctic from Asia to Alaska to Canada to Greenland rely to a substantial degree upon subsistence hunting and fishing for their livelihoods, and harvest a similar mix of marine mammals, terrestrial mammals, and fish. At one time, trading networks spanned international borders and connected Arctic's indigenous people.

In the 20th century, the Arctic nations have taken different ap-

James Magdanz (2)

Figure 4-6. Country food market in Ilulisaat, Greenland, April 2005. Arctic nations have different approaches to commiditization of country foods. Since the late 19th century, Greenland has allowed cash trade of "country foods." Above right, Ilulisaat hunters butcher a freshly caught minke whale in the community market, or Kalaalimineerniarfik.

proaches to managing trade in "country food." As a general rule, governmental units with larger indigenous populations – such as Greenland and Nunavut – have incorporated country food into limited, local, cash economies. For the most part, Alaska has not. Alaska has treated all cash exchanges of fish, regardless of scope, as a commerce, and has prohibited most cash exchanges of wildlife, except for trapping.

In Greenland, for example, Native hunters throughout the 20th century and into the 21st century have been selling seal, whale, and other country foods in community markets both to local *Kalaallit* and to Danes:

> Today these transactions take place at the *kalaalimineerniarfik* ('place where Greenlandic food is sold'), a local market where fresh catches can be bought directly from the hunters or from a person selling on their behalf. Traditional food can also be bought in the shops and supermarkets, where different kinds of goods (mostly frozen) are available. (Pars et al 2001:23)

In Canada, the new Nunavut government is attempting to simultaneously continue the traditional food economy and develop its cash economy.

> Experience with many enterprises suggests that small-scale renewable resource-based enterprises could provide some of these benefits. In particular, country food stores have been set up in the North, to provide processed and packaged Arctic meats and fish. These country food stores have met with great success in northern communities - they have experimented with new and traditional products - caribou and muskox jerky, seal pastrami, char, maqtaq

> - some of which have met with keen customer interest and demand. Furthermore, the stores provide jobs in the community that support the domestic harvest, so in the food security context they have a multiple effect. (Myers 2000:1)

In other words, in Canada and Greenland subsistence economies were allowed to evolve to incorporate some market elements. Given the very limited demand for most Arctic foods – whale, seal, caribou – and the extremely high transportation costs, most markets were small and local. For species with greater demand – salmon, cod, shrimp – harvesting was managed as a commercial activity.

Until statehood, Alaska had a similar approach. Writing about Northwest Alaska in the 1930s, Anderson and Ells (1935:201) observed:

> The essential parts of the Eskimo diet are still made up of natural foods procured from the land and water of their habitat. On the average, this food supply has been sufficient for their needs, although seasonal shortages have been known. These become accentuated as the Eskimos sell more and more food, such as salmon, to the traders to procure the tempting articles and foods of the whites.

In a report about Kivalina prepared during Project Chariot, Saario and Kessel wrote: "During the fall of 1960, three men from Kotzebue flew to the Wulik River to obtain fish to sell in Kotzebue. They caught about 3,400 lb of fish" (1966:986).

Since statehood, the Alaska Department of Fish and Game has attempted to accommodate all cash trade of fish in Northwest Alaska under commercial regulations. The Department established a number of small commercial fisheries for species like whitefish, saffron cod, burbot, and rainbow smelt (Kohler et al 2004:52-53). One of the more viable examples was the Kotzebue commercial sheefish fishery, which dated to 1967 (Kohler et al 2004:152). This is an unusual fishery, conducted with gillnets set under the ice in winter, a traditional subsistence method. Unlike many large-scale commercial fisheries, this commercial fishery evolved directly out of a subsistence fishery. In its early years, it attracted a dozen or more sellers, but over its life, the commercial fishery has averaged less than five participants a year, and the median number of registered fishermen has been one (Figure 4-7). During the last 10 years, on the average, one fisherman participated and sold about 100 fish each year. In the four years when both subsistence and commercial sheefish harvest data were available for Kotzebue, the commercial harvest represented less than 1% of the total community subsistence harvest.

Other small commercial freshwater fisheries in Northwest Alaska

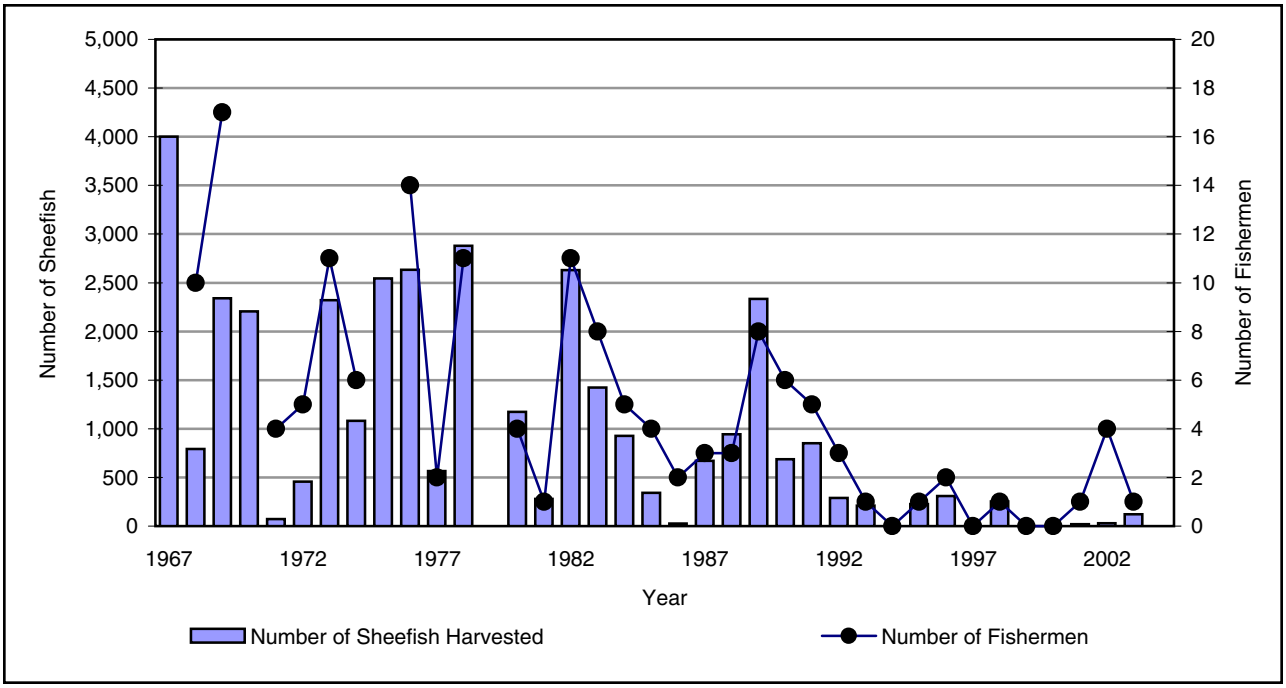


Figure 4-7. Effort and Harvest, Kotzebue Commercial Sheefish Fishery, 1967-2003. This unusual fishery is conducted with gill nets set under the ice in winter, a traditional subsistence technique. Legally speaking, the fishers were retaining some of their commercial harvests for personal or family consumption, and selling the rest in commercial markets. Practically speaking, the fishers were fishing for subsistence and selling small amounts of excess fish to friends and neighbors in Northwest Alaska.

were equally small. Usually, these fisheries were established in response to requests from individuals who wanted to sell fish locally. In these fisheries, sellers obtained a commercial license from the state (currently $75), and submitted fish tickets to the department documenting each sale. In most cases, these fisheries had only a few licensed fishers, and sometimes just one. Usually these fisheries lasted only a few years before the sellers either quit selling or grew tired of the fish ticket bureaucracy.

The amount of cash trade that could constitute "customary trade" has been an issue for at least 25 years. In a 1981 memo to Alaska Governor Jay Hammond on new subsistence provisions in the Alaskan National Interest Lands Conservation Act (ANILCA Title VIII), Alaska Department of Law attorneys suggested that Yukon River commercial fishing "may be consistent with the federally mandated priority for customary trade" (Alaska Department of Law 1981:33). But at the Board of Fisheries meeting in January, 2007, assistant attorney general Lance Nelson offered a more limited interpretation of the state statute. Nelson told board members:

> It is important that it (customary trade) be considered non-commercial. The statute says non-commercial. Even more important than that is the fact that, since subsistence uses are limited to Alaska residents, any commercial activity related to subsistence would be prohibited by the United States Constitution's commerce clause, because it is going to be illegal under the commercial clause for the State to provide a commercial opportunity and limit it to residents of this state. That's called "facial discrimination" of

> interstate commerce. So it is doubly important that any level you might consider allowing be non-commercial…
>
> I happened to be involved in drafting this (state) legislation in 1992, and was present in the discussions of the legislative committees and the legislature itself… It was not intended to supplant commercial fishing. The intent of it was a means to provide for full distribution, full opportunity for distribution of subsistence products among subsistence users. That's the basic intent, and motivation for allowing customary trade.

Nelson advised the Board that customary trade in state regulation should stay below levels seen in commercial fisheries in the area, and below levels that might be viewed as "commerce."

It could be argued that some of the small "commercial" fisheries in Northwest Alaska met the definition of "customary trade," except the Department elected to manage them as commercial fisheries. The advantages (for the Department) were that the freshwater "commercial" fisheries were easy to establish administratively, and did not require Board of Fisheries approval. Licensing, reporting, and other systems were all in place for "commercial" fisheries. In practice, though, subsistence fishers often found that the $75 commercial license and the fish tickets were not worth the hassle for a hundred fish. Eventually, as the Kotzebue sheefish fishery may illustrate, many opted out of the commercial management system, but continued to fish for subsistence, and perhaps to quietly sell a few fish to their neighbors.

Given the small volume of fish, the small number of sellers, the mostly local buyers, and the lack of middlemen, many of these small fisheries were commercial in name only. They were conducted by the same people, in the same locations, in the same seasons, and with the same gear as the subsistence fisheries. Legally speaking, the fishers were "retaining" some of their "commercial" harvests for personal or family consumption, and selling the rest in commercial markets. Practically speaking, the fishers were fishing for subsistence and selling small amounts of excess fish to friends and neighbors in Northwest Alaska. In most of the world, they would be considered subsistence fisheries.

Conclusion

This project began as a discussion between two of the authors during a long drive from Teller back to Nome in 2002. In the Teller store, one of us had seen a hand-lettered sign on a bulletin board advertising bundles of dried salmon for sale. We knew that Teller stores had a long history of cash trade in dried fish. We knew that a similar sign was tacked to a bulletin board in a Nome grocery

store. We knew that small quantities of subsistence foods often were sold person-to-person throughout Alaska. We knew that in *Iñuit* communities in Canada and Greenland, "country food" sales were permitted and routine. We knew that in Alaska, such sales had been prohibited by state regulation for decades.

Nonetheless, people kept buying and selling: a bundle of salmon, a sack of frozen cod, a jar of seal oil, or a bucket of berries. Rarely was anyone cited, even when products were sold at public venues like the annual Alaska Federation of Natives convention.

On the one hand, there were elder Natives who would sell someone a bag of strips out of their house if they had some extra strips, if someone asked, maybe a couple hundred dollars worth a year. On the other hand, allegedly, there were ambitious entrepreneurs who fished hard, smoked much, and took coolers of smoked strips to the city to sell. Under state regulations prior to July 2007, selling extra bags of strips for a couple hundred dollars had the same legal status as selling coolers full for thousands of dollars. If the fish came from state managed waters, both perpetrators were equally guilty.

Long-term local biologists and enforcement officers were aware of the cash trade in subsistence-caught fish, but few had ever written a citation. With the exception of smoked salmon strips, rarely did anyone raise conservation concerns. People traded fish for cash, and agencies ignored it unless it was particularly egregious. It was bureaucratic cognitive dissonance.

This created a situation in which it was hard for responsible citizens to criticize, let alone report, the ambitious entrepreneurs. Prohibiting cash trade in regulation and then failing to enforce the regulation created, paradoxically, a social climate in which large-scale sales of subsistence-caught fish could prosper.

One of the duties of ADF&G's Division of Subsistence is to "evaluate the impact of state and federal laws and regulations on subsistence hunting and fishing, and when corrective action is indicated, make recommendations to the department" AS 16.05.094(5). As a matter of policy, the Division prefers not to make such recommendations unilaterally, but rather to work with the public to develop recommendations. As this study neared its end in 2006, Austin Ahmasuk, one of the authors of this study and an employee of Kawerak Inc., submitted a proposal to the Alaska Board of Fisheries to provide for customary trade in the Norton Sound-Port Clarence Area. A summary of the Board's deliberations appears in Appendix 7.

When the Board began deliberations on Proposal 148 on February 4, 2007, the first question came from board member Bonnie Williams. She asked staff to clarify the legal foundation for customary

trade. She asked staff to confirm that the practice was "universal or near universal in the area." She asked whether it was "fair to say that the department is not enforcing" the prohibition on sales of subsistence-taken fish. Staff noted one citation had been issued in Nome in 2002. Department of Law staff remarked on the limited resources available for enforcement.

"It is unhealthy for a regulation to be consistently violated," Ms. Williams concluded, "It builds contempt for all law."

The Board deliberated on Proposal 148 and adopted substitute language for a regulation to take place on July 1, 2007 (Appendix 3). At that time, it will be legal for a household, in the Norton Sound-Port Clarence Area only, to sell subsistence-caught fish under the conditions listed in the regulation. Basically, a household:

a) Must obtain a permit before selling subsistence-caught fish.

b) May not sell subsistence-caught fish for than $200 total per household in a calendar year.

c) Must record all sales on the permit, including date of each sale, buyer's name and address, species and amount of finfish sold, harvest location, form of processing used, and dollar amount of each sale.

d) Must conduct all sales, purchases, and deliveries in the Norton Sound-Port Clarence Area.

e) May not buy and then resell finfish.

The Board's action brought state and federal rules on customary trade in the Norton Sound-Port Clarence Area into closer alignment. State limits and record keeping requirements were more strict than federal requirements, but the basic provisions were similar.

Recommendations

Most, if not all, of the exchanges described by respondents in this study would seem to meet the statutory definitions of customary trade: limited, non-commercial exchange of subsistence-caught fish or game for cash. Although customary trade is now recognized by both management systems, the federal and state boards took different approaches. The federal approach was minimal – no permits, no limits, no geographic restrictions – while the state found it necessary to add these conditions. There are important differences in federal and state management systems. In the federal system, only local rural Alaska residents with customary and traditional uses are eligible to participate in customary trade. In the state system, all Alaska residents are eligible to participate in state customary trade.

Thus the state potentially has more subsistence users, although very few people from outside the Norton Sound-Port Clarence Area fish in the area for subsistence.

The state regulation would not have maintained existing levels of cash trade as documented in this study. The average household in this study reported customary trade in fish totaling $192 annually. Had that limit been in place for fish, and followed by the respondents in this study, the reported cash trade would have been $3,739 instead of $4,599, a reduction of about 19%. The 21% of households whose cash trade exceeded $200 a year in the past would have had to reduce their trade to comply with the new regulation.

We recommend a review of the information collected in this study. We further recommend a comparison of the Seward Peninsula Area findings with findings for Bristol Bay and the Yukon River drainage (Krieg et al 2007, Moncrieff 2007). Patterns of trade in these areas were different than those in Norton Sound, and the comparisons could be instructive. Because salmon comprised 97 percent of the reported cash trade in fish, we recommend better methods to estimate the amount of salmon being purchased or sold in customary trade.

There were legitimate concerns about high-volume cash trade in subsistence fish in Alaska, trade which may be more commercial in nature than subsistence. An important step in managing the high-volume traders is securing the cooperation and support of their neighbors by adopting realistic and defensible regulations for customary trade.

Acknowledgments

Without respondents, survey research could not happen. In this unusual study, respondents were asked to report on their own potentially illegal activities. Respondents trusted that researchers would do no harm, and perhaps even hoped they would do some good. For your trust and your hopes, thank you.

The project also would have been impossible without the support of the Native Village of Brevig Mission, the Native Village of Elim, the Nome Eskimo Community, the Native Village of Shaktoolik, the Native Village of Saint Michael, and the Native Village of Stebbins. In each community, the local researchers were invaluable. Matilda Nayokpuk in Brevig Mission, Joel Saccheus in Elim, Dennis Bahnke in Nome, Pauline Hunt in Saint Michael, Carrie Takak in Shaktoolik, and Adeline Pete in Stebbins verified household lists, assisted with surveys and interviews, and helped finish up field work after the principal investigators left.

Charlie Lean, Wes Jones, Jim Menard, Dan Bergstrom, Gene Sandone, Tom Taube, Alex Whiting, Susan Georgette, Lance Nelson, Al Cain, Karl Erickson, Helga Eakon, Art Ivanoff, Henry Oyoumick, and many others offered comments, criticisms, and suggestions throughout the research project. To each of you, we offer our thanks.

Catherine Moncrieff kept us informed about her parallel customary trade project in the Yukon River area, and shared a draft of her final report with us. Robbin La Vine, Laura Jurgensen, Molly Chythlook, Ted Krieg, and Jim Fall kept us informed about their customary trade project in Bristol Bay and, like Catherine, Jim shared their final report draft with us.

For the Division of Subsistence, data were reviewed, organized, analyzed, and archived by Dave Koster, the information management program coordinator. James Simon and Elizabeth Andrews reviewed reports and supervised our progress. Marianne See coordinated the project with the funding agency. Sue Steinacher developed the community posters. Pam Amundson and Ana Lewis kept the travel papers moving, the timesheets coming, and the budgets balanced.

For the U.S. Fish and Wildlife Service, Amy Craver supervised the project for FIS, in cooperation with Polly Wheeler and Kathleen Orzechowski. All were supportive of our efforts at every juncture, which we greatly appreciate. This project was funded in the amount of $261,878 under contract number 701814C142.

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Appendix 1:
Appendix Tables

TABLE A1. POUNDS AND DOLLARS EXCHANGED BY CATEGORY AND COMMUNITY

	Total Edible Pounds Exchanged[1] (Number of Items)[2]					
	Salmon	Other Fish	Other Subsistence Goods[3]	Store Goods	Total Pounds	Total Dollars Exchanged
	Pounds (N)	Pounds (N)	Pounds (N)	Pounds (N)	Pounds (N)	Dollars (N)
Source of Trade Goods						
Anchorage Area						$450 (3)
BREVIG MISSION	350 (7)				350 (7)	
ELIM	14 (2)		27 (3)		41 (5)	$480 (6)
Gambell						$125 (1)
Kotlik	18 (2)	15 (1)			33 (3)	
Kotzebue						$50 (2)
Mountain Village						$50 (1)
Nenana	30 (1)				30 (1)	
NOME	750 (4)				750 (4)	$1,540 (9)
Pilot Station						$200 (1)
SAINT MICHAEL	162 (15)	5 (2)	633 (32)		800 (49)	$4,032 (44)
Savoonga		20 (1)			20 (1)	
SHAKTOOLIK	24 (4)				24 (4)	$120 (3)
Shishmaref						$250 (2)
STEBBINS	182 (5)	7 (2)	66 (3)		255 (10)	$509 (10)
Teller	108 (1)				108 (1)	
Unknown	150 (1)				150 (1)	
Total Trade	*1,788 (41)*	*47 (6)*	*726 (38)*	*0 (0)*	*2,561 (85)*	*$7,806 (83)*
Source of Barter Goods						
Anchorage Area	13 (2)	18 (1)	6 (2)		37 (5)	-
BREVIG MISSION	383 (10)				383 (10)	-
ELIM	498 (16)	33 (2)	63 (3)		594 (21)	-
Emmonak	30 (1)				30 (1)	-
Gambell			128 (11)		128 (11)	-
Golovin	12 (1)				12 (1)	-
Kotlik	60 (1)		50 (1)		110 (2)	-
Kotzebue		30 (1)			30 (1)	-
Koyuk			271 (3)		271 (3)	-
NOME	80 (9)	3 (1)	114 (6)		196 (16)	-
Nulato	30 (1)				30 (1)	-
Pilot Station				21 (2)	21 (2)	-
Point Hope			40 (2)		40 (2)	-
Saint Marys		30 (2)	7 (12)		37 (14)	-
SAINT MICHAEL	102 (4)	42	290	(2)	434 (6)	-
Savoonga		70	306 (3)		376 (3)	-
SHAKTOOLIK	2,120		(1)	20	2,140 (1)	-
Shishmaref		(1)	80 (1)		80 (2)	-
Shungnak	(8)	(2)	136 (14)		136 (24)	-
STEBBINS	142 (5)	250 (10)	598 (9)	1 (1)	991 (25)	-
Unalakleet	90 (1)				90 (1)	-
Wasilla			5		5 (2)	-
Total Barter	*3,560 (59)*	*475 (20)*	*2,093 (70)*	*42 (5)*	*6,169 (154)*	-

[1] Edible pounds were calculated from reported amounts using standard conversion factors (see Table 2-2).

[2] Each exchange had a minimum of two items, one from each participant in the exchange. An "item" might be a bundle of 25 dried salmon, a bag of smoked salmon strips, or a bucket of berries. Each cash payment, regardless of amount, counted as one "item."

[3] "Other Subsistence Goods" included shellfish.

TABLE A2. AMOUNTS TRADED, BY HOUSEHOLD AND COMMUNITY

community	Household Number	Household Active in Trade?	Number 0f Trades	Cash	Salmon	Other Fish	Other Subsistence Goods	Trade Goods Total
Brevig Mission	1	Yes	2	$375	164 lb			164 lb
	2							
	3							
	4	Yes	1	$50	26 lb			26 lb
	5							
	6	Yes	1	$120	53 lb			53 lb
Elim	1							
	2							
	3							
	4	Yes	1	$25	2 lb			2 lb
	5							
	6							
	7							
	8							
	9	Yes	1	$30			6 lb	6 lb
	10	Yes	3	$125	12 lb		21 lb	33 lb
Nome	1							
	2	Yes	2	$200	300 lb			300 lb
	3							
	4	Yes	4	$450	258 lb			258 lb
	5							
	6							
	7	Yes	3	$740	600 lb			600 lb
Shaktoolik	1	Yes	2	$120	12 lb			12 lb
	2							
Stebbins	1	Yes	1	$70	12 lb	5 lb		17 lb
	2	Yes	2	$35		35 lb		35 lb
	3	Yes	1		6 lb			6 lb
	4	Yes	1	$50			6 lb	6 lb
	5							
	6							
	7							
	8	Yes	1	$24	2 lb	2 lb		4 lb
	9							
	10	Yes	1	$250	120 lb		30 lb	150 lb
	11	Yes	1	$80	12 lb			12 lb
	12	Yes	1	$30	30 lb			30 lb
	13							
	14	Yes	1	$300	18 lb			18 lb
Saint Michael	1	Yes	1				3 lb	3 lb
	2	Yes	7	$230	18 lb	5 lb	18 lb	41 lb
	3	Yes	3	$452	18 lb		6 lb	24 lb
	4							
	5	Yes	4	$350	12 lb		28 lb	40 lb
	6	Yes	1	$40			2 lb	2 lb
	7	Yes	4	$705	66 lb		18 lb	84 lb
	8	Yes	1	$40	3 lb			3 lb
	9	Yes	1	$40	3 lb			3 lb
	10							
	11							
	12	Yes	3	$450			102 lb	102 lb
	13							
	14							
	15	Yes	8	$1,285			294 lb	294 lb
	16	Yes	5	$495	42 lb		54 lb	96 lb
	17	Yes	4	$160			36 lb	36 lb
	18	Yes	1	$10		0 lb		
	19	Yes	2	$475			102 lb	102 lb
Totals			**75**	**$7,806**	**1,788 lb**	**47 lb**	**726 lb**	**2,561 lb**
Counts	**58**	**33**	**33**	**31**	**23**	**5**	**15**	**32**
Average Per Household				**$135**	**31 lb**	**1 lb**	**13 lb**	**44 lb**
Percentages								
Of Households (n=73)	**79%**	**44%**						
Of Exchange Type					**70%**	**2%**	**28%**	**100%**
Of All Exchanges					**20%**	**1%**	**8%**	**29%**

TABLE A3. AMOUNTS BARTERED, BY HOUSEHOLD AND COMMUNITY

community	Household Number	Household Active in Barter?	Number of Barters	Salmon	Other Fish	Other Subsistence Goods	Store Goods	Barter Goods Total
Brevig Mission	1	Yes	1	32 lb				32 lb
	2	Yes	3	212 lb		70 lb		282 lb
	3	Yes	1	83 lb		10 lb		93 lb
	4							
	5	Yes	1	58 lb				58 lb
	6							
Elim	1	Yes	2	32 lb	30 lb	45 lb		107 lb
	2	Yes	2	68 lb		6 lb		74 lb
	3	Yes	1	42 lb		5 lb		47 lb
	4	Yes	5	14 lb	5 lb	34 lb		53 lb
	5	Yes	1	105 lb		30 lb		135 lb
	6	Yes	2	12 lb		7 lb		19 lb
	7	Yes	2	195 lb		40 lb		235 lb
	8	Yes	1	31 lb		5 lb		36 lb
	9							
	10	Yes	1		28 lb	25 lb		53 lb
Nome	1	Yes	2	13 lb	21 lb	12 lb		45 lb
	2							
	3	Yes	1	12 lb				12 lb
	4							
	5	Yes	4	29 lb	70 lb	161 lb		259 lb
	6	Yes	2	21 lb		1 lb		22 lb
	7							
Shaktoolik	1							
	2	Yes	3	2,120 lb		5 lb	20 lb	2,145 lb
Stebbins	1	Yes	1	15 lb		57 lb		72 lb
	2							
	3							
	4							
	5	Yes	2		45 lb	17 lb		62 lb
	6	Yes	1	37 lb	30 lb	18 lb	1 lb	86 lb
	7	Yes	4	48 lb	73 lb	43 lb		164 lb
	8							
	9	Yes	1			636 lb		636 lb
	10	Yes	1	60 lb		50 lb		110 lb
	11							
	12							
	13	Yes	2	60 lb	132 lb			192 lb
	14	Yes	1	12 lb		3 lb		15 lb
Saint Michael	1	Yes	2	24 lb		252 lb		276 lb
	2							
	3							
	4	Yes	1	2 lb		2 lb		4 lb
	5	Yes	2			16 lb	21 lb	37 lb
	6	Yes	1	16 lb				16 lb
	7	Yes	2	12 lb		101 lb		113 lb
	8							
	9							
	10	Yes	1	30 lb	30 lb			60 lb
	11	Yes	1	24 lb		120 lb		144 lb
	12	Yes	1			22 lb		22 lb
	13	Yes	1	6 lb		5 lb		11 lb
	14	Yes	3	90 lb	12 lb	209 lb		311 lb
	15	Yes	1	30 lb		60 lb		90 lb
	16							
	17							
	18							
	19	Yes	2	18 lb		26 lb		44 lb
Total			**66**	**3,560 lb**	**475 lb**	**2,093 lb**	**42 lb**	**6,169 lb**
Count	**58**	**38**	**38**	**33**	**11**	**32**	**3**	**38**
Average Per Household				**94 lb**	**13 lb**	**55 lb**	**1 lb**	**162 lb**
Percentages								
Of Households (n=73)	**79%**	**52%**						
Of Exchange Type				**58%**	**8%**	**34%**	**1%**	**100%**
Of All Exchanges				**41%**	**5%**	**24%**	**0%**	**71%**

TABLE A4. AMOUNTS TRADED AND BARTERED, BY EXCHANGE ID

Exchange Type	Exchange ID	"Cash"	"Salmon"	"Other Fish"	"Other Subsistence Goods"	"Store Goods"	All Goods
Trade	69027.01	$250	111				0
Trade	69027.02	$125	53				0
Trade	69064.01	$50	26				0
Trade	69094.01	$120	53				0
Trade	126046.01	$25	2				0
Trade	126089.01	$30			6		6
Trade	126138.01	$35			11		11
Trade	126138.02	$50			11		11
Trade	126138.03	$40	12				0
Trade	251005.01	$100	150				0
Trade	251005.02	$100	150				0
Trade	251007.01	$60	108				0
Trade	251007.02	$60	108				0
Trade	251007.03	$80	12				0
Trade	251007.04	$250	30				0
Trade	251019.01	$175	150				0
Trade	251019.02	$370	300				0
Trade	251019.03	$195	150				0
Trade	307032.01	$60	6				0
Trade	307032.03	$60	6				0
Trade	325013.01				3		3
Trade	325014.01	$25		5			5
Trade	325014.02	$25	6				0
Trade	325014.03	$40			6		6
Trade	325014.04	$50			6		6
Trade	325014.05	$25	6				0
Trade	325014.06	$25	6				0
Trade	325014.07	$40			6		6
Trade	325019.01	$400	6				0
Trade	325019.02	$40	12				0
Trade	325019.03	$12			6		6
Trade	325029.01	$200			24		24
Trade	325029.02	$50			4		4
Trade	325029.03	$50	6				0
Trade	325029.04	$50	6				0
Trade	325040.01	$40			2		2
Trade	325049.01	$300	30				0
Trade	325049.02	$300	30				0
Trade	325049.03	$30	6				0
Trade	325049.04	$75			18		18
Trade	325055.01	$40	3				0
Trade	325058.01	$40	3				0
Trade	325072.01	$150			24		24
Trade	325072.02	$300			36		36
Trade	325072.03				42		42
Trade	325084.01	$360			72		72
Trade	325084.02	$200			48		48
Trade	325084.03	$100			24		24
Trade	325084.04	$125			30		30
Trade	325084.05	$125			30		30
Trade	325084.06	$125			30		30
Trade	325084.07	$125			30		30
Trade	325084.08	$125			30		30
Trade	325101.01	$90			18		18
Trade	325101.02	$30	6				0
Trade	325101.03	$240	18		18		18
Trade	325101.04	$60	18				0

TABLE A4. AMOUNTS TRADED AND BARTERED, BY EXCHANGE ID (CONTINUED)

Exchange Type	Exchange ID	"Cash"	"Salmon"	"Other Fish"	"Other Subsistence Goods"	"Store Goods"	All Goods
Trade	325101.05	$75			18		18
Trade	325115.01	$60			12		12
Trade	325115.02	$50			12		12
Trade	325115.03	$25			6		6
Trade	325115.04	$25			6		6
Trade	325122.01	$10		0			0
Trade	325200.01	$375			90		90
Trade	325200.02	$100			12		12
Trade	327018.01	$70	12	5			5
Trade	327025.01	$15		15			15
Trade	327025.02	$20		20			20
Trade	327029.01		6				0
Trade	327043.01	$50			6		6
Trade	327073.01	$24	2	2			2
Trade	327078.01	$250	120		30		30
Trade	327080.01	$80	12				0
Trade	327088.01	$30	30				0
Trade	327125.01	$300	18				0
Barter	69027.01		32				0
Barter	69048.01		69				0
Barter	69048.02		113		35		35
Barter	69048.03		30		35		35
Barter	69058.01		83		10		10
Barter	69084.01		58				0
Barter	126020.01		32		20		20
Barter	126020.02			30	25		55
Barter	126031.01		26		3		3
Barter	126031.02		42		3		3
Barter	126040.01		42		5		5
Barter	126046.01		6		9		9
Barter	126046.02		6		4		4
Barter	126046.03		2		4		4
Barter	126046.04			5	3		8
Barter	126046.05				16		16
Barter	126052.01		105		30		30
Barter	126053.01		6		2		2
Barter	126053.02		6		5		5
Barter	126056.01		92		16		16
Barter	126056.02		104		24		24
Barter	126066.01		31		5		5
Barter	126138.01			28	25		53
Barter	251003.01			3			3
Barter	251003.02		13	18	12		30
Barter	251006.01		12				0
Barter	251013.01		11	20			20
Barter	251013.02		11	50	64		114
Barter	251013.03		4		1		1
Barter	251013.04		4		96		96
Barter	251015.01		3		1		1
Barter	251015.02		18				0
Barter	307041.01		20		5		5
Barter	307041.02		1,200			10	10
Barter	307041.03		900			10	10
Barter	325013.01				242		242
Barter	325013.02		24		10		10
Barter	325022.01		2		2		2
Barter	325029.01				6	1	7

TABLE A4. AMOUNTS TRADED AND BARTERED, BY EXCHANGE ID (CONTINUED)

Exchange Type	Exchange ID	"Cash"	"Salmon"	"Other Fish"	"Other Subsistence Goods"	"Store Goods"	All Goods
Barter	325029.02				10	20	30
Barter	325040.01		16				0
Barter	325049.01				46		46
Barter	325049.02		12		55		55
Barter	325068.01		30	30			30
Barter	325071.01		24		120		120
Barter	325072.01				22		22
Barter	325077.01		6		5		5
Barter	325080.01			12	10		22
Barter	325080.02		90		14		14
Barter	325080.03				185		185
Barter	325084.01		30		60		60
Barter	325200.01		18		18		18
Barter	325200.02				8		8
Barter	327018.01		15		57		57
Barter	327050.01			12	10		22
Barter	327050.02			33	7		40
Barter	327057.01		37	30	18	1	49
Barter	327070.01		30	18	30		48
Barter	327070.02			25	12		37
Barter	327070.03				1		1
Barter	327070.04		18	30			30
Barter	327076.01				636		636
Barter	327078.01		60		50		50
Barter	327114.01		60	60			60
Barter	327114.02			72			72
Barter	327125.01		12		3		3
Trade Total	**75 53%**	**$7,806**	**1,788 lb**	**47 lb**	**726 lb**	**0 lb**	**773 23%**
Barter Total	**66 47%**		**3,560 lb**	**475 lb**	**2,093 lb**	**42 lb**	**2,609 77%**
All Exchanges	**141 100%**	**$7,806**	**5,348 lb**	**522 lb**	**2,819 lb**	**42 lb**	**3,382 100%**

TABLE A5. AMOUNTS TRADED AND BARTERED, BY HARVEST LOCATION AND STUDY COMMUNITY

	Brevig Mission (N=8)	Elim (N=16)	Nome (N=12)	Shaktoolik (N=3)	St. Michael (N=19)	Stebbins (N=15)
	lb (n)	lb (n)	lb (n)	lb (n)	lb (n)	lb (n)
Cash Trade						
Brevig Mission			1,008 (6)			
Emmonak					6 (2)	
Kotlik					14 (3)	16 (4)
Nenana			30 (1)			
Savoonga						20 (1)
Shaktoolik			12 (1)			
Saint Micheal					764 (43)	
Stebbins					30 (1)	36 (2)
Teller			108 (1)			
Port Clarence	216 (4)					
Grantley Harbor	26 (2)					
Norton Sound				5 (2)		
Moose Point		27 (3)				
Kwiniuk River		2 (1)				
Shaktoolik River				2 (1)		
Pikmiktalik						18 (1)
Yukon River					2 (1)	176 (5)
Barter						
Anchorage		2 (1)				3 (1)
Chitina			13 (2)			
Golovin			12 (1)			
Homer			18 (1)			
Kotlik						50 (1)
Kotzebue		30 (1)	3 (1)		6 (1)	
Koyuk					65 (1)	
Ninilchik		3 (1)				
Nome			29 (4)		30	
Nulato					15 (1)	
Savoonga		1 (1)	20 (1)			
Saint Micheal					258 (10)	
Stebbins						370 (13)
Unalakleet					90 (1)	
Port Clarence	172 (5)					
Grantley Harbor	212 (5)					
Norton Sound				5 (1)		
Topkok			12 (1)			
Nook			9 (2)			
Moose Point		55 (2)				
Kwiniuk River		137 (2)				
Iron Creek		31 (1)				
Tubuktulik		24 (4)				
Kwik River		5 (1)				
Shaktoolik River				2,111 (3)		
Pikmiktalik						49 (2)
Yukon River						93 (3)

TABLE A6. TRADE AND BARTER HISTORIES, BY STUDY COMMUNITY

	Elim (N=16)		Nome (N=12)		Shaktoolik (N=3)		St. Michael (N=19)		Stebbins (N=15)	
	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.
Cash Trade History										
Have You Bought or Sold This Year?	3	19%	3	19%	1	6%	2	11%	2	13%
Have You Ever Bought or Sold…?	8	50%	5	31%	1	6%	15	79%	10	67%
Why Have you Bought or Sold Subsistence-Caught Fish? [1]										
Needed Fish (Subsistence Food[2])	5	63%	5	63%	1	13%	7	47%	7	47%
Someone Else Needed Fish (Subs Food[2])	5	63%	3	38%	1	13%	5	33%	6	40%
Needed Something	6	75%	0	0%	0	0%	8	53%	5	33%
Someone Else Needed Something	4	50%	1	13%	0	0%	6	40%	4	27%
Had Extra Fish (Subsistence Food[2])	3	38%	0	0%	1	13%	5	33%	2	13%
Other Reason	3	38%	1	13%	1	13%	1	7%	0	0%
What is Usually The Single Most Important Factor in Your Buying or Selling? [1]										
Needed Fish (Subsistence Food[2])	1	13%	3	38%	1	13%	5	33%	4	27%
Someone Else Needed Fish (Subs Food[2])	1	13%	1	13%	0	0%	0	0%	3	20%
Needed Something	4	50%	0	0%	0	0%	8	53%	2	13%
Someone Else Needed Something	1	13%	0	0%	0	0%	2	13%	0	0%
Had Extra Fish (Subsistence Food[2])	0	0%	0	0%	0	0%	0	0%	1	7%
Other Reason	0	0%	0	0%	0	0%	0	0%	0	0%
Barter History										
Have You Bartered This Year?	8	50%	4	33%	1	33%	7	37%	2	11%
Have You Ever Bartered...?	13	81%	7	58%	3	100%	12	63%	10	53%
Why Have You Bartered? [1]										
Needed Fish (Subsistence Food[2])	5	38%	2	15%	3	23%	9	75%	6	50%
Someone Else Needed Fish (Subs Food[2])	11	85%	3	23%	3	23%	12	100%	10	83%
Needed Something	11	85%	3	23%	3	23%	1	8%	2	17%
Someone Else Needed Something	6	46%	1	8%	3	23%	1	8%	5	42%
Had Extra Fish (Subsistence Food[2])	8	62%	1	8%	2	15%	8	67%	5	42%
Other Reason	3	23%	5	38%	2	15%	0	0%	0	0%
What is Usually The Single Most Important Factor in Your Barters? [1]										
Needed Fish (Subsistence Food[2])	1	8%	2	15%	1	8%	6	50%	4	33%
Someone Else Needed Fish (Subs Food[2])	2	15%	0	0%	0	0%	5	42%	4	33%
Needed Something	7	54%	0	0%	0	0%	0	0%	1	8%
Someone Else Needed Something	0	0%	0	0%	1	8%	1	8%	0	0%
Had Extra Fish (Subsistence Food[2])	0	0%	0	0%	0	0%	0	0%	1	8%
Other Reason	3	23%	3	23%	1	8%	0	0%	0	0%

[1] Percentages based on households that reported participating in customary trade or barter.

[2] In Saint Michael and Stebbins only, the survey asked about exchanges of all subsistence foods, not just fish. These questions were changed to be consistent with the rest of the survey.

Appendix 2: Selected Federal Statutes and Regulations

Selections from the Marine Mammal Protection Act (MMPA)

Title 16: Conservation
Chapter 51: Marine Mammal Protection
Subchapter II: Conservation and Protection of Marine Mammals

§ 1371. Moratorium on taking and importing marine mammals and marine mammal products

(b) Exemptions for Alaskan natives

Except as provided in section 1379 of this title, the provisions of this chapter shall not apply with respect to the taking of any marine mammal by any Indian, Aleut, or Eskimo who resides in Alaska and who dwells on the coast of the North Pacific Ocean or the Arctic Ocean if such taking -

(1) is for subsistence purposes; or

(2) is done for purposes of creating and selling authentic native articles of handicrafts and clothing: Provided, That only authentic native articles of handicrafts and clothing may be sold in interstate commerce: And provided further, That any edible portion of marine mammals may be sold in native villages and towns in Alaska or for native consumption. For the purposes of this subsection, the term "authentic native articles of handicrafts and clothing" means items composed wholly or in some significant respect of natural materials, and which are produced, decorated, or fashioned in the exercise of traditional native handicrafts without the use of pantographs, multiple carvers, or other mass copying devices. Traditional native handicrafts include, but are not limited to weaving, carving, stitching, sewing, lacing, beading, drawing and painting; and

(3) in each case, is not accomplished in a wasteful manner.

Selections from the Alaska National Interest Lands Conservation ACT (ANILCA)

Title 16: Conservation
Chapter 51: Alaska National Interest Lands Conservation
Subchapter VIII: Subsistence

§ 803. As used in this Act, the term "subsistence uses" means the customary and traditional uses by rural Alaska residents of wild renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade. For the purposes of this section, the term--…

(2) "barter" means the exchange of fish or wildlife or their parts, taken for subsistence uses--

(A) for other fish or game or their parts; or

(B) for other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature.

Customary trade is recognized, but not defined in ANILCA. The definition used in regulation comes from the Senate Committee on Energy and Natural Resources, which in a report to the Senate on ANILCA wrote: "The Committee does not intend that 'customary trade' be construed to permit the establishment of significant commercial enterprises under the guise of 'subsistence uses.' The Committee expects the Secretary and the State to closely monitor the 'customary trade' component of the definition and promulgate regulations consistent with the intent of the subsistence title." (Senate Report No. 413, 96th Congress, 2nd Session, 234)

Selections from Subsistence Management Regulations For Public Lands In Alaska

Title 50: Wildlife and Fisheries
Part 18—Marine Mammals

§ 18.23 Native Exemptions

(a) *Taking.* Except as otherwise provided in part 403 of this title, any Indian, Aleut, or Eskimo who resides in Alaska and who dwells on the coast of the North Pacific Ocean or the Arctic Ocean may take any marine mammal without a permit, subject to the restrictions contained in this section, if such taking is:

(1) For subsistence purposes, or

(2) For purposes of creating and selling authentic native articles of handicraft and clothing, and

(3) In each case, not accomplished in a wasteful manner.

(b) *Restrictions.*

(1) "Except for a transfer to a duly authorized representative of the Regional Director of the U.S. Fish and Wildlife Service for scientific research purposes, no marine mammal taken for subsistence may be sold or otherwise transferred to any person other than an Alaskan Native or delivered, carried, transported, or shipped in interstate or foreign commerce, unless:

(i) It is being sent by an Alaskan Native directly or through a registered agent to a tannery registered under paragraph (c) of this section for the purpose of processing, and will be returned directly or through a registered agent to the Alaskan Native; or

(ii) It is sold or transferred to a registered agent in Alaska for resale or transfer to an Alaskan Native; or

(iii) It is an edible portion and it is sold in an Alaskan Native village or town.

(2) "Except for a transfer to a duly authorized representative of the Regional Director of the U.S. Fish and Wildlife Service for scientific research purposes, no marine mammal taken for purposes of creating and selling authentic Native articles of handicraft and clothing may be sold or otherwise transferred to any person other than an Indian, Aleut or Eskimo, or delivered, carried, transported or shipped in interstate or

foreign commerce, unless:

(i) It is being sent by an Indian, Aleut or Eskimo directly or through a registered agent to a tannery registered under paragraph (c) of this section for the purpose of processing, and will be returned directly or through a registered agent to the Indian, Aleut or Eskimo; or

(ii) It is sold or transferred to a registered agent for resale or transfer to an Indian, Aleut, or Eskimo; or

(iii) It has been first transformed into an authentic Native article of handicraft or clothing; or

(iv) It is an edible portion and it is sold (A) in an Alaskan Native village or town or (B) to an Alaskan Native for his consumption.

(c) The restriction in paragraph (b) shall not apply to parts or products of the Pacific walrus (*Odobenis rosmarus*) to the extent that the waiver of the moratorium and the approved State/Federal regulations relating to the taking and importation of walrus permits the delivery, sale, transportation or shipment of parts or products of the Pacific walrus in interstate or foreign commerce…

Title 50: Wildlife and Fisheries

Part 100—Subsistence Management Regulations For Public Lands In Alaska

§ 100.4 Definitions…

Barter means the exchange of fish or wildlife or their parts taken for subsistence uses; for other fish, wildlife or their parts; or, for other food or for nonedible items other than money, if the exchange is of a limited and noncommercial nature…

Customary trade means exchange for cash of fish and wildlife resources regulated in this part, not otherwise prohibited by Federal law or regulation, to support personal and family needs; and does not include trade which constitutes a significant commercial enterprise…

Subsistence uses means the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter, or sharing for personal or family consumption; and for customary trade...

§ 100.27 Subsistence taking of fish.

(a) Applicability.

(1) Regulations in this section apply to the taking of fish or their parts for subsistence uses….

(11) Transactions between rural residents. Rural residents may exchange in customary trade subsistence-harvested fish, their parts, or their eggs, legally taken under the regulations in this part, for cash from other rural residents. The Board may recognize regional differences and define customary trade differently for separate regions of the State.

(i) Bristol Bay Fishery Management Area—The total cash value per household of salmon taken within Federal jurisdiction in the Bristol Bay Fishery Management Area and exchanged in customary trade to rural residents may not exceed $500.00 annually.

(ii) Upper Copper River District—The total number of salmon per household taken within the Upper Copper River District and exchanged in customary trade to rural residents may not exceed 50% of the annual harvest of salmon by the household. No more than 50% of the annual household limit may be sold under paragraphs 100.27(c)(11) and (12) when taken together. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rests with the seller.

(12) Transactions between a rural resident and others. In customary trade, a rural resident may trade fish, their parts, or their eggs, legally taken under the regulations in this part, for cash from individuals other than rural residents if the individual who purchases the fish, their parts, or their eggs uses them for personal or family consumption. If you are not a rural resident, you may not sell fish, their parts, or their eggs taken under the regulations in this part. The Board may recognize regional differences and define customary trade differently for separate regions of the State.

(i) Bristol Bay Fishery Management Area—The total cash value per household of salmon taken within Federal jurisdiction in the Bristol Bay Fishery Management Area and exchanged in customary trade between rural residents and individuals other than rural residents may not exceed $400.00 annually. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rest with the seller.

(ii) Upper Copper River District—The total cash value of salmon per household taken within the Upper Copper River District and exchanged in customary trade between rural residents and individuals other than rural residents may not exceed $500.00 annually. No more than 50% of the annual household limit may be sold under paragraphs 100.27(c)(11) and (12) when taken together. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rest with the seller.

(13) No sale to, nor purchase by, fisheries businesses.

(i) You may not sell fish, their parts, or their eggs taken under the regulations in this part to any individual, business, or organization required to be licensed as a fisheries business under Alaska Statute AS 43.75.011 (commercial limited-entry permit or crew license holders excluded) or to any other business as defined under Alaska Statute 43.70.110(1) as part of its business transactions.

(ii) If you are required to be licensed as a fisheries business under Alaska Statute AS 43.75.011 (commercial limited-entry permit or crew license holders excluded) or are a business as defined under Alaska Statute 43.70.110(1), you may not purchase, receive, or sell fish, their parts, or their eggs taken under the regulations in this part as part of your business transactions…

Appendix 3:
Selected State Statutes and Regulations

Selected State Statutes

Sec. 16.05.258. Subsistence use and allocation of fish and game.

(a) Except in nonsubsistence areas, the Board of Fisheries and the Board of Game shall identify the fish stocks and game populations, or portions of stocks or populations, that are customarily and traditionally taken or used for subsistence. The commissioner shall provide recommendations to the boards concerning the stock and population identifications. The boards shall make identifications required under this subsection after receipt of the commissioner's recommendations.

(b) The appropriate board shall determine whether a portion of a fish stock or game population identified under (a) of this section can be harvested consistent with sustained yield. If a portion of a stock or population can be harvested consistent with sustained yield, the board shall determine the amount of the harvestable portion that is reasonably necessary for subsistence uses and

(1) if the harvestable portion of the stock or population is sufficient to provide for all consumptive uses, the appropriate board

(A) shall adopt regulations that provide a reasonable opportunity for subsistence uses of those stocks or populations;

(B) shall adopt regulations that provide for other uses of those stocks or populations, subject to preferences among beneficial uses; and

(C) may adopt regulations to differentiate among uses;

(2) if the harvestable portion of the stock or population is sufficient to provide for subsistence uses and some, but not all, other consumptive uses, the appropriate board

(A) shall adopt regulations that provide a reasonable opportunity for subsistence uses of those stocks or populations;

(B) may adopt regulations that provide for other consumptive uses of those stocks or populations; and

(C) shall adopt regulations to differentiate among consumptive uses that provide for a preference for the subsistence uses, if regulations are adopted under (B) of this paragraph;

(3) if the harvestable portion of the stock or population is sufficient to provide for subsistence uses, but no other consumptive uses, the appropriate board shall

(A) determine the portion of the stocks or populations that can be harvested consistent with sustained yield; and

(B) adopt regulations that eliminate other consumptive uses in order to provide a reasonable opportunity for subsistence uses; and

(4) if the harvestable portion of the stock or population is not sufficient to provide a reasonable opportunity for subsistence uses, the appropriate board shall

(A) adopt regulations eliminating consumptive uses, other than subsistence uses;

(B) distinguish among subsistence users, through limitations based on

(i) the customary and direct dependence on the fish stock or game population by the subsistence user for human consumption as a mainstay of livelihood;

(ii) the proximity of the domicile of the subsistence user to the stock or population; and

(iii) the ability of the subsistence user to obtain food if subsistence use is restricted or eliminated.

(c) The boards may not permit subsistence hunting or fishing in a nonsubsistence area. The boards, acting jointly, shall identify by regulation the boundaries of nonsubsistence areas. A nonsubsistence area is an area or community where dependence upon subsistence is not a principal characteristic of the economy, culture, and way of life of the area or community. In determining whether dependence upon subsistence is a principal characteristic of the economy, culture, and way of life of an area or community under this subsection, the boards shall jointly consider the relative importance of subsistence in the context of the totality of the following socio-economic characteristics of the area or community:

(1) the social and economic structure;

(2) the stability of the economy;

(3) the extent and the kinds of employment for wages, including full-time, part-time, temporary, and seasonal employment;

(4) the amount and distribution of cash income among those domiciled in the area or community;

(5) the cost and availability of goods and services to those domiciled in the area or community;

(6) the variety of fish and game species used by those domiciled in the area or community;

(7) the seasonal cycle of economic activity;

(8) the percentage of those domiciled in the area or community participating in hunting and fishing activities or using wild fish and game;

(9) the harvest levels of fish and game by those domiciled in the area or community;

(10) the cultural, social, and economic values associated with the taking and use of fish and game;

(11) the geographic locations where those domiciled in the area or community hunt and fish;

(12) the extent of sharing and exchange of fish and game by those domiciled in the area or community;

(13) additional similar factors the boards establish by regulation to be relevant to their determinations under this subsection.

(d) Fish stocks and game populations, or portions of fish stocks and game populations not identified under (a) of this section may be taken only under nonsubsistence regulations.

(e) Takings and uses of fish and game authorized under this section are subject to regulations regarding open and closed areas, seasons, methods and means, marking and identification requirements, quotas, bag limits, harvest levels, and sex, age, and size limitations. Takings and uses of resources authorized under this section are subject to AS 16.05.831 and AS 16.30.

(f) For purposes of this section, "reasonable opportunity" means an opportunity, as determined by the appropriate board, that allows a subsistence user to participate in a subsistence hunt or fishery that provides a normally diligent participant with a reasonable expectation of success of taking of fish or game.

Sec. 16.05.920. Prohibited conduct generally.

(a) Unless permitted by AS 16.05 - AS 16.40, by AS 41.14, or by regulation adopted under AS 16.05 - AS 16.40 or AS 41.14, a person may not take, possess, transport, sell, offer to sell, purchase, or offer to purchase fish, game, or marine aquatic plants, or any part of fish, game, or aquatic plants, or a nest or egg of fish or game.

(b) A person may not knowingly disturb, injure, or destroy a notice, signboard, seal, tag, aircraft, boat, vessel, automobile, paraphernalia, equipment, building, or other improvement or property of the department used in the administration or enforcement of this title except AS 16.51 and AS 16.52, or a poster or notice to the public concerning the provisions of this title except AS 16.51 and AS 16.52, or a regulation adopted under this title except AS 16.51 and AS 16.52, or a marker indicating the boundary of an area closed to hunting, trapping, fishing, or other special use under this title except AS 16.51 and AS 16.52. A person may not knowingly destroy, remove, tamper with, or imitate a seal or tag issued or used by the department or attached under its authority to a skin, portion, or specimen of fish or game, or other article for the purpose of identification or authentication in accordance with this title except AS 16.51 and AS 16.52 or a regulation adopted under this title except AS 16.51 and AS 16.52.

Sec. 16.05.940. Definitions.

In AS 16.05 - AS 16.40…

…(2) "barter" means the exchange or trade of fish or game, or their parts, taken for subsistence uses:

(A) for other fish or game or their parts; or

(B) for other food or for nonedible items other than money if the exchange is of a limited and noncommercial nature;

…(8) "customary trade" means the limited noncommercial exchange, for minimal amounts of cash, as restricted by the appropriate board, of fish or game resources; the terms of this paragraph do not restrict money sales of furs and furbearers…

…(31) "subsistence fishing" means the taking of, fishing for, or possession of fish, shellfish, or other fisheries resources by a resident domiciled in a rural area of the state for subsistence uses with gill net, seine, fish wheel, long line, or other means defined by the Board of Fisheries;

(32) "subsistence hunting" means the taking of, hunting for, or possession of game by a resident domiciled in a rural area of the state for subsistence uses by means defined by the Board of Game;

(33) "subsistence uses" means the noncommercial, customary and traditional uses of wild, renewable resources by a resident domiciled in a rural area of the state for direct personal or family consumption as food, shelter, fuel, clothing, tools, or transportation, for the making and selling of handicraft articles out of nonedible by-products of fish and wildlife resources taken for personal or family consumption, and for the customary trade, barter, or sharing for personal or family consumption; in this paragraph, "family" means persons related by blood, marriage, or adoption, and a person living in the household on a permanent basis…

Selected State Regulations

5 AAC 01.010. Methods, means, and general provisions.

(a) Unless otherwise provided in this chapter, the following are legal types of gear for subsistence fishing:

(1) gear specified in 5 AAC 39.105;

(2) jigging gear, which consists of a line or lines with lures or baited hooks that are operated during periods of ice cover from holes cut in the ice, or from shore ice referred to in 5 AAC 01.220(l) , and which are drawn through the water by hand;

(3) a spear which is a shaft with a sharp point or fork-like implement attached to one end, used to thrust through the water to impale or retrieve fish and which is operated by hand;

(4) a lead which is a length of net employed for guiding fish into a seine or a length of net or fencing employed for guiding fish into a fish wheel, fyke net or dip net.

(b) Finfish may be taken for subsistence purposes only by Alaskan residents.

(c) Gillnets used for subsistence fishing for salmon may not exceed 50 fathoms in length, unless otherwise specified by the regulations in particular areas set forth in this chapter.

(d) It is unlawful to buy or sell subsistence-taken fish, their parts, or their eggs, unless otherwise specified in this chapter.

(e) Fishing for, taking or molesting any fish by any means, or for any purpose, is prohibited within 300 feet of any dam, fish ladder, weir, culvert or other artificial obstruction.

(1) Repealed 4/2/88.

(f) The use of explosives and chemicals is prohibited.

(g) Subsistence fishing by the use of a hook and line attached to a rod or pole is prohibited, unless otherwise provided in this chapter.

(h) Each subsistence fisherman shall plainly and legibly inscribe his first initial, last name, and address on his fish wheel, or on a keg or buoy attached to gillnets and other unattended subsistence fishing gear.

(i) All pots used for subsistence fishing must comply with the escape mechanism requirements in 5 AAC 39.145.

(j) Persons licensed under AS 43.75.011 to engage in a fisheries business may not receive for commercial purposes or barter or solicit to barter for subsistence taken salmon or their parts. Further restrictions on the bartering of subsistence taken salmon or their parts may be implemented by emergency order for a specific time or area if circumvention of management programs is occurring because of illegal bartering activities.

(k) Gillnet web in a gillnet used for subsistence fishing for salmon must contain at least 30 filaments, except that

(1) in the Southeastern Alaska, Yakutat, Prince William Sound, and Cook Inlet Areas, gillnet web in a gillnet used for subsistence fishing for salmon must meet one of the following requirements:

(A) the web must contain at least 30 filaments and all filaments must be of equal diameter, or

(B) the web must contain at least six filaments, each of which must be at least 0.20 millimeter in diameter;

(2) the requirements in (1)(A) and (1)(B) of this subsection apply in the Kodiak, Chignik, Aleutian Islands, Alaska Peninsula, Bristol Bay, Kuskokwim, Yukon-Northern, Norton

Sound-Port Clarence, and Kotzebue Areas.

(l) Repealed 5/15/93.

(m) Salmon taken for subsistence use or under subsistence fishing regulations may not be subsequently used as bait for commercial fishing purposes.

(n) The use of live nonindigenous fish as bait is prohibited. (History: In effect before 1983; am 4/16/83, Register 86; am 4/2/88, Register 105; am 6/2/88, Register 106; am 6/25/89, Register 110; am 7/16/92, Register 123; am/readopt 5/15/93, Register 126; am 7/3/94, Register 130; am 6/17/2001, Register 158)

Authority: AS 16.05.251 AS 16.05.258

Editor's note: 5 AAC 01.010(e) (1), which first appeared in the AAC in Register 78, was adopted, approved, and printed, in the absence of a paragraph (2). Because the existence of a paragraph (1) would normally imply the existence of at least a paragraph (2), this note has been added to verify the non-existence of a 5 AAC 01.010(e) (2) and avoid potential confusion.

At its February 23 - 27, 1993 meeting, the Board of Fisheries readopted 5 AAC 01.010(a) (1), (a)(3), (a)(4), (c) - (f), (h), (j), (k), (m), and (n) in their entirety without change, under ch. 1, SSSLA, 1992 (the 1992 subsistence law), which repealed and reenacted AS 16.05.258 .

5 AAC 01.717. Customary Trade in Herring Roe On Kelp. (a) The limited, noncommercial exchange for cash of subsistence-harvested herring roe on kelp, legally taken in Districts 1 - 16, under the terms of 5 AAC 01.730, is permitted as customary trade. Persons licensed under AS 43.75.011 to engage in a fisheries business may not exchange, solicit to exchange, or receive for commercial purposes subsistence-taken herring roe on kelp. Allowable possession limits for customary trade and other subsistence uses shall be those specified on permits issued according to 5 AAC 01.730(g). Permits must include the following information:

(1) the intended purposes of the harvest and the estimated amount of herring roe on kelp dedicated to each purpose;

(2) the name of the individual transporting the herring roe on kelp to the point of sale or transfer.

(b) The permit information provided in compliance with (a) of this section may be changed before herring roe on kelp is taken, by contacting an ADF&G representative where the permit was issued. (Eff. 5/15/93. Register 126)

Authority: AS 16.05.251, AS 16.05.258

DRAFT Pending State Regulation

5 AAC 01.195. Customary trade in finfish. (a) In the Norton Sound-Port Clarence Area, the limited, noncommercial exchange for cash of subsistence harvested finfish, legally taken as specified in 5 AAC 01.180 is permitted as customary trade. A person who sells subsistence harvested finfish for cash shall:

(1) obtain a customary trade record keeping form from the department prior to any exchange of finfish for cash and accurately record all cash sales on the form within 24-hours of any exchange;

(2) the form shall require the

(A) date of each sale;

(B) buyers name and address;

(C) species and amount of finfish sold;

(D) location the finfish were harvested;

(E) dollar amount of each sale;

(F) form of processing used; and

(G) any other information the department requires for management or enforcement purposes;

(3) not sell subsistence harvested finfish for more than $200 total per household in any calendar year.

(4) display the customary trade record keeping form upon request by a representative of the department or a peace officer of the state;

(b) A person who receives subsistence harvested finfish in exchange for cash may not resell the fish.

(c) A sale or purchase of finfish authorized under this section, including the delivery of fish to a purchaser, may only occur in the Norton Sound - Port Clarence Area.

(d) A person licensed under AS 43.75.011 that engages in a fisheries business may not exchange, solicit to exchange, or receive for commercial purposes subsistence harvested finfish.

(e) The customary trade record keeping form must be returned to the department as required on the form. (Eff. ____/____/2007, Register ____)

Appendix 4:
Customary Trade Poster

Customary Trade and Barter Today

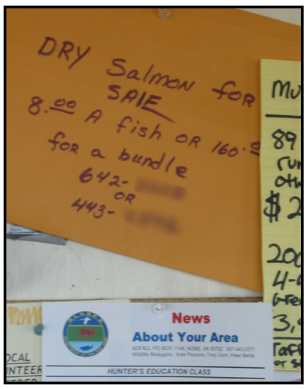
A study of subsistence-caught fish in the Norton Sound Area

Alaska's subsistence foods are some of the healthiest and tastiest food in the world. People all over the state love to eat smoked king salmon strips, frozen trout, or fresh seal oil. If you do not live near the source of these foods, then you probably have to share, barter, or trade with other people for these subsistence foods.

Trade in subsistence-caught fish has a long history in Alaska (above). A recent sign on a Nome grocery store bulletin board advertises dried salmon for sale (right).

Kawerak and the ADF&G Division of Subsistence have received funding to study barter and customary trade in the Norton Sound region. The study has several objectives. Researchers will identify communities where barter and customary trade occurs, and select four communities (probably Brevig Mission, Shaktoolik, Unalakleet and Nome.)

In each community, researchers will hire one or more research assistants. They will hold a community meeting to explain the project. Then, working with the field assistants, they will contact households active in barter and customary trade, and ask their permission to conduct a survey and interview.



The survey will ask about the fish involved in barter and customary trade, and about the households' networks of trading partners. Researchers will ask about the history of customary trade, explore why people are involved in customary trade, and discuss how customary trade is managed. Then researchers will analyze the survey data, summarize interviews, and prepare draft reports for the study communities to review. Then they will prepare a final report. Similar studies are underway in the Yukon Area and Bristol Bay.

Federal and state law both recognize that people barter and sell surplus subsistence foods. But the state and federal governments manage customary trade differently. Differences in state and federal regulations make it difficult for the public to know what kinds of trade are legal.

"Customary trade" means the ***cash*** sale of fish and wildlife taken for subsistence.

"Barter" means the exchange of ***other goods*** for fish and wildlife taken for subsistence.

Under federal regulations a rural resident may sell fish harvested for subsistence, their parts or their eggs if:

- the fish were harvested in federal waters,

  AND
- the fish are sold to individuals, not businesses.

In Norton Sound there are very few federal waters. The Unalakleet River above Chirosky River is one example.

Under state regulations no one may sell fish harvested for subsistence in Norton Sound. The state law has recognized only one customary trade fishery - for herring in Southeast Alaska. Although many other customary trade fisheries exist, they have not been recognized in state regulation.

The goals of this study include:

- to describe barter and customary trade in fish from Norton Sound.
- to explain current regulations to the public.
- to provide information to the federal and state boards.

For more information please contact:

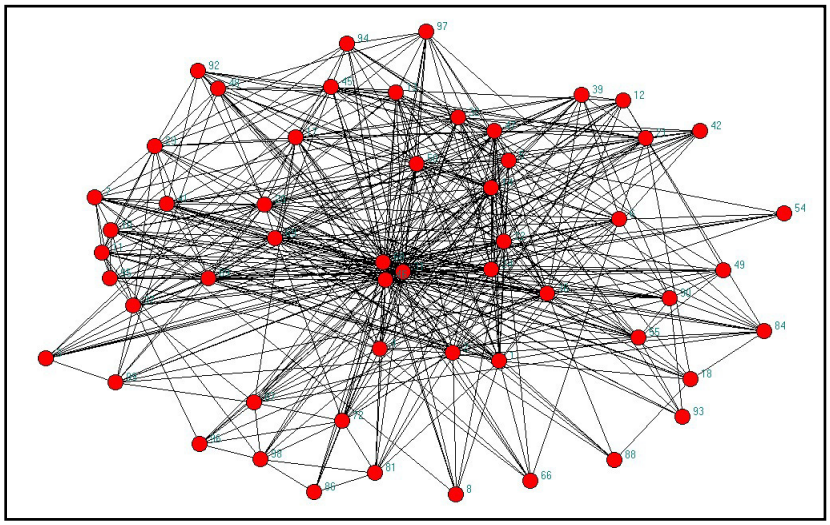
Jim Magdanz, ADF&G
Div. of Subsistence, Kotzebue
(800-478-3420)

Sandra Tahbone, Kawerak
Dept. of Natural Resources, Nome
(907-443-4383)

Subsistence Food Networks

Foods connect households and communities with one another

Subsistence foods travel across Alaska. Long ago, prized subsistence products were carried by dog team or umiak all across Alaska and even across the Bering Sea to Asia. In the 13th century, walrus ivory traveled as far as Turkey! Today, any rural airline agent can tell you that subsistence foods still go all over the state.

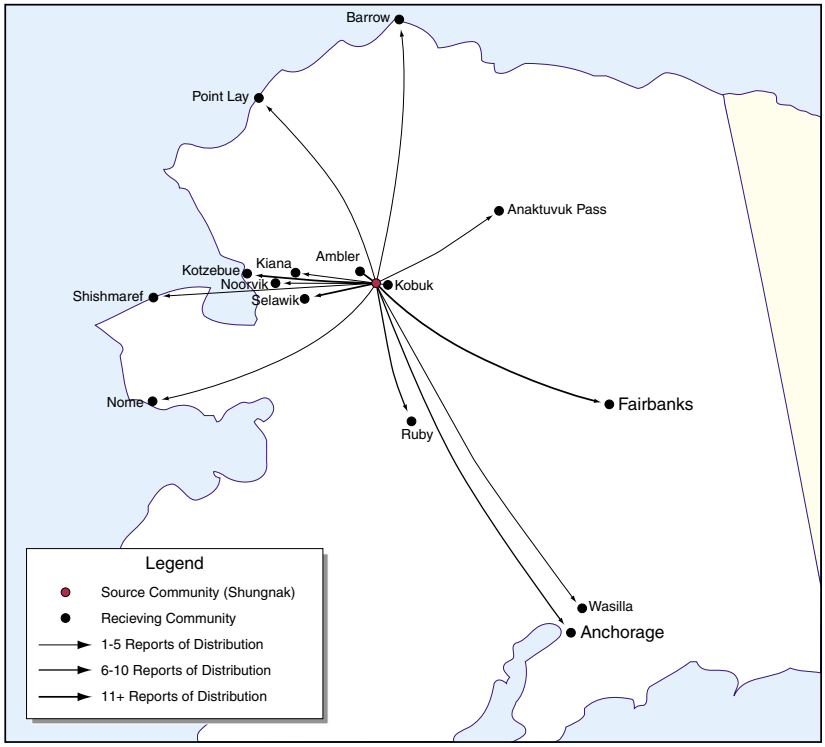


Did you ever wonder exactly how much villagers shared with one another? Researchers made a drawing to show sharing in Shungnak in 2002 (left). Each red circle is a household. Households that shared subsistence food are connected with a line. Every household reported getting at least some of their subsistence food from someone in another household. To make this drawing, researchers asked each household who got the fish and game they used. To protect confidentiality, researchers used numbers, not names, to identify households.

Researchers are interested in making similar drawings of statewide barter and trading networks. In 2002, Shungnak, households reported sending wilds foods to 15 other communities around Alaska (below). In this study, the survey does not ask who your trading partners were. Reseachers would like to know where they lived, and a few other details. Were they men or women, young or old? Were they relatives, friends, or strangers? The surveys will help researchers describe customary trade networks.

"Customary trade" means the ***cash*** sale of fish and wildlife taken for subsistence.

"Barter" means the exchange of ***other goods*** for fish and wildlife taken for subsistence.



For more information please contact:

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Div. of Subsistence, Kotzebue
(800-478-3420)

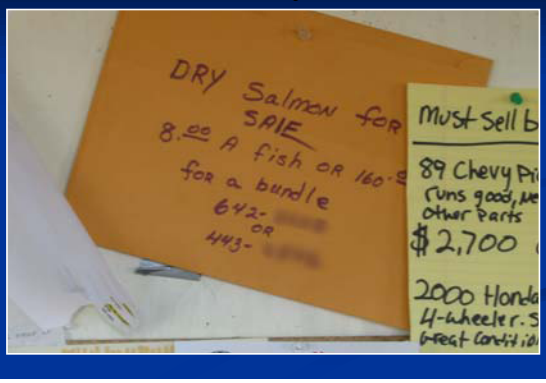
Sandra Tahbone, Kawerak
Dept. of Natural Resources, Nome
(907-443-4383)

Appendix 5:
Presentation Used For Elim Meeting

Customary Trade & Barter
of Fish in the Seward Peninsula Area

ADF&G Division of Subsistence • Kawerak Inc.
Research Funded by the USF&WS Fisheries Information Service (FIS 04-151)

Customary Trade



What is Customary Trade?

- The SALE of fish or game
- From a SUBSISTENCE harvest
- For CASH.

What is Barter?

- The EXCHANGE of fish or game
- From a SUBSISTENCE harvest
- For OTHER GOODS or SERVICES

What is Sharing?

- The GIVING of fish or game
- From a SUBSISTENCE harvest
- For NOTHING in return.

Why Do People Trade…

- Some foods are hard to get
- People may have extra food
- People may need something they don't have
- For example:
  - You have extra dried salmon
  - You need some seal oil
  - You may BARTER oil for salmon directly
  - OR You may SELL the salmon and BUY the oil

Federal Regulations in 2004 - Fish

- SHARING is always OK
- BARTER is always OK
- CUSTOMARY TRADE is…
  - Always OK between rural residents
  - Usually OK between rural and urban residents
  - But NEVER OK with a fisheries business
- In other words, most exchanges are OK

State Regulations in 2004 - Fish

- SHARING is always OK
- BARTER is always OK
- CUSTOMARY TRADE is…
  - OK for Herring in SE Alaska
  - NOT OK in any other situation
- In other words, most exchanges are OK, but Customary Trade usually is NOT OK for fish caught in state waters

Regulations Can Change…

- Under State LAW, customary trade is OK
  - Recognized as a subsistence use
  - Has a priority over non-subsistence uses
- Under State REGULATIONS, customary trade is usually NOT OK
  - HOWEVER, laws trump regulations!
  - State regulations may be difficult to enforce in cases where customary trade is a traditional practice, if the tradition can be documented.

Federal & State Lands

The Problems

- Federal and state rules for fish do not agree
  - Federal regulations very liberal
  - State regulations very strict
  - Confusing for the public
  - Creates loopholes…
- Is it subsistence when…?
  - …Tourist shops sell smoked king strips to tourists?
  - …A Japanese fish buyer buys 579 buckets of herring roe?

Study Goals

- Describe barter and customary trade in fish in the Seward Peninsula Area
- Explain current regulations to the public.
- Provide information to the Federal Subsistence Board
- Provide information to the State Board of Fisheries

The Study

- Not much is "known" about trade
  - By "known" we mean "documented"
  - Sensational cases are known
  - Routine activities are NOT known
- Research Questions
  - What kinds of fish are traded?
  - Where? To Whom? Why?
  - Today and in the past…

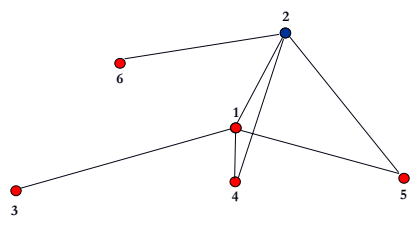
Progress to Date

- Brevig Mission *December 7-10*
  - Conducted Community Meeting
  - Completed Surveys with 8 households
  - Completed Interviews with 4 households
- Shaktoolik *February 1-4*
  - Conducted Community Meeting
  - Attended Elders' Meeting on Customary Trade
  - Completed Surveys with 4 households
  - Completed Interviews with 2 households
- Nome *December 22 - continuing*
  - Conducted Community Meeting
  - Completed Surveys with @ 18 households
  - Conducted Interview with 1 household

Trade, Barter, & Sharing Made Visible

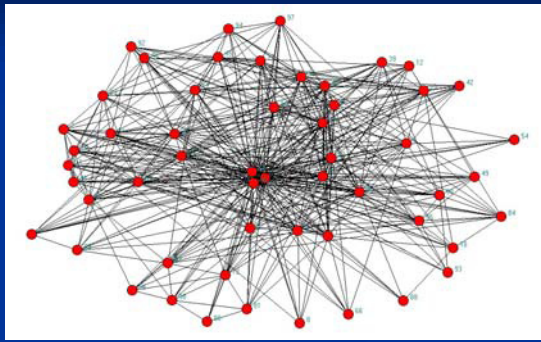
- Have you ever wondered what it would look like if you could…
  - SEE how foods move through your village?
  - MAP how food moves through your village?
- Network surveys can do that
- Here's how it works…

A Subsistence Network



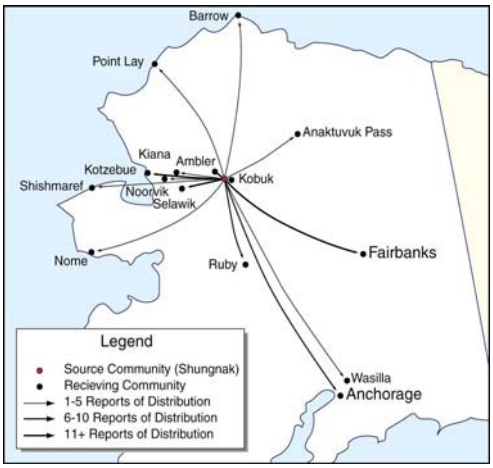
Now imagine this same diagram for an entire village….

Shungnak Subsistence Network



Shungnak Subsistence Network

Appendix 6:
Survey Instrument



Customary Trade & Barter

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ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF SUBSISTENCE
BOX 689
KOTZEBUE, AK 99752

800-478-3420

THIS RESEARCH FUNDED BY THE FISHERIES INFORMATION SERVICE, US FISH & WILDLIFE SERVICE

HH ID: _____

COMMUNITY: _____

START TIME: _____

STOP TIME: _____

INTERVIEWER: _____

DATE: _____

CODER: _____

SUPERVISOR: _____

Information collected on this survey will be used by Kawerak and ADF&G to better understand subsistence fisheries in Norton Sound. You are not required to participate in this survey. We will not use the information from this survey for enforcement. We will publish a summary report of trade and barter in your community, and send it to all the households that participate. We will not identify your household in any of our published materials.

WOULD YOU LIKE TO PARTICIPATE IN THE SURVEY?

☐ **YES**
CONTINUE THE SURVEY...

☐ **NO**
STOP
THANK RESPONDENT

Original survey was printed in landscape format, duplexed, and bound on the short edge.

This survey documents trade and barter of subsistence fish. Each exchange has three parts:

1) a source
who trades, barters, or shares...
2) the fish
with...
3) a consumer.

This survey asks about each part. First, we ask a few questions about your household. Then we ask about the fish that were bartered or traded. Finally, we ask about your exchange partners.

In our analysis, we will summarize trade at the community level. We will add up how much fish was traded, what types, how many households were involved, etc. Using computers, we will draw diagrams showing the flow of fish among households in a community, and among different communities.

When I ask you about your trading partners, I do not need to know their name. I would like YOU to use the orange code sheet to keep track of your trading partners during the interview. Write their name on the sheet, and tell me their number: "PARTNER 1." "PARTNER 2." I not not need to see the code sheet at any time. After the survey, you may destroy the code sheet.

NOTES TO SURVEYOR

Give respondent a copy of the handout on customary trade and barter.

Explain to them how the survey works (above).

Please DO NOT write any names on the survey.

When the survey is complete, please give it to your field supervisor.

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

EXPLANATION: In our report, we would like to write about what kinds of households are involved in customary trade and barter. For example, are the households that PURCHASE subsistence foods through customary trade more likely to be employed full time, or more likely to be elder households? For example, are households with commerical fishing permits more likely or less likely to sell non-commercial species like whitefish? The questions on this page -- including an optional question about household income levels -- are intended to help us describe trading and bartering households.

HOW MANY PEOPLE LIVE IN THIS HOUSEHOLD? N OF PEOPLE _____

HOW MANY ADULTS (18 AND OLDER) LIVE IN THIS HOUSEHOLD? N OF ADULTS? _____

HOW MANY ALASKA NATIVES LIVE IN THIS HOUSEHOLD? N OF ALASKA NATIVES? _____

HOW OLD IS THE HEAD OF THIS HOUSEHOLD? AGE OF HEAD _____

THINK OF THE PERSON IN THIS HOUSEHOLD WHO HAS LIVED IN THIS COMMUNITY THE LONGEST…
HOW LONG HAS THAT PERSON LIVED IN THIS COMMUNITY? YEARS OF RESIDENCY _____

DURING THE LAST 12 MONTHS, HOW MANY PEOPLE IN THIS HOUSEHOLD WERE…

….EMPLOYED IN FULL-TIME JOBS? N OF FULL TIME EMPLOYED _____

….EMPLOYED IN SEASONAL OR PART-TIME JOBS? N OF SEASONAL OR PART-TIME EMPLOYED _____

…SELF-EMPLOYED? SELF EMPLOYED _____

DURING THE LAST 12 MONTHS, DID ANYONE IN THIS HOUSEHOLD HAVE A **COMMERCIAL** FISHING PERMIT?
YES (1) NO (0)

IF YES…WHAT KIND(S) DID YOUR HOUSEHOLD MEMBERS HAVE?
Circle each type of commercial fishing permit held by someone in this household

COMMERCIAL SALMON PERMIT	COMMERCIAL HERRING PERMIT	COMMERCIAL KING CRAB PERMIT	OTHER COMMERCIAL FISHING PERMIT

C_ SALMON _____
C_ HERRING _____
C_CRAB _____
C_ OTHER _____

THIS IS AN OPTIONAL QUESTION… WE WOULD LIKE TO KNOW YOUR HOUSEHOLD'S TOTAL CASH INCOME FROM ALL SOURCES…
Circle ONE income range. TOTAL income includes wages, Permanent Fund Dividends, grants, public assistance…

(1)	(2)	(3)	(4)	(5)
...LESS THAN $10,000	...$10,000 TO $24,999	...$25,000 TO $49,999	$50,000 TO $74,999	MORE THAN $75,000

INCOME RANGE _____

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

"CUSTOMARY TRADE" MEANS THE EXCHANGE OF SUBSISTENCE GOODS FOR CASH.

DURING THE LAST 12 MONTHS, HAVE YOU OR SOMEONE IN YOUR HOUSEHOLD BOUGHT OR SOLD SUBSISTENCE-CAUGHT FISH? (1) YES (0) NO

IF YES… I WOULD LIKE YOU TO THINK OF ONE TIME DURING THE LAST 12 MONTHS WHEN YOU BOUGHT OR SOLD SUBSISTENCE-CAUGHT FISH...

Ask each question below, then ask respondent to think of another time when he or she BOUGHT OR SOLD subsistence-caught fish in the last year, and repeat the questions for each transactio

EXCHANGE #	DID YOU BUY OR SELL THESE FISH? *(Circle One)*	WITH WHOM? *(Use Partner Codes)* PART 01	PART 02	PART 03	PART 04	PART 05	ITEM #	WHAT KIND OF FISH? *(Species)*	HOW WERE THESE FISH PROCESSED? *(Process)*	HOW MUCH FISH? *(Amount)*	UNIT? *(fish, lbs, gal, etc)*	PRICE PAID FOR THIS ITEM? *($)*	WHERE WERE THESE FISH CAUGHT? *(Location)*
1	BUY SELL						1					$	
							2					$	
							3					$	

If the respondent bought or sold EXACTLY the same amount of the same item more than once, then list the partners in each trade above. If a single exchange involved more than three items, continue below and number items as 4, 5, 6, etc. Otherwise, use the rows below for a new exchange.

#	*(Circle One)*	01	02	03	04	05	#	*(Species)*	*(Process)*	*(Amount)*	*(Unit)*	*($)*	*(Location)*
	BUY SELL											$	
												$	
												$	

#	*(Circle One)*	01	02	03	04	05	#	*(Species)*	*(Process)*	*(Amount)*	*(Unit)*	*($)*	*(Location)*
	BUY SELL											$	
												$	
												$	

#	*(Circle One)*	01	02	03	04	05	#	*(Species)*	*(Process)*	*(Amount)*	*(Unit)*	*($)*	*(Location)*
	BUY SELL											$	
												$	
												$	

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

"BARTER" MEANS TO EXCHANGE SUBSISTENCE GOODS FOR SOMETHING OTHER THAN CASH.

DURING THE LAST 12 MONTHS HAVE YOU OR SOMEONE IN YOUR HOUSEHOLD BARTERED FISH? (1) YES (0) NO

Ask each question across both pages, then ask respondent to think of another time when he or she BARTERED subsistence-caught fish, and repeat the questions for that transaction.

EXCHANGE #	DID YOU GIVE OR RECEIVE FISH? *(Circle One)*	WITH WHOM? *(Code)*	YOUR ITEMS *(What you gave away)*						
			ITEM #	WHAT ITEMS DID YOU GIVE? *(Items)*	HOW MUCH DID YOU GIVE? *(Amount)*	HOW MUCH DID YOU GIVE? UNIT? *(fish, lbs, gal, etc)*	IF YOU GAVE AWAY FISH… WHAT KIND OF FISH? *(Species)*	IF YOU GAVE AWAY FISH… HOW WERE THESE FISH PROCESSED? *(Process)*	IF YOU GAVE AWAY FISH… WHERE WERE THESE FISH CAUGHT? *(Location)*
1	GAV RCV		1						
			2						
			3						

If a single exchange involved more than three items, continue below and number items as 4, 5, 6, etc. Otherwise, use the rows below for a new exchange.

#	*(Circle One)*	*(Code)*	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*
	GAV RCV								

#	*(Circle One)*	*(Code)*	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*
	GAV RCV								

#	*(Circle One)*	*(Code)*	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*
	GAV RCV								

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

Continue from previous page.

EXCHANGE #	ITEM #	THEIR ITEMS *(What you received)*						
		WHAT ITEMS DID YOU RECEIVE? *(Items)*	HOW MUCH DID YOU RECEIVE? *(Amount)*	UNIT? *(fish, lbs, gal, etc)*	IF YOU RECEIVED FISH… WHAT KIND OF FISH? *(Species)*	HOW WERE THESE FISH PROCESSED? *(Process)*	WHERE WERE THESE FISH CAUGHT? *(Location)*	WHAT DO YOU CALL THIS KIND OF EXCHANGE? *(Term)*
1	1							
	2							
	3							

#	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*	*(Term)*

#	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*	*(Term)*

#	#	*(Items)*	*(Amount)*	*(Unit)*	*(Species)*	*(Process)*	*(Location)*	*(Term)*

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TRADING PARTNERS

(QUESTIONS ON TEAR-OFF SHEET)

PERSON CODE	WHERE DOES THIS PERSON LIVE?	SEX *(M / F)*	AGE *(00)*	HOW IS THIS PERSON RELATED TO YOUR HH?	YEAR FIRST MET?	CUSTOMARY TRADE			BARTER		
						YEAR OF FIRST TRADE?	HOW OFTEN HAVE YOU BOUGHT FISH FROM OR SOLD FISH TO THIS PERSON?		YEAR OF FIRST BARTER?	HOW OFTEN HAVE YOU BARTERED FISH WITH THIS PERSON?	
1							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
2							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
3							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
4							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
5							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
6							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
7							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
8							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
9							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
10							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
11							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
12							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
13							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
14							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
15							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)

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TRADING PARTNERS (continued)

PERSON CODE	WHERE DOES THIS PERSON LIVE?	SEX (M / F)	AGE (00)	HOW IS THIS PERSON RELATED TO YOUR HH?	YEAR FIRST MET?	BARTER			TRADE		
						YEAR OF FIRST TRADE?	HOW OFTEN HAVE YOU BOUGHT FISH FROM OR SOLD FISH TO THIS PERSON?		YEAR OF FIRST BARTER?	HOW OFTEN HAVE YOU BARTERED FISH WITH THIS PERSON?	
16							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
17							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
18							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
19							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
20							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
21							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
22							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
23							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
24							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
25							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
26							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
27							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
28							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
29							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)
30							TIME(S) PER	YR(S)		TIME(S) PER	YR(S)

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BARTER

HAVE YOU EVER BARTERED SUBSISTENCE-CAUGHT FISH?

YES (1) NO (0)

If YES, continue below. If NO, skip to CUSTOMARY TRADE questions.

	BARTER FACTORS	
	WHY HAVE YOU BARTERED?	WHAT IS USUALLY THE SINGLE MOST IMPORTANT FACTOR IN YOUR BARTERS
	"X" all that apply	"X" only ONE
I NEEDED FISH		
SOMEONE ELSE NEEDED FISH		
I NEEDED SOMETHING (OTHER THAN FISH)		
SOMEONE ELSE NEEDED SOMETHING		
I HAD SOME EXTRA FISH		
OTHER REASON *(Explain)*		
OTHER REASON *(Explain)*		
		MOST IMPORTANT

WHAT WAS THE FIRST YEAR YOU BARTERED SUBSISTENCE CAUGHT FISH? YEAR _____

HOW OFTEN DO YOU BARTER SUBSISTENCE-CAUGHT FISH?

(1)	(2)	(3)	(4)
MORE THAN ONCE A YEAR	ABOUT ONCE A YEAR	LESS THAN ONCE A YEAR	ALMOST NEVER

HOW OFTEN HAVE YOU BARTERED THE SAME FISH MORE THAN ONCE?
That is, how often are you the "middleman" in a barter?

(0)	(1)	(2)
NEVER	RARELY	OFTEN

CUSTOMARY TRADE

HAVE YOU EVER BOUGHT OR SOLD SUBSISTENCE-CAUGHT FISH?

YES (1) NO (0)

If YES, continue on this page. If NO, skip to next page.

	TRADE FACTORS	
	WHY HAVE YOU BOUGHT OR SOLD SUBSISTENCE-CAUGHT FISH?	WHAT IS USUALLY THE SINGLE MOST IMPORTANT FACTOR IN YOUR BUYING OR SELLING?
	"X" all that apply	"X" only ONE
I NEEDED FISH		
SOMEONE ELSE NEEDED FISH		
I NEEDED MONEY		
SOMEONE ELSE NEEDED MONEY		
I HAD SOME EXTRA FISH		
OTHER REASON *(Explain)*		
OTHER REASON *(Explain)*		
		MOST IMPORTANT

WHAT WAS THE FIRST YEAR YOU BOUGHT OR SOLD SUBSISTENCE CAUGHT FISH? YEAR _____

HOW OFTEN DO YOU BUY OR SELL SUBSISTENCE-CAUGHT FISH?

(1)	(2)	(3)	(4)
MORE THAN ONCE A YEAR	ABOUT ONCE A YEAR	LESS THAN ONCE A YEAR	ALMOST NEVER

HOW OFTEN HAVE YOU BOUGHT AND THEN SOLD THE SAME FISH?
That is, how often are you the "middleman" in a customary trade?

(0)	(1)	(2)
NEVER	RARELY	OFTEN

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

QUESTION ON THIS PAGE ASK ABOUT YOUR COMMUNITY IN GENERAL, NOT JUST ABOUT YOUR OWN PERSONAL TRADING AND BARTERING.

WHAT KIND OF FISH DO YOU THINK IS TRADED OR BARTERED MOST OFTEN IN YOUR COMMUNITY?	HOW ARE THESE FISH USUALLY PROCESSED?	WHAT IS A TYPICAL AMOUNT THAT SOMEONE MIGHT TRADE OR BARTER?		
(Species)	*(Dried, Strips, etc.)*	*(Amount)*	*(Unit)*	COMMENTS

NOW… IF SOMEONE HAD THIS MUCH FISH AND WANTED TO BARTER THAT FISH FOR...

	HOW MUCH _____ WOULD BE A FAIR TRADE FOR THE FISH?		HOW OFTEN DO BARTERS LIKE THIS HAPPEN IN YOUR COMMUNITY?	FROM WHERE DOES THIS ITEM USUALLY COME?	
(Species or Item)	*(Amount)*	*(Unit)*	*(Circle One)*	*(Communities)*	COMMENTS
SEAL OIL			OFTEN RARELY NEVER		
BLACK MEAT IN OIL			OFTEN RARELY NEVER		
MUKTUK			OFTEN RARELY NEVER		
MOOSE MEAT			OFTEN RARELY NEVER		
GASOLINE		GALLON	OFTEN RARELY NEVER		

CAN YOU THINK OF ANYTHING ELSE YOU MIGHT BARTER FOR THIS FISH?

	FAIR TRADE AMOUNT?		HOW OFTEN...?	*FROM WHERE…?*	
(Species or Item)	*(Amount)*	*(Unit)*	*(Circle One)*	*(Communities)*	COMMENTS
			OFTEN RARELY NEVER		
			OFTEN RARELY NEVER		

IF SOMEONE OFFERED CASH FOR THIS FISH, WHAT WOULD BE A FAIR PRICE?

	FAIR PRICE?		HOW OFTEN...?	
(Item)	*(Amount)*	*(Unit)*	*(Circle One)*	COMMENTS
CASH	$	DOLLARS	OFTEN RARELY NEVER	

"OFTEN" means A PERSON is likely to exchange these items at least once a year.

"RARLEY" means A PERSON is likley to exchange these items less than once a year.

DO YOU HAGGLE ABOUT AMOUNTS…		*HOW DO YOU DECIDE HOW MUCH TO OFFER...*	
…IN BARTERS?	…IN TRADES?	…IN BARTERS?	…IN TRADES?
OFTEN RARELY NEVER	OFTEN RARELY NEVER		

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

DO YOU HAVE ANY QUESTIONS, COMMENTS, OR CONCERNS?

INTERVIEW SUMMARY:

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

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TRADING PARTNERS

REMOVE THIS PAGE FROM SURVEY, GIVE TO RESPONDENT

TO HELP US UNDERSTAND BARTER AND TRADE NETWORKS,
WE WOULD LIKE TO KNOW SOMETHING ABOUT THE PEOPLE WHO BARTER AND TRADE WITH YOU.
TO PROTECT PEOPLE'S CONFIDENTIALITY, WE USE CODES RATHER THAN NAMES.

WHEN WE ASK "WHO BARTERED AND TRADED FISH WITH YOU?",
WE WANT YOU TO WRITE DOWN THEIR NAMES ON THIS SHEET.
THEN TELL US WHAT THEIR "SURVEY CODE" IS (IN THE RIGHT COLUMN)
IF YOU DON'T KNOW YOUR PARTNERS' NAMES, WRITE DOWN THEIR COMMUNITY AND A NUMBER.
FOR EXAMPLE, TWO STRANGERS IN ANCHORAGE WOULD BE "ANCHORAGE 1" AND "ANCHORAGE 2."
IF YOU KNOW NOTHING AT ALL ABOUT SOME OF YOUR TRADING PARTNERS,
WRITE "UNKNOWN 1," "UNKNOWN 2," ETC.

AFTER WE HAVE ASKED ABOUT YOUR BARTERS AND TRADES,
WE WOULD LIKE TO KNOW ABOUT YOUR BARTER AND TRADING PARTNERS.
FOR EACH PERSON, WE'D LIKE TO KNOW…

WHERE DOES THIS PERSON LIVE? (IN WHAT COMMUNITY)
IS THIS PERSON A MAN OR A WOMAN?
HOW OLD IS THIS PERSON?
IS THIS PERSON RELATED TO ANYONE IN THIS HOUSEHOLD?
IF, YES, HOW IS HE OR SHE RELATED?

IN WHAT YEAR DID THIS PERSON FIRST GET TO KNOW SOMEONE IN THIS HOUSEHOLD?

WHAT WAS THE **FIRST** YEAR THIS PERSON **TRADED** WITH SOMEONE IN THIS HOUSEHOLD?
HOW OFTEN DOES THIS PERSON **TRADE** WITH YOUR HOUSEHOLD?
FOR EXAMPLE: "Once a year" "Once every 3 years" "3 times a year"

WHAT WAS THE **FIRST** YEAR THIS PERSON **BARTERED** WITH SOMEONE IN THIS HOUSEHOLD?
HOW OFTEN DOES THIS PERSON **BARTER** WITH YOUR HOUSEHOLD?
FOR EXAMPLE: "Once a year" "Once every 3 years" "3 times a year"

PERSON'S NAME	CODE
	PARTNER 1
	PARTNER 2
	PARTNER 3
	PARTNER 4
	PARTNER 5
	PARTNER 6
	PARTNER 7
	PARTNER 8
	PARTNER 9
	PARTNER 10
	PARTNER 11
	PARTNER 12
	PARTNER 13
	PARTNER 14
	PARTNER 15

SPACE FOR MORE PARTNERS ON BACK…

TO MAINTAIN CONFIDENTIALITY, WE DO NOT INCLUDE THIS SHEET IN THE SURVEY.
THIS PAGE IS YOURS, AND WE SUGGEST YOU DESTROY IT AFTER THE SURVEY IS COMPLETE.

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

TRADING PARTNERS (continued)

PERSON'S NAME	CODE
	PARTNER 16
	PARTNER 17
	PARTNER 18
	PARTNER 19
	PARTNER 20
	PARTNER 21
	PARTNER 22
	PARTNER 23
	PARTNER 24
	PARTNER 25
	PARTNER 26
	PARTNER 27
	PARTNER 28
	PARTNER 29
	PARTNER 30
	PARTNER 31
	PARTNER 32
	PARTNER 33
	PARTNER 34
	PARTNER 35

PERSON'S NAME	CODE
	PARTNER 36
	PARTNER 37
	PARTNER 38
	PARTNER 39
	PARTNER 40
	PARTNER 41
	PARTNER 42
	PARTNER 43
	PARTNER 44
	PARTNER 45
	PARTNER 46
	PARTNER 47
	PARTNER 48
	PARTNER 49
	PARTNER 50
	PARTNER 51
	PARTNER 52
	PARTNER 53
	PARTNER 54
	PARTNER 55

Survey continues across facing pages. Original survey was printed in landscape format, duplexed, and bound on the short edge.

Appendix 7:
Alaska Board of Fisheries Action on Customary Trade

One of the duties of ADF&G's Division of Subsistence is to "evaluate the impact of state and federal laws and regulations on subsistence hunting and fishing, and when corrective action is indicated, make recommendations to the department" AS 16.05.094(5). As a matter of policy, the Division prefers not to make such recommendations unilaterally, but rather to work with the public to develop recommendations. As this study neared its end in 2006, Austin Ahmasuk, one of the authors of this study and an employee of Kawerak Inc., submitted a proposal to the Alaska Board of Fisheries to provide for customary trade in the Norton Sound-Port Clarence Area.

Under law, the Federal Subsistence Board and the Alaska Board of Fisheries are to determine whether cash trade of subsistence fish meets the statutory definitions of customary trade, that is, whether it is customary and traditional, limited, and noncommercial in nature. At the time of this study, the federal board already had reviewed recommendations from the Regional Advisory Councils, the state, and the public, and had provided for customary trade in fish in the Seward Peninsula Area. One purpose of this study was to provide additional information to inform the Federal Subsistence Board about customary trade in the area.

As this final report was being prepared, the Alaska Board of Fisheries met in Anchorage to consider changes to finfish regulations in the Arctic-Yukon- Kuskowkim Region, which includes the Norton Sound-Port Clarence Area. From January 31 through February 4, 2007, The Board heard staff reports, took public testimony, and then deliberated on 55 proposals, among them Ahmasuk's customary trade proposal, "Proposal 148."

The authors reviewed information from the study for the Board. They provided a briefing paper summarizing the results, an eight-criteria worksheet, an oral report (Magdanz), public testimony (Ahmasuk), and additional deliberations materials to the Board. Following a committee discussion of the proposal, staff developed a draft regulation providing for customary trade in the Norton Sound-Port Clarence Area. These materials can be found in the formal record of the Alaska Board of Fisheries AYK meeting (RC 2 Tab 2, RC 2 Tab 4, RC 11, RC 48, RC 72).

The Board began deliberations on proposal 148 on February 4, 2007. Staff summarized the available information under the eight customary-and-traditional criteria. Board member Art Nelson asked whether the 7% of households involved in cash trade was sufficient to establish a pattern. Assistant attorney general Lance Nelson advised that was a Board determination. There was concern that traditionally processed foods would not meet food safety regulations; Lance Nelson noted that the Board's authority did not include food safety. Capt. Cain expressed his concern that if a regulation was adopted, compliance be simple: "Don't make people violators."

Discussion turned to an appropriate limit on customary trade amounts. Suggested limits ranged from $50 to $1,000, as in the original proposal. In this study, the average annual trade volume per household was $192 in finfish. The Federal Subsistence Board did not establish a dollar limit on customary trade in the Norton Sound-Port Clarence Area, but had established limits of $400 and $500 per household per year in other areas. There were differences of opinion among Board members on an appropriate amount. After an hour of deliberations the Board voted to table Proposal 148 until the following day.

When Proposal 148 was brought back from the table on February 5, substitute language for proposal 148 was introduced (RC 72), which provided for customary trade in the area but left the amount blank. The Board deliberated on the regulatory language for nearly an hour, but still could not reach agreement on an appropriate dollar amount. Board member Art Nelson was tasked to work with a stakeholder committee to address remaining issues, and report back to the Board a month later, at its March meeting.

The amount of cash trade that could constitute "customary trade" has been an issue for at least 25 years. In a 1981 memo to Alaska Governor Jay Hammond on new subsistence provisions in the Alaskan National Interest Lands Conservation Act (ANILCA Title VIII), Alaska Department of Law attorneys suggested that Yukon River *commercial* fishing "may be consistent with the federally mandated priority for customary trade" (Alaska Department of Law 1981:33). But at the board meeting in January, 2007, assistant attorney general Lance Nelson offered a more limited interpretation of the state statute. Nelson told board members:

> It is important that it (customary trade) be considered non-commercial. The statute says non-commercial. Even more important than that is the fact that, since subsistence uses are limited to Alaska residents, any commercial activity related to subsistence would be prohibited by the United States Constitution's commerce clause, because it

> is going to be illegal under the commercial clause for the State to provide a commercial opportunity and limit it to residents of this state. That's called "facial discrimination" of interstate commerce. So it is doubly important that any level you might consider allowing be non-commercial…
>
> I happened to be involved in drafting this (state) legislation in 1992, and was present in the discussions of the legislative committees and the legislature itself… It was not intended to supplant commercial fishing. The intent of it was a means to provide for full distribution, full opportunity for distribution of subsistence products among subsistence users. That's the basic intent, and motivation for allowing customary trade.

Nelson advised the Board that customary trade in state regulation should stay below levels seen in commercial fisheries in the area, and below levels that might be viewed as "commerce."

Board member Art Nelson met with stakeholders in Nome on March 5, and returned to the Board with a recommended amount between $400 and $500 per household per year. Some Board members were unwilling to adopt an amount that large, and so the Board amended the substitute language to set a limit of $200.

On Monday, March 12, the Board of Fisheries adopted the amended, substitute language for Proposal 148 to provide for customary trade in finfish. Beginning July 1, 2007, it would be legal for a household, in this area only, to sell subsistence-caught fish under the following conditions:

- Each household selling fish must first obtain a Customary Trade Permit and Record from the Alaska Department of Fish and Game.
- Sales of subsistence-harvested finfish by all members of a household may not exceed $200 in any calendar year.
- All sales of subsistence-harvested finfish by all household members must be accurately recorded on this permit within 24 hours of any exchange.
- All sales and purchases of subsistence-caught finfish, including delivery of fish to the purchaser, must occur within the Norton Sound-Port Clarence Area.
- A person who receives subsistence-harvested finfish in exchange for cash may not resell the finfish.
- Persons licensed under AS 43.75.011 to engage in a fisheries business may not exchange, solicit to exchange, or receive for commercial purposes subsistence-taken finfish.
- The permit holder must display the customary trade permit upon request by a representative of the department or a peace officer of the state.
- If a subsistence fishing permit is required, all fish sold must be reported on that permit, and are included in permit limits.

The Board's action brought state and federal rules on customary trade in the Norton Sound-Port Clarence Area into closer alignment. State limits and record keeping requirements were more strict than federal requirements, but the basic provisions were similar.

During the January meeting and again during the March meeting, the staff and Board members discussed potential violations of food safety regulations posed by customary trade. Customary trade goods were rarely, if ever, processed in licensed processing facilities, nor were they inspected. However there were provisions in food safety regulations adopted by the Alaska Department of Environmental Conservation (DEC) that permitted traditionally processed foods to be sold in non-profit fund raising events. During the January meeting, Division of Subsistence assistant director Marianne See and Austin Ahmasuk spoke with DEC staff and reported that it should be possible to make a coordinated change in both Fish and Game and DEC regulations in advance of July 1, when the customary trade regulation would take effect.

Proposal 148 was an interesting and controversial proposal. Adoption required coordinated efforts of the proposal author, ADF&G Directors, many ADF&G staff, the two Norton Sound Advisory Committees, the Alaska Department of Law, the Norton Sound Economic Development Commission, the National Park Service, and the U.S. Fish and Wildlife Service. Parallel customary trade research by the Division of Subsistence in Bristol Bay and by Yukon River Drainage Fisherman's Association, although not part of the formal record, were helpful as background. It was indeed a research- and public-driven proposal.

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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:

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