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Sharing, Bartering, and Cash Trade of Subsistence Resources in the Bristol Bay Area, Southwest Alaska

by

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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

TECHNICAL PAPER NO. 326

SHARING, BARTERING, AND CASH TRADE OF SUBSISTENCE RESOURCES IN THE BRISTOL BAY AREA, SOUTHWEST ALASKA

by

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Final Report to the U.S. Fish and Wildlife Service, Office of Subsistence Management, Fisheries Resource Monitoring Program, to fulfill obligations for Study No. 04-454 under agreement 701814C141.

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/

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ABSTRACT

The study investigated the cash trade and barter of subsistence-caught fish in five communities of the Bristol Bay area of southwest Alaska–Dillingham, King Salmon, Naknek, Nondalton, and Togiak. State and federal statutory definitions of subsistence uses include "customary trade," the limited noncommercial exchange of subsistence resources for minimal amounts of cash, as determined by regulatory boards. However, little information about trading and bartering practices in Bristol Bay communities was available prior to this study. Research methods included a systematic survey of 128 households and 12 key respondent interviews involving 22 individuals. Traditional values about sharing, barter, and trade encouraged the generous distribution of subsistence resources, although traditional forms of barter and trade in Yup'ik and Dena'ina communities included notions of balance as well. The surveys and interviews revealed that most subsistence resources in Bristol Bay are distributed through sharing, with no immediate exchange and no expectation of any return in the future. In the five study communities, 27 households (21%) had a history of involvement in cash trade of subsistence-caught fish, and 16 households (13%) engaged in cash trade in the 2004 study year. Cash trade most often involved value-added products such as smoked sockeye or Chinook salmon, resembling a form of craft production rather than commercial manufacture. Of 40 cash trade transactions, 28 involved less than $100. In the five study communities, 54 households (42%) had a history of involvement in barter of subsistence-caught fish, and 48 households (38%) bartered fish for other goods or services in 2004. Surveyed households described 143 barter transactions in 2004 that included the exchange of 386 items or services; Chinook salmon (24% of all items bartered) and sockeye salmon (18%) were most often involved in barter. Market goods (17% of the items bartered) and services (7%) were also part of barter transactions for subsistence-caught fish.

Key words: customary trade, barter, sharing, fish, salmon, subsistence uses, Bristol Bay, Dillingham, Togiak, Nondalton, Naknek, King Salmon, Central Yup'ik, Dena'ina Athabascan

CHAPTER 1. INTRODUCTION

STUDY BACKGROUND

Introduction

This report presents the findings of a study of cash trade and barter of subsistence-caught fish by the residents of five communities of the Bristol Bay area of southwest Alaska. The study addressed a gap in documentation of trading and bartering of subsistence resources in this area. The study communities were Dillingham, King Salmon, Naknek, Nondalton, and Togiak (Figure 1, Table 1). The research was conducted by the Division of Subsistence of the Alaska Department of Fish and Game (ADF&G) and the Bristol Bay Native Association (BBNA) under contract to the Fisheries Information Service of the Office of Subsistence Management, U.S. Fish and Wildlife Service (USFWS) (Project No. 04-454). Table 2 presents a chronology for the project. Table 3 lists project staff.

Customary trade is part of long-standing subsistence traditions in Alaska (Langdon and Worl 1981; Wolfe and Magdanz 1993). The definitions of subsistence uses in state statute (AS 16.05.940(32)) and the federal Alaska National Interest Lands Conservation Act (ANILCA) recognize customary trade as a subsistence use where state or federal regulatory boards have made such a determination. Figure 2 provides an overview of types of subsistence and nonsubsistence exchanges in Alaska (ADF&G 2007; Wolfe, Davis, Georgette, and Paige 2000).

The need to characterize and provide for customary trade in regulation was one of the issues recognized in the federal subsistence fisheries management implementation plan (Fox, Gerhard, Krueger, and Brelsford 1999). The need to better understand patterns of customary trade in the Bristol Bay area was a concern raised by participants in "needs assessment" meetings sponsored by BBNA in King Salmon, Dillingham, and Clarks Point in 2003.

In 2003, discussions of proposed federal customary trade regulations illustrated how little information was available about the nature and extent of customary trade. With one exception (Schroeder and Kookesh 1990), there were no published reports to inform these discussions about which fish stocks were utilized, how much fish was traded, under what circumstances trade occurred, how regulations may be affecting the nature and extent of customary trade, and whether the practice was customary, including amounts traded for cash. In December 2002, the Federal Subsistence Board's *Customary Trade Briefing Document* (FSB 2002) concluded:

> Rural subsistence users' concern focuses on the unknown potential impact regulating this complex issue may have on the rural communities of Alaska and their subsistence way of life… The need to move slowly and cautiously has been echoed throughout this process. The Board must be cognizant of traditional and cultural values when developing regulations defining 'customary trade' as it pertains to the subsistence lifestyle. But at the same time, the regulations developed must safeguard these long traditional practices and still prevent abuses.

This project was designed in response to these data needs. Describing the range of patterns of barter and cash trade within the broader context of sharing of subsistence resources also provides an opportunity to explain the regulatory distinctions between these two activities.

Statutory and Regulatory Background

The current legal definition of customary trade in federal rules comes from the legislative history of ANILCA (PL 96-487, 94 Stat. 2371), adopted in 1981, which recognizes "customary trade" as a subsistence use, also recognized in the state subsistence statute (AS 16.05.940). The term is not further defined in ANILCA itself, but the following clarification appears in a report to the full Senate from the Committee on Energy and Natural Resources:

> 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).

The FSB defined customary trade as follows:

> Customary trade means the exchange of cash for fish and wildlife resources regulated herein, 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.

ANILCA defines "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 for non-edible items other than money if the exchange is of a limited and noncommercial nature (16 USC 3113).

The Alaska legislature also considered the trade of subsistence-caught fish for limited cash exchange as a customary subsistence practice. State law recognizes "customary trade" as a subsistence use. It defines customary trade as "the limited noncommercial exchange, for minimal amounts of cash, as restricted by the appropriate board, of fish and game resources" (AS 16.05.940(8)). As does federal law, state statutes distinguish customary trade from barter. In state law, barter is "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" (AS 16.05.940(2)).

In short, under current state and federal laws and regulations, exchanges of subsistence-caught fish and wildlife involving cash may constitute customary trade as long as such exchanges are noncommercial and provided they can be demonstrated to be customary and traditional practices. In the Bristol Bay area, however, "barter" is often called "trade" by local residents, and "customary trade" is often called "selling."

All residents of the Bristol Bay Management Area may participate in federal subsistence fisheries because the entire area is classified as rural by the FSB. The FSB has recognized customary and traditional uses of salmon, other finfish, and shellfish for rural residents of this management area (50 Code of Federal Regulations [CFR] part 100 and 36 CFR 242; Subpart D. Sec. __ 27. Subsistence Taking of Fish), as follows:

> (c) (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.

As noted in the section entitled "General Provisions for the Taking of Fish" in the annual summary of federal subsistence fishing regulations (USFWS 2007:19), the federal customary trade regulations "do not preempt laws regarding the processing and sale of food for human consumption. All food sold for human consumption must comply with food safety laws." The summary adds that "Processing, under State law, includes all activities which would change the physical condition of the fish. This includes butchering, thermal processing, cooking, dehydrating, freezing, pickling, salting, shucking, or smoking."

This study collected information about all barter and cash trade of fish by interviewed households, whether or not the exchanges involved rural or non-rural residents, unprocessed or processed fish, subsistence resources other than fish, and fish taken in federally managed or state managed waters. Available ethnographic data for Bristol Bay (see Chapter 2) demonstrate that barter of subsistence-taken fish involves other resources such as seal oil or moose and caribou meat.

State and federal regulations are structured differently with respect to providing for customary trade. At the time of this study, the Alaska Board of Fisheries (BOF) had not received any proposals to allow trade of subsistence-caught fish in the Bristol Bay Area. State rules prohibit trade except in cases where the BOF or Board of Game has made a positive finding that the practice is customary and traditional based on a set of criteria.[1] Under state rules, it is lawful to buy or sell a handicraft made out of the skin or nonedible by-products of fish taken for personal or family consumption (5 AAC 01.010 (d)).

For cash trade in subsistence-taken fish resources from areas under federal jurisdiction, a different approach was applied. In December 2001, the FSB started a process to develop regulations guiding customary trade of fish resources in federal regulations. Each federal Subsistence Regional Advisory Council (RAC) reviewed draft regulatory guidelines provided by a federal Customary Trade Task Force. This process also included public input and additional review by the task force. The regional councils eventually adopted regulatory language that was forwarded to the FSB and, in January 2003, the FSB adopted final regulations defining customary trade. At its September 29-30, 2003 meeting in Dillingham, the Bristol Bay RAC adopted Proposal FP04-16, which contained Bristol Bay Management Area modifications to those regulations. The proposed regulations defined dollar limits for the customary trade of salmon and a reporting requirement. Specifically, for the rural residents of Bristol Bay, an annual limit of $500 per household was recommended for customary trade of salmon taken within federal jurisdiction between rural residents. The maximum amount of cash that can be received by a federally-qualified Bristol Bay rural resident exchanging fish to a non-rural resident is $400 per household and those transactions must be recorded on a customary trade record-keeping form. The Bristol Bay RAC supported setting a monetary limit only if a record keeping form was required, because of the need for accountability and for a means to enforce the regulations. In the view of the RAC, the regulations were unenforceable without the reporting requirements. The FSB adopted these regulations and they went into effect on March 1, 2004.

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[1] Currently, state subsistence fishing regulations state, "Unless otherwise specified in this chapter, it is unlawful to buy or sell subsistence-taken fish, their parts, or their eggs" (5 AAC 01.010 (d)).

In 2004, the USFWS developed a customary trade reporting form. In that year, five households in Togiak obtained the forms, as did one in Ekwok. Only one was returned. In 2005, one permit was issued and returned. None were issued for 2006 (Michael Edwards, USFWS, personal communication, November 13, 2006). In Togiak, the permits were issued by the ADF&G subsistence salmon permit vendor, and it was unclear if the five households who obtained the forms in 2004 understood their purpose. More generally, the extent to which Bristol Bay residents understood the federal customary trade regulations and reporting requirements is also uncertain, and the number of permits issued and returned may not be a reliable indicator of involvement in customary trade. When this study began, misunderstandings about trade and barter regulations illustrated the need to provide guidance to federal and state boards as they considered, identified, and refined regulations governing trade and barter. Studies such as this one that involve both federal and state jurisdictions are also more likely to result in congruent state and federal regulations. The study also addressed the need to inform users about these regulations.

STUDY OBJECTIVES

Study objectives were as follows:

1. Develop a Central Yup'ik typology for sharing, barter, and cash trade for the Bristol Bay area to understand how these practices are distinguished by those Bristol Bay Yup'ik who engage in these traditions;
2. Identify approximately four communities in the Bristol Bay Area where trade occurs and secure approvals to conduct research in these communities;
3. Survey households involved in barter and cash trade in the study communities;
4. Interview selected key respondents about the history of barter and cash trade;
5. Analyze survey data to determine the species, quantities, and value of fish involved in barter and cash trade, as well as other subsistence resources and commodities involved in these exchanges; and,
6. Write a narrative report summarizing the nature, extent, and history of cash trade in fish in the study communities as a customary and traditional pattern.

METHODS

Coordination with Other Research

The Fisheries Information Service (FIS) of the Office of Subsistence Management received two other customary trade research proposals for 2004 funding: FIS 04-265 for the Yukon River, and FIS 04-151 for the Seward Peninsula. At the recommendation of the Technical Review Committee (TRC), investigators for the three projects exchanged pre-proposals and draft investigation plans as they developed their final investigation plans. After FIS funded these projects, discussions between the investigators continued. The Yukon River researchers employed a different survey instrument, and no further coordination with that project took place. The Bristol Bay and Seward Peninsula investigators coordinated their work by developing a single survey instrument that was administered in both areas (see Objective 3, below).

Objective 1. Develop a Yup'ik Typology: Develop a Central Yup'ik typology for sharing, barter, and cash trade for the Bristol Bay area.

Molly Chythlook of ADF&G[2] conducted interviews with 10 key respondents to define terms and concepts for sharing, bartering, and trading of subsistence resources that are encoded in the Central Yup'ik language of Bristol Bay. Chythlook interviewed five elders in a group, and followed up with questions and discussions with five other individuals. Key respondent interviews are a standard research method for gathering qualitative information about specific topics from a range of knowledgeable people. For gathering information about the typology, Chythlook selected individuals who had traditional knowledge about the barter and trade systems of the Yup'ik people of western Bristol Bay in the early and mid 20th century, as well as the influence of western culture on these systems. Because of the limited number of interviews, the findings reported in Chapter 2 are a preliminary overview of Bristol Bay Yup'ik concepts and practices regarding the exchange of subsistence resources that can be used to guide future research.

Through these interviews, key Yup'ik terms for sharing, bartering, and trading, were identified along with examples from the past and the present. These interviews also explored if changes to how each type of exchange operates have occurred and reasons for these changes. These interviews were conducted largely in the Yup'ik language by Chythlook, who prepared detailed summaries plus English translations of key sections. The results of these interviews are discussed in Chapter 2.

Objective 2. Identify Study Communities: Identify at least four communities in the Bristol Bay Area where barter and trade occur.

Initially, project staff identified the "four study communities" as Dillingham, Nondalton, Togiak, and the Bristol Bay Borough. However, the Bristol Bay Borough consists of three distinct communities: King Salmon, Naknek, and South Naknek. The tribal councils of each of the study communities approved the research by resolution submitted to BBNA. Resolutions were received from each of the three Bristol Bay Borough communities. The study communities vary in size and location, and represent in total four of the six fisheries management districts of the Bristol Bay Area. Dillingham serves as the regional center and airline hub for western Bristol Bay communities, so it was important for it to be included in the study. Because the three communities of the Bristol Bay Borough (Naknek, South Naknek, and King Salmon) participate in the same subsistence fisheries and may be involved in the same exchange networks, they were treated as single place for sampling purposes. King Salmon serves as the transportation hub for eastern Bristol Bay communities.

Objective 3. Household Surveys: Survey households involved in barter and trade in the study communities.

Development of the Survey Instrument

Staff of this project and the corresponding project for the Seward Peninsula and Norton Sound area formed a committee to develop the survey instrument, consistent with the goal to collect comparable information in the two projects. In addition to ADF&G staff, the review committee

[2] Chythlook was a Fish and Wildlife Technician V with the Division of Subsistence until early April 2006, when she began a job as Natural Resources Manager with BBNA. Due to loss of funding, ADF&G was unable to refill Chythlook's position.

included a representative of Kawerak, who was working cooperatively with the Division of Subsistence in Kotzebue, Robbin La Vine and Ralph Andersen of BBNA, and Amy Craver of FIS. Jim Magdanz, of the Division of Subsistence in Kotzebue, designed the first draft of the survey instrument. A number of teleconferences ensued in which the form was reviewed and changes suggested. Magdanz incorporated revisions and distributed the updated instrument to the other researchers for further review. Magdanz and Kawerak staff then field tested a final draft of the survey instrument, and determined that it needed some important revisions. The revised survey instrument was then reviewed one more time by teleconference with Magdanz, who also provided training in administering the form. After that final meeting, the survey instrument was reformatted by regional program manager James Fall and the Dillingham researchers to include aspects they deemed important for administration of the form in the Bristol Bay region. Because the survey was administered in communities and households with different cultural backgrounds, including Yup'ik, Inupiat, Dena'ina, Alutiiq, and Euro-American, the researchers did not incorporate the Yup'ik typology developed under Objective 1 into the survey instrument. When Yup'ik-speaking households were interviewed in Togiak or Dillingham, concepts illustrated in the typology were applied to assist respondents in describing their exchanges of subsistence resources.

The survey instrument (Appendix A) was designed to determine the species, amounts, processing methods, and sources of fish involved in barter and exchanges of subsistence-caught fish for cash. When administering the survey, the term "customary trade" was employed and was defined as "the exchange of subsistence goods for cash" (see page 4 of the survey instrument, Appendix A). In this report, such exchanges are called "cash trade." The operational definition of barter was 'to exchange subsistence goods for something other than cash" (see page 6 of the survey instrument, Appendix A).

The kinds of information that were collected on the survey instrument included:

1. Household size and ethnicity, and other demographic data;
2. The number of years living in the study community for the household member with the longest residency;
3. Characteristics of barter and cash trade networks the household was involved in, both as providers of fish and as recipients of fish, including: residence of persons bartered and traded with; age and sex of these persons; relationship to household; length of acquaintance; frequency of barter and trade; and types of resources involved;
4. For a 12-month study year, documentation of barter and cash trade transactions, including: type of fish received or bartered and traded; type of resource received or provided in return; and amount of cash involved in the transaction;
5. Personal history of the household concerning barter and cash trade of subsistence-caught fish, including length of participation in the activity; frequency; and the reasons for engaging in the activity; and
6. Community examples documenting the household's understanding of barter and cash trade of fish in their community including: the most frequently bartered or traded fish species; how the fish were processed before bartering or trading; the typical amount that was bartered or traded; what the fish were bartered for; the frequency of these types of barter; what the other barter items were; the amount and where the item came from; the amount of cash exchanged in trade for the fish; and whether the amounts in the barter or cash trade were haggled over by the participants.

Initially, the intent was to collect information about barter and cash trade in which each surveyed household engaged in 2004. The choice of this study year was based on conducting the surveys in early 2005. However, as discussed below, delays in survey administration occurred, stretching the interviewing into the summer and fall of 2005 and, in the case of Togiak, into early 2006. In these surveys, researchers asked about barter and cash trade that had occurred from October 1, 2004 through September 20, 2005 for Naknek and King Salmon, or "over the last 12 months," to reduce confusion over the time period that respondents were being asked to recall. Therefore, the study year covered by the survey is variable. Nevertheless, in all cases, the results include all barter and cash trade for each surveyed household for a recent 12-month period. For simplicity, we refer to 2004 as the study year throughout the report and in all tables and figures.

Interview Sample Goals

With some alterations, described below in the description for each community, the sample selection process was as follows. In all the study communities, ADF&G and BBNA researchers, with the assistance of key respondents, identified households that were involved in trade. The list was developed through the chain-referral method. The chain-referral method was appropriate because the goal of the surveys was to interview a small and potentially hard-to-reach group of households who were knowledgeable about bartering and trade because of their direct involvement in these activities. A randomly selected sample in relatively large Alaska communities such as Dillingham, Togiak, Naknek, and King Salmon was unlikely to select enough knowledgeable households to address the study objectives.

The proposed study communities fell into two population size categories: three with more than 100 households (Togiak, Dillingham, Bristol Bay Borough) and one with fewer than 100 households (Nondalton). Therefore, two sampling strategies were used.

1. In Nondalton, the goal was to interview all 44 households, with an initial priority for those who were identified as active either as receivers or providers in barter or cash trade. ADF&G and BBNA staff planned to focus on these households during their field visits to provide for a training opportunity for the local assistant, who was then to complete the surveys in Nondalton.
2. In the three larger communities, interviews were to take place only with those households that were identified as being involved, either as receivers or providers, in barter or cash trade exchanges. If the number of such households was 50 or less, the goal was to interview all the households. If the number exceeded 50, a random sample of up to 50 households was to be selected and interviewed. In all three places, the initial list was less than 50, so randomly selecting a sample was not necessary.

As summarized in Table 4, 176 households were part of the initial potential sample list. Of these, 44 households were in Nondalton, and the other 132 were households identified by staff or through chain-referral as possibly involved in barter or cash trade of subsistence resources. Subsequently, researchers determined that nine of these households had moved, leaving a target goal of 167 households. Of these, 128 surveys (77%) were completed in five communities, including 31 in Dillingham (84%), 28 in Naknek (74%), 20 in King Salmon (71%), 37 in Nondalton (84%), and 12 in Togiak (67%). For reasons discussed below, no surveys were conducted in South Naknek.

Participation in the survey was voluntary and based upon informed consent. The anonymity of respondents was maintained, consistent with the research ethical guidelines of BBNA (n.d.)

(Appendix B) and ADF&G. In some communities, researchers encountered reluctance from some households about participation in the study because of concerns about whether the results might be used to restrict subsistence uses or sanction individuals who engage in cash trade or barter. This topic is discussed further in the final chapter of the report.

As discussed in the following chapters, project researchers concluded that the survey sample was large enough to provide information to illustrate patterns of contemporary reciprocal exchanges involving subsistence resources in the study communities. However, with the exception of Nondalton, only a relatively small sample of households was interviewed, survey results were not expanded to estimate the total number of households that might be involved in barter or cash trade or to estimate the total volume of resources and cash these exchanges entail. Further, because not all Bristol Bay area communities were included in the project, the results may not illustrate all exchange patterns currently engaged in by area residents.

Survey Implementation

To assist with introducing the project to potential survey respondents, project researchers developed a project description (Appendix C). Each potential respondent reviewed a copy of the description, which included definitions of the terms "sharing," "barter," and "customary trade and a discussion of state and federal regulations regarding these activities. Most project participants were unaware that the term "customary trade" referred to an exchange involving cash and that state and federal regulations differed on whether a person could engage in the customary trade of subsistence-caught fish. Many respondents used the terms "trade" and "barter" interchangeably. Once participants were adequately informed about the definitions of these terms as used in this project, they were encouraged to use their own terms to define their activities, and these terms were noted on the survey in a column provided for such responses (Appendix A). Thus, when respondents are quoted in this report as referring to bartering of subsistence resources as a "trade," they used the term after a thorough explanation by the interviewers of its regulatory meaning.

Nondalton

On September 16, 2004, Ted Krieg of ADF&G, and BBNA Partners Program Social Scientist Laura Jurgensen traveled to Nondalton for a meeting to present information about this project.[3] In mid January 2005, ADF&G and BBNA began fieldwork on another survey project in Nondalton, called "Kvichak Watershed Comprehensive Subsistence Baseline Update 2004" (see Fall, Holen, Davis, Krieg, and Koster 2006).[4] ADF&G hired Nondalton resident Terina Trefon to assist with conducting the baseline surveys. The tragic accidental death of two young Nondalton men in early February caused delays in completion of the baseline interviews and start-up of the trade and barter surveys until early March.

From March 7 to 10, 2005, ADF&G personnel worked with Ms. Trefon to complete the baseline harvest surveys. On March 8, following approval by the Nondalton Tribal Council, BBNA hired Ms. Trefon to conduct the trade and barter surveys. The household list that was developed for the baseline harvest survey project was used to arrange interviews. A few households that might

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[3] Jurgenson resigned her position with BBNA in mid October 2004. In April 2005 Robbin LaVine assumed the position.

[4] That research updated existing baseline subsistence harvest and use information for Nondalton, Port Alsworth, Iliamna, Newhalen, and Pedro Bay (Fall et al. 2006).

participate in barter and cash trade of subsistence fish were identified based on the baseline survey results.

On March 24, a public "Community Planning & Development Meeting" occurred in Nondalton involving the Nondalton Tribal Council, Nondalton City Council, and Kijik Corporation (the Alaska Native Claims Settlement Act village corporation for Nondalton). At the request of a Kijik Corporation board member, Krieg attended the meeting and described the two ongoing projects. This large public forum was an opportunity to inform community members about the work. Several participants raised issues about the study. One Nondalton resident said the project appeared to be "just another way to restrict our subsistence." Some meeting participants viewed the study as a "double-edged sword" because, even though the intentions of the researchers might be good, they could not guarantee how a regulatory body might use the information once it is made public. Project researchers acknowledged this risk.

By April 28, 2005, 25 of the 44 Nondalton households had been surveyed. Krieg and Trefon completed 12 more interviews by June 10, 2005, for a total of 37 surveys, 84% of the year-round households in the community.

Naknek and King Salmon

On January 27, 2005 Kenny Wilson of BBNA[5] and Molly Chythlook and Ted Krieg of ADF&G traveled to Naknek for a community meeting to present the project to the tribal councils of Naknek and King Salmon. Naknek had good participation at the meeting, but the community of King Salmon was not represented. Prior to this meeting, in December 2004, the Naknek Tribal Council had approved participation in the study by a resolution to BBNA. On February 3, 2005, Kenny Wilson returned to King Salmon and described the project. Subsequently, the King Salmon Tribal Council also approved the project by resolution to BBNA.

On March 3, 2005, Molly Chythlook and Ted Krieg traveled to Naknek and met with knowledgeable tribal members including the person selected by the tribal council to conduct the surveys. This group identified households that might be involved in barter and cash trade from a comprehensive community list for both Naknek and King Salmon. After training and conducting a few surveys, the local assistant was apprehensive about the number of questions and paperwork involved in the work. He agreed to attempt to continue to do the surveys with the assistance of another tribal member, but he soon resigned. Subsequently, Molly Chythlook recommended that BBNA hire another assistant to conduct the surveys in both King Salmon and Naknek, but this individual did not produce any completed surveys before resigning to start another job. By this time, the busy summer season had begun and no surveys were attempted until October 2005 and were completed in November 2005. The ADF&G personnel completed most of the surveys with help from a third local assistant. As a result of the delay in survey administration, the study year in Naknek and King Salmon became October 1, 2004, through September 30, 2005, rather than the originally-planned 2004 calendar year.

In Naknek, initial consultations identified 21 households that might participate in barter and cash trade; chain-referrals added 21 more as the surveys were being conducted. Of these 42 households, 4 had left Naknek before the surveys got underway, resulting in a target of 38 households. Of these, 28 (74%) were interviewed; 4 could not be contacted, and 6 declined to

[5] Kenny Wilson was Subsistence Coordinator at BBNA, and was assigned to this project to fill in for Jurgensen until the social scientist position was filled. He later resigned from BBNA and the position was not filled.

participate (Table 4). Three households declined to be surveyed because they indicated that they only shared subsistence-caught fish.

In King Salmon, 14 households were identified initially, and 19 more through chain-referrals. Of these 33 households, 5 had moved before the research began, leaving a target of 28 households. Twenty of these (71%) were interviewed, 6 could not be contacted, and 2 declined to participate (one of whom said they did not trade or barter fish) (Table 4).

South Naknek

On January 27, 2005, after the conclusion of the activities described above in Naknek, BBNA and ADF&G staff traveled to South Naknek where another community meeting was held. There was good participation and the project was well received. The participants related some aspects of traditional sharing and the importance of it to their way of life. At this meeting, the possibility of treating South Naknek as a separate sample from the road-connected communities of Naknek and King Salmon was discussed. However, in a meeting on March 3, 2005, the South Naknek tribal administrator reported that only one bartering and trading household lived in South Naknek. This one household, in addition to the 66 households described above for Naknek and King Salmon, brought the total to 67 targeted households for the three communities. Repeated attempts to contact this South Naknek household were unsuccessful. Therefore, South Naknek was not included in the study.

Togiak

Molly Chythlook of ADF&G contacted representatives of the Togiak Traditional Council several times in early 2005 to coordinate a combined meeting with the traditional council, village corporation board, and city government representative, but conflicting schedules prevented the meeting from occurring. Chythlook was able to sufficiently describe the project to representatives of the traditional council and gained the approval for Togiak's participation in the project by resolution to BBNA. On March 30, 2005, she traveled to Togiak, hired, and trained Anecia Kritz as the local assistant. They identified 50 possible bartering and trading households. After contacting the households and conducting chain-referrals that number was reduced to 32. Chythlook and Kritz interviewed one household before Chythlook returned to Dillingham. While Kritz provided rich and detailed notes to accompany her completed surveys, she only finished 3 before recognizing that other work and subsistence commitments left her very little time to continue on with the project, and she resigned.

In January 2006, Robbin La Vine traveled to Togiak to complete the remaining household surveys. She finished 4 interviews, but most households were reluctant to participate, many citing they did not have the time, or that they only shared and did not barter or trade. One of the individuals on the list, Elizabeth Myas, had experience conducting surveys for past projects with ADF&G. She agreed to be trained to conduct the rest of the surveys, and completed 5 more, for a community total of 12.

In summary, 32 Togiak households who were possibly involved in trade were initially identified. Fourteen of these subsequently reported that they were not involved in trade or barter and therefore were not interviewed. Of the remaining 18 households, 12 were interviewed (67%), one declined to be interviewed, 5 could not be contacted (Table 4).

Dillingham

On February 23, 2005, Kenny Wilson of BBNA and Ted Krieg, ADF&G, met with the Curyung Tribal Council administrator in Dillingham to present information about this project. The Curyung Tribal Council signed a resolution to BBNA on March 4, 2005, in support of the research.

Because of the large number of households in Dillingham, project staff decided to use the list of 391 Dillingham state subsistence salmon permit holders for 2004 as a starting point. Staff reviewed the list, and approximately 74 households were identified as possibly participating in barter and trade. Eunice Dyasuk, ADF&G program technician in Dillingham, attempted multiple times to contact these households during business hours. She was able to contact 28 households and 12 of these reported that they were involved in barter or trade. Additional households were added to the list as chain-referrals. The final list included 38 Dillingham households.

BBNA hired a local research assistant in Dillingham in late April 2005 to conduct the surveys, but this person was unable to continue with the project. BBNA subsequently hired Doreen Anderson Spear as an intern in June; she was very effective at arranging appointments and interviews over the summer despite the fact that most people were busy harvesting and processing fish for subsistence use. Because Dillingham was the permanent residence for ADF&G and BBNA researchers, they all participated in conducting the Dillingham surveys during summer 2005.

A total 38 Dillingham households who were possibly involved in trade were identified. Of these, 31 were interviewed (82%) and 7 could not be contacted (Table 4).

Objective 4. Key Respondent Interviews: Interview selected key respondents about the history and contemporary patterns of trade.

Including the 10 individuals interviewed to address Objective 1, a total of 10 key respondent interviews were conducted with 11 individuals, and two group interviews took place, one involving 6 key respondents from Naknek and King Salmon and the other involving 5 key respondents from Togiak (1), Manokotak (3), and Igiugig (1). In total, 22 individuals participated in these interviews. Eight tape-recorded interviews were transcribed by a BBNA temporary local hire and one by Molly Chythlook. These included the group interview with Naknek and King Salmon residents, 5 interviews in Nondalton, one in Togiak, one in Dillingham, and one with a former resident of Aleknagik and *Qulukaq* (a former village on Kulukak Bay) now living in Dillingham. Interviews with another Togiak resident and a resident of Platinum were not recorded on audio tape. Molly Chythlook conducted all the interviews except those in Nondalton and one that took place in Dillingham.

Only one key respondent interview was conducted in Dillingham as a follow-up with a surveyed household, with a family who participated extensively in barter activities. The few Dillingham individuals who reported participating in cash trade during the survey were reluctant to contribute to the project further by consenting to be key respondents. However, other Dillingham survey respondents who demonstrated knowledge about resource exchange patterns and who were comfortable during the survey were invited to continue with a discussion of the more open-ended key respondent questions. This information appears in the case examples in the Dillingham chapter.

As for Objective 1, key respondents for Objective 5 were selected based on their knowledge of past barter and trade activities in the Bristol Bay area or their involvement in contemporary cash trade and barter. Their points of view may not cover the range of activities throughout the area, but illustrate many of the patterns of past and current exchange of subsistence resources in their communities.

Again, it should be noted that researchers took extensive notes during the surveys, recording much supplemental information that provides context and perspectives to the quantified survey results. Much of the information summarized in the case examples in chapters 4 through 8 derives from these supplemental survey notes.

Objective 5. Data Analysis: Analyze survey data to determine the species, quantities, and value of fish involved in barter and cash trade, as well as other subsistence resources and commodities involved in these exchanges.

ADF&G and BBNA coded the completed surveys for data entry by Division of Subsistence information management staff in Anchorage. Staff compiled a series of summary tables with the study findings for each community. In addition, profiles of each surveyed household were prepared to guide the descriptions of the case households that appear in each community chapter.

Objective 6. Final Report: Write a narrative report summarizing the nature, extent, and history of cash trade in fish in the study communities

Chapter 2 addresses study findings related to Objective 1, concepts that address subsistence resource distribution as expressed in the Central Yup'ik language of Bristol Bay. Chapter 3 provides a broad overview of the survey findings. This is followed by chapters for each of the five study communities, including more discussion of survey findings. In these chapters, selected surveyed households and some key respondent households are described as case studies. Chapter 9 presents a summary discussion of the study findings, concluding with recommendations and further observations about the applicability of the study findings to federal and state subsistence fisheries management.

CHAPTER 2. STUDY FINDINGS: A BRISTOL BAY YUP'IK TYPOLOGY OF SHARING, BARTER, AND TRADE

INTRODUCTION

One objective of this project was to develop a Central Yup'ik typology for sharing, barter, and cash trade. A typology organizes terms within a particular semantic domain (categories of related things, actions, or concepts) to depict underlying principles and concepts. For example, the Linnaean system of classifying animals and plants into species, genera, and families is a typology, as are sets of kinship terms or names of colors. For this study objective, the goal was to discover how sharing, barter, trade, and sale are expressed, or "encoded," in the Central Yup'ik language of Bristol Bay.

As noted in Chapter 1, Molly Chythlook conducted key respondent interviews, primarily in the Central Yup'ik language, to explore Yup'ik concepts of sharing and other forms of resource exchange as practiced in the Bristol Bay region.[6] Terms for sharing, bartering, trading, and selling were first elicited in a group discussion with five elders. This discussion was not taped because it took place during a meal. Following this discussion, Ms. Chythlook made phone calls to the participating elders to clarify terms and collect additional information. She also engaged in discussions and interviews with five other knowledgeable persons in Dillingham and Togiak. Table 5 lists the Yup'ik terms concerning sharing and exchange of subsistence resources from those interviews and translations. Figure 3 shows the relationships between the Yup'ik terms, anthropological concepts about exchange, and regulatory categories of subsistence resource distribution.

ETHNOGRAPHIC BACKGROUND

In traditional Alaska subsistence economies, the taxonomy of exchange of resources can be complex. For the Inupiat of Northwest Alaska, for example, Burch (1988) identified nine categories of transfer of property (including subsistence foods), including *aiccuq* (a "free gift" with no expectation of return) and *tauqsiq*, today translated as "buy" because the exchange involves cash, although traditionally involved the trading of subsistence foods, other products, or raw materials.

There has been no comprehensive study of sharing concepts among the Central Yup'ik population of the Bristol Bay area such as Burch's for the Inupiat. For the Yup'ik of the lower Yukon River, Wolfe (1981:211-220) discussed several categories of sharing of subsistence resources, including:

1. "*chigiq*": giving of food as unsolicited gifts;
2. " *navolhotuq*": the exchange of one economic good for another (barter);
3. "*tungyiaq*": the trade of goods involving some form of currency (customary trade);
4. no Yup'ik term elicited: sharing of food among close family members.

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[6] Molly Chythlook, formerly a project researcher with ADF&G, and, since April 2006, with BBNA, completed a draft overview of key terms and concepts regarding sharing, bartering, and customary trade for the Bristol Bay Yup'ik area, along with many examples. Other project staff and Ms. Chythlook reviewed and discussed the typology and related concepts that are featured in this chapter.

Similar categories occur among the Yup'ik speakers of Bristol Bay*:* *cikir-* (to give) (*cikiun* is a gift), *naverte-* (to trade [not involving cash] or barter), and *tune-* (to sell). The contexts in which these types of exchanges occurred in the past and the form they take today are discussed in the next section of this chapter and in the findings for Togiak described in Chapter 5.

Exchanges of resources between residents of contemporary Bristol Bay communities, and with residents of communities outside the area, are common, and include both "barter" and "customary trade," as well "sharing" with no immediate return expected.[7] For example, in Manokotak, a Central Yup'ik community east of Togiak, Schichnes and Chythlook (1988:77-78) identified 18 other communities from which community residents received subsistence foods and 15 to which Manokotak residents sent subsistence foods. The authors speculated that this sharing involved "gifts" (trade was not mentioned) to relatives in Anchorage and Dillingham who could not obtain their customary "Native foods" in those locations. The authors also surmised that kinship and Moravian Church affiliation in Togiak, Twin Hills, and Aleknagik were a factor in the frequency with which communities were engaged in sharing with Manokotak. However, more details on the nature of these exchanges, such as whether barter or cash trade occurred, were not collected as part of the research summarized in that report.

An important point of view expressed by Bristol Bay Yup'ik elders from western Bristol Bay communities during this study and others conducted by the Division of Subsistence was that in the past, they primarily harvested and processed meat, fish, berries, and greens for survival and not with the intent of exchange for cash or other exchange value. They stated that they preferred to give subsistence foods to someone in need, rather than trade the resources for cash. For the most-senior generation of elders, those 80 or more years of age, subsistence foods were never associated with money. Elders stated that if a family was needy, they simply gave subsistence foods to them, and expected nothing back.

Nevertheless, there is also ethnographic evidence of traditional barter and trade in Bristol Bay communities, which continue today. Certain communities, or groups of communities, continue to be known for the quality of the resources they produce, which are involved in cash trade or barter. For example, Togiak is known for having an abundant supply of seal oil. The skilled processors of seals in Togiak produce the oil without getting bits of meat or blood mixed in with the blubber, which alter the taste of the oil, or cause it to discolor.

In the Bristol Bay area in the mid and late 20th century, former residents of coastal villages who have moved to Nushagak River communities or the regional center of Dillingham, grew up eating certain subsistence foods not readily available where they now reside. If one area did not have a resource, barter or trade took place with residents of a community where it occurred. For example, Togiak residents traded marine products such as seal oil, seal meat, clams, smelt, and Togiak trout (Dolly Varden), to Manokotak for burbot and, in the past, blackfish; Aleknagik was famous in the area for huckleberries, dried spawned-out sockeye salmon (locally referred to as "redfish"), and moose, and residents of this community traded these resources to Togiak residents for the marine products described above. Goodnews Bay and Platinum residents were known for selling blackberries. Before the commercial herring fishery in Togiak was established in the late 1960s, it was common for Togiak residents to trade marine resources, including

[7] These examples were developed by Molly Chythlook based on interviews, field notes, and personal experience. These examples derive largely from Division of Subsistence research in Bristol Bay communities prior to the present study.

herring, with Nushagak River and Nushagak Bay communities. At the time of this study, it was more common for commercial herring fishermen traveling to Togiak from the Nushagak communities to harvest and return with their own marine resources. However, participation in the Togiak District commercial herring fisheries has declined over the last 10 years (Westing, Brazil, West, and Sands 2006), so the pattern might again change in the future towards more sharing of marine resources between Togiak and Nushagak River communities. This is also an example of how changing economic factors shape sharing and exchange.

There is some evidence that younger generations in Bristol Bay communities have become more accustomed to the practice of trading subsistence foods for cash rather than for other subsistence products. For example, it is becoming more common for Togiak residents to bring seal oil to Dillingham to sell for cash, perhaps to defray their costs for their round trip transportation and to buy groceries in Dillingham to take back with them. As transportation costs have increased, so has the price for seal oil. Togiak residents do not harvest large numbers of Chinook salmon for making strips compared to neighboring communities, so some Togiak families obtain them from the Dillingham area through barter or purchase. With the more recent availability of moose and caribou nearby, Togiak residents no longer have to travel to the Nushagak River or Aleknagik to hunt them. In the recent past, Togiak moose and caribou hunters gave seal oil to the households on the Nushagak River who helped them hunt, but this barter has stopped. Instead, there is the opportunity to trade seal oil for cash rather than another natural resource or service with people in those villages that do not harvest seals themselves. However, should moose or caribou populations decline in the Togiak area, it is likely that bartering would resume.

In summary, the trade or barter in subsistence products occurred in the past in the Bristol Bay Area and continues to occur. The role of cash in these exchanges has grown with the transition to a mixed economy with a cash component. Consequently, "trade" now exists in two forms: "traditional" trade not involving money (similar to when there was little or no cash), and "modern" or more recent trade that does involve money. Traditional "trade," now defined as "barter" in state and federal law, is still practiced, but, in some cases or for some resources, modern trade involving cash appears to be becoming more common.

RESULTS OF KEY RESPONDENT INTERVIEWS

Terms Related to Types of Sharing and Exchange

As noted above, the Central Yup'ik language of the Bristol Bay area shares the basic typology of distribution of subsistence resources with the Central Yup'ik language of the Kuskokwim and Yukon delta area. *Cikir-* means "to give" and c*ikiun* refers to a gift, and correspond to the anthropological concept of "generalized reciprocity"–there is no expectation of an immediate return for the shared item. This activity is generally referred to in English as "sharing" in key respondent interviews, as well as in state and federal subsistence statutes (Table 5; Figure 2). Sahlins (1972:193-194) defined "generalized reciprocity" as follows.

> "Generalized reciprocity" refers to transactions that are putatively altruistic, transactions on the line of assistance given and, if possible and necessary, assistance returned. The ideal type is Malinowski's "pure gift." Other indicative ethnographic formulas are "sharing," "hospitality," "free gift," "help," and "generosity."

The term *cikir-* can involve giving material things in addition to subsistence resources, such as in the modern activity of giving a Christmas or birthday present. There was no fixed, prescribed set of households to which harvested fish and game had to be distributed. Resources went to the households that needed them the most at the time. Often, those households which did not receive a portion of a particular harvest partook in the harvest in other ways. A common, contemporary aphorism that expresses the key to sharing is that "what goes around, comes around." The traditional Yup'ik adage is that "It is said that *Elam Yua* (Person of the Universe [God]) will bless the receiver's gratitude by three fold." The giver is filled with gratitude when the receiver appreciates the gift, and the person who gives without expecting anything in return usually is "blessed" in one way or another.

The reciprocal of *cikir-* (to give) is *akurtur-* (to receive, to acquire; also *unake-*, to obtain). More specifically, *akurtur-* implies to receive gifts "without hesitation." In other words, the gift is received graciously and no offer to match the gift is expected. Indeed, such an offer might be offensive to the person who is freely offering the gift.

Specific Yup'ik terms refer to sharing of subsistence foods. *Aruqe-* means "to distribute a share of the catch (harvest)." The distributed share of a harvest is called *aruqun*. This type of distribution takes place without any expectation of receiving something in return. For example, distribution of meat and blubber happens when harvests of larger animals such as walrus and beluga take place. Fresh seal meat and blubber are also distributed to family members if the seal is a first harvest of a son.

Subsistence foods taken to another person's house are called *payugun. Payugte-* means "to take food over to someone." *Payugtaa* means "He took some food to her." For example, harvesters share their fresh harvests of any subsistence resource with another household, be it parents, other relatives, friends, or, especially, elders. This type of sharing usually has no expectation of any immediate exchange. Any received *payugun* is special and receivers drop whatever they are doing at that moment to receive and take care of the *payugun.*

Ilataq refers to sharing of an item or items out of respect for an invitation, without expecting anything else in return. For example, if a person is invited for a *maqi-* (steam bath), the invited guest may *ilataq* wood for the *maqi-* as a thank-you gift for the invitation.

A form of redistribution (passing on received items to a third party) is expressed in the terms *minaq* (food set aside for someone) and *minar-* (to leave, keep, or save food for someone else). *Minaq* is food set aside for someone who may not be present at the time to eat. *Tuvqake-* refers to a person who elects to save a dish of food or any edible resource for someone else to share with. *Tuvqatartuq* means, "He is generous."

The next several terms describe more immediate exchanges of resources that resemble a form of "balanced reciprocity." Sahlins (1972:194-195) defined "balanced reciprocity' as follows:

> "Balanced reciprocity" refers to direct exchange. In precise balance, the reciprocation is the customary equivalent of the thing received and is without delay. . . "Balanced reciprocity" may be more loosely applied to transactions which stipulate returns of commensurate worth or utility within a finite and narrow period.

The first several of these Yup'ik terms do not involve bargaining or negotiation and may therefore not be, strictly speaking, "barter" (Table 5, Figure 2). *Imir-* means "to put contents in,

to fill." For example, *imiraa* means, "He put the contents in." *Imiun* is "the contents," that is, the item that replaced the one that was received in the container that the visitor brought. Frequently, if a person brings food over (*payugteq*) to another household, the receiver may fill or refill (*imiq*) the container with another food item. Or, if someone receives a bag of dry fish, they may give in return a bowl of *akutaq* or another prepared Native food dish as a gesture of thanks. Thus, *imir-* is a form of direct, immediate exchange not involving any bargaining, but is nevertheless a form of balanced reciprocity. A qualification, however, is that the giver does not expect a returned item; without this expectation, this activity resembles generalized reciprocity also.

Cimiq is "a substituted item," and *cimir-* means "to replace, to substitute, to exchange one state or item for another." For example, c*imiraa* means, "He replaced it." This is a form of exchange that expresses ideas about equivalent values and expectations. *Cimir-* (to substitute, replace) is what a person does if they are not satisfied with an item brought or received. It also means "to change," as to change one's clothes (*cimiriuq*) and or even to change one's personality or state of being (*cimirtuq*). *Cimir-* can involve cash when applied to the return of store-bought items for a refund or exchange for another item. This type of barter can also be perceived as an "even trade" of one item for another without a precise accounting of monetary value. For example, a fur hat may be exchanged for a cloth parka. Basically, this is an exchange of an item or a resource with whatever is available and is needed by trading partners.

Atunem is a particle added to a verb to convey mutuality or matching the quality of the verb. Thus *atunem cikir-* means "to give mutually, to match something exactly." This activity can be loosely understood as a type of "barter" also, because it involves an agreement to give back an identical item to the one received, at a later date. For example, if one person harvests and shares Chinook salmon with another person, the other person agrees to give back the same fish species when they harvest it later.

Naverte- means "to trade, to exchange it" and is the equivalent of the regulatory term "barter." The item traded or bartered is *navertaq*. In this form of exchange, if something is given as a gift and the owner or receiver is not satisfied with the item, it can be exchanged or traded for another item.

A related word, *navrar-* means "to borrow. This exchange may involve cash. For example, *navrun* ("a borrowed thing") can be a cash loan from the bank. It can also just be a borrowed tool or another item loaned by neighbor or friend. The thing that a person loans to someone else is called a *navriun*.

The Yup'ik term *tune-,* "to sell for money," can be used as a translation of "customary trade," as defined by state and federal regulations as the noncommercial exchange of subsistence foods for cash. In this form of exchange, the monetary price of an item is set largely by custom and profit is not a motive, described later in Chapter 6 findings for Naknek. It can be viewed as a form of "balanced reciprocity," where each person involved in the transaction receives something of agreed-upon equivalent value. There is no haggling over price, no profit motive, and no competition for sales between producers.

The reciprocal term to *tune-* (sell) in Yup'ik is *akilir-*, "to pay for something using money, to provide with an equivalent." *Akiliraa* means "He is paying for it." *Akiliun* is an actual payment of cash for something bought by a person. *Akilir-* can mean "to buy an item in a store." It can also be payment for work done using some cash. Many times this type of trade using cash is

expected to be paid in full. However, it also covers transactions in which the individual provides an equivalent item, rather than cash. This second meaning likely dates to before the development of a cash sector to the local village economies, and refers to traditional exchanges in which an immediate, equal "payment" was expected. This recalls the similar case described by Burch (1988) for the northwest Alaska Inupiat (described earlier), in which *tauqsiq* now means "buy with cash," but formerly described cashless, direct exchanges involving payments with various products. In Togiak and other Bristol Bay Yup'ik communities, these kinds of traditional direct exchange arrangements not involving cash still occurred at the time of this study.

Akiliutaa is what a person does for another person who is not able to make cash transactions themselves. In these situations, the payer may or may not expect anything in return. Paying for someone's airfare, groceries, or gasoline when no cash is available to the user are examples.

Tune-, "to sell for money," also includes market sales, where supply and demand determine price. Thus, *tune-* and *akilir-* also describe activities that, in anthropological terms, are forms of "negative reciprocity," an exchange in which one or both of the people involved in the transaction try to gain an advantage, which Sahlins (1972:195) defined as follows:

> "Negative reciprocity" is the attempt to get something for nothing with impunity, the several forms of appropriation, transactions opened and conducted toward net utilitarian advantage.

Transactions in the market place, where one party seeks a profit, are one form of negative reciprocity. "Haggling," an intense form of negotiation over the price of something, can be seen as a form of barter that has moved from "balanced reciprocity" to "negative reciprocity."

Sales described in this study, however, proceeded without "haggling" or any overt effort for a significant cash gain. Also, because *tune-* refers to market sales as well as traditional exchanges for cash, it is not a precise translation of the regulatory concept "customary trade," which by definition is "noncommercial."

Another form of negative reciprocity is reluctance to share, to keep all the proceeds from an economic activity, such as a subsistence harvest, to one's self. This is the opposite of sharing. In Bristol Bay Yup'ik, *qunuuq* means, **"**He is reluctant to part with something" and q*unutungartuq* means, **"**He is stingy." A "*qunuuq*" is a person who refuses to share anything that belongs to him. This type of person is viewed as "needy due to their lack of sharing practices, because it is known that the more you share, the more you receive from unexpected sources." *Qunutungartuq* refers to people who do not invite people into their homes for meals or do not share harvested resources with others. *Qunuituq* is the opposite of *qunutungartuq*. Such people are viewed as being hospitable and are always willing to share whatever they have with other people.

The ultimate form of "negative reciprocity" is theft, when an individual takes something with no intention of giving anything in return. In Central Yupik, *tegleg-* means "to steal" and *tegleng'arli* refers to people who take things or resources from another person without their permission (thieves). This term is also applied to people who harvest resources out of season, and, in this sense, is similar to the term "poaching" in fish and wildlife management.

Occasions During Which Sharing of Subsistence Foods Occur

Keleg- means "to invite people to one's house, usually to eat." This activity involves sharing prepared subsistence resources by one person to one or several other people from other households. The *kelgun* (an invitation) can be, for example, for a birthday party, for the first harvested resource by one of the children in the family, or for song fest visitors from other communities. Song fests started in southwest Alaska villages during the early 20th century to replace the *Curukaq*, a feast wherein residents of one village traveled to another to dance and exchange gifts or challenges (athletic, dance, gift giving, etc.) (Morrow 1984). *Keleg-* also includes less formal activities, such as sharing between friends of either fresh resources harvested by a household member, or a *payugun*, a resource brought over from another household. In each community, households are recognized and respected for their generosity, as shown by their ability to *kelgiq* (invite people to eat) at a moment's notice when an *allaneq,* a stranger or visitor from another village, arrives in the community. On the other hand, households that do not normally *kelgiq* are termed "*kelgiyuilnguut*"–households or people that do not invite people to eat. More sharing and trade of subsistence resources occur in households that are normally generously hospitable to people in their own village and to visitors from other communities.

Cikiiliq refers to an occasion when a person (or persons) is invited to have tea or a meal with another person. "Come and *cikiiliq* me as I eat my fresh boiled fish," is an invitation to share subsistence foods in one's home. This can also involve sharing food together using one single dish, called *cikiqullunuk*.

Although the term *yuurqaq* means "to drink tea," this term is used to *kelek* (to invite to one's house, usually to eat) a person or persons to one's home not only to have tea, but also share subsistence foods in a meal or snack. In the Yup'ik custom, it is proper to offer *yuurqaq* (tea) to visitors who enter one's home. The offering of tea may lead to a full meal if the visitor has not eaten. People who normally do not offer tea to their visitors are referred to as being *qunutunaq* (stingy). The older the visitor is, the more appropriate it is to offer tea. *Kelek* and offering *yuurqaq* have the same outcome as far as sharing food in one's home. It is unusual to invite a person to the home just to drink tea; normally, the invitation is to eat and share some special delicacy. During this process of "having tea," the invited guest may *minaq* (set aside food) to take home for someone else to eat, thus becoming a form of redistribution. The host may also give their guest a food item (*cikiq)* such as fried bread, *sulunaq* (salted fish), or any other special food available to share.

There are several terms referring to feasts or occasions during which subsistence foods are shared and distributed. The term *nerevkariq* means "to have a feast or party." This involves subsistence foods prepared and shared by *kelgun* (invitation) to friends and relatives for holiday dinners; birthday parties; marking the first resource harvest by a child; and religious or ceremonial 40 day feasts (those honoring a person 40 days after their death). "Potlucks" for any occasion are also referred to as *nerevkarin* (feast, party), but in these events the guests bring food to contribute to the feast. Households that normally have feasts and parties store extra resources for these occasions.

Another example is *kalukaq*, a feast for sharing of a successful harvest of subsistence resources. A household will not only share food but may also share material items with people that are attending the feast.

Quyurtaq is a gathering of the residents of several communities in a single village location for a song fest (a religious gathering). People from different western Alaska villages gather in one particular village to attend song fests. The visitors are housed with relatives and friends. Some of the visitors bring food to share with the household that houses them while attending the song fest, and to share with another household that may have requested the food resources not available within the area. Sharing like this may just be *payugun* (food brought) for a thank-you gift or a shared food resource not available in this community.

Other Concepts Related to Sharing

Several terms arose during the key respondent interviews that are not part of a "typology," but reflect local Yup'ik values associated with sharing and exchange of subsistence resources. *Umyuarrluk* refers to persons who are thoughtless and who are known to be selfish with their possessions, including the fish and wildlife they harvest. *Umyuacuk* means "a thoughtless person." For example, a person, usually a wife, is *umyualuk* if they hide food from their spouse when food is scarce and people are going hungry. Historically, when a village was lacking food due to *cikuyaq* ("late spring icing of bays") and harvesters were not able to travel to hunt seals and other early spring resources were not available, wives were counseled to conserve the available food and provide more food to hunters so that they would continue to have enough energy to seek resources. The true character of people was revealed during such periods and wives who hid food from their providers or other village members were referred to as *umyuacuk.* *Kiviiraq* ("dried fish packed in seal skin poke") was sometimes hidden from one's spouse inside one's home so as to eat the contents whenever the spouse was not present. *Umyuaqeqciuq* (thoughtful) is the opposite of *umyualuk.*

Yuc'uk refers to a self-centered person. Such individuals are thoughtless of others and do not share with the people around them.

Kinguvar-, another form of sharing among the Bristol Bay Yup'ik, is the passing on of possessions, skills, and knowledge to younger generations. The passing down of personal items occurs even when the owners of the items are alive. Traditionally, the deceased person's personal items were called *eliveq* ("possession of deceased person") and traditionally these items were burned soon after death to ward off evil spirits.

Kinguvartat are items that have been received from another person as gifts and as an inheritance. A *nukalpiaq* ("good hunter or provider") elder may also give a personal item to a younger person in hopes of passing down their skills as a gift. A respected elder may give his or her used *qaspeq* (cloth garment) to a parent to make clothing for a child to pass down their skills to that child. *Paitat* are inherited items given to another person and can also refer to something given as a reward.

Summary

In summary, this review shows that while there is no direct correspondence between the various Bristol Bay Central Yup'ik terms for giving, sharing, exchanging, and trading resources and the regulatory concepts of sharing, barter, customary trade, and market sale, there are parallel concepts revealed in the Yup'ik typology (Figure 3). For example, the terms *tune-* (sell) and *akilir-* (pay) now cover instances where cash is used in transactions involving subsistence foods, rather than another resource, and therefore approximate the regulatory category of "customary trade." Figure 3 also illustrates that Yup'ik resource exchanges described as *cikir-* (to give)

reflect the regulatory category of sharing, and the Yup'ik term *naverte-* pertains to more direct exchanges of subsistence resources or services, approximating the category of barter.

This summary also illustrates what appears to still be the prevailing view among Bristol Bay Yup'ik people, and especially among elders, that subsistence resources are to be shared generously and without bargaining or the expectation of an immediate, equivalent replacement. In this view, generous people eventually are rewarded with esteem, and with resources and services freely given by others. Further, wealth accrues not with the accumulation of material goods, but rather from sharing resources with others. A person who hoards is considered poor, not wealthy. A person who gives things away is viewed as rich.

It should be noted that, as discussed in the chapter on Naknek, a few families of Yup'ik or Alutiiq heritage in that community have for several generations exchanged small amounts of smoked salmon from their subsistence harvests for cash at local bazaars or through longstanding relationships with other families. Such exchanges supplement these families' limited incomes, helping them to maintain their subsistence way of life in their community. The money acquired through such sales is invested back into equipment used for subsistence harvests or to help pay bills that are essential to living in contemporary Naknek.

Finally, the review revealed that concepts of equivalent value were active in some forms of exchange, such as those translated as "to fill" (*imir-*) and "to replace" (*cimir-*). While generosity was the norm, this was conditioned by notions about fairness and sanctions against those who did not share or hoarded scarce resources at the expense of others. On the other hand, to profit from an exchange of subsistence foods was disapproved. This traditional value is the basis of "customary trade" of subsistence fish that may involve limited amounts of cash, rather than marketing of subsistence products simply for monetary gain or commerce.

CHAPTER 3. STUDY FINDINGS: OVERVIEW OF SURVEY RESULTS

The goal of this chapter is to provide a general, comparative overview of the survey findings. More detail appears in the subsequent chapters on each community, and Chapter 9 includes additional discussion.

DEMOGRAPHY, INCOME, AND COMMERCIAL FISHING INVOLVEMENT

Demographic Characteristics

Key demographic findings about the survey sample (Table 6) are compared with overall community demographic characteristics as reported by the federal decennial census (U.S. Bureau of the Census 2001) and in updates by the Alaska Department of Labor and Workforce Development (2006). Sample goals were based upon chain-referrals in all communities except Nondalton, where a census was the goal, as described in Chapter One.

Surveyed households for this project tended to be larger than household averages as reported in the federal census results, and included more, older adults. For example, surveyed households contained an average of more than two adults, ranging from 2.2 in Dillingham and Nondalton to 2.5 in King Salmon. The average age of household heads was over 50 years in every community. Also in every study community, surveyed households were larger than those in the entire community population as estimated by the federal census (Figure 4). The average household size of surveyed households in Dillingham was 3.6 persons, compared to 2.8 persons for the federal census estimate. In King Salmon, surveyed households averaged 3.4 persons, compared to 2.3 in the census; in Naknek, surveyed households averaged 3.3 persons compared to 2.7 in the census; in Nondalton, surveyed households had 3.9 people on average, compared to 3.3 in the census; and in Togiak, surveyed households had 4.5 members, compared to 4.0 in the federal census.

In three communities, the surveyed sample of households had a larger percentage of Alaska Native members than their communities overall (Figure 5). These were Dillingham (81% of the sample was Alaska Native, compared to 61% of federal census population), King Salmon (43% of the interview sample, 30% of the census), and Naknek (66% sample, 47% census). Nondalton and Togiak were overwhelmingly Alaska Native (89% or more) in both the survey sample and the federal census results.

Surveyed households tended to have long lengths of residency in their communities (Table 6). The lowest average length of residency by community was in King Salmon at about 26 years, following by Dillingham (35 years), Naknek (41 years), Nondalton (45 years), and Togiak (49 years). This suggests that households that have lived in their communities for a relatively long period of time have established relationships with other households that are expressed in exchanges of natural resources.

These comparisons of demographic information suggest that households that are reported to be involved in barter and customary trade by other community members tend to be more mature and larger than the average households in their communities. They are also more likely to have Alaska Native members and to have lived in their community for 26 years or more. Research has indicated that these characteristics are often are associated with higher than average subsistence harvests in rural Alaska communities (Wolfe and Walker 1987).

Cash Income and Commercial Fishing

Surveyed households were asked to indicate their cash incomes for 2004 study year within five ranges. Of all 128 respondents, 20 (16%) declined to answer this question, with the largest percentage of nonresponses in Naknek (36%) (Table 7).

Nondalton had the highest percentage of households in the lower income categories (46% less than $10,000; 30% $10,000 to $24,999). In contrast, the largest number of the respondents to this question in Dillingham (45%), King Salmon (45%), and Naknek (21%) had incomes over $75,000. The largest number of Togiak respondents had incomes in the $50,000 to $74,999 range (42%) (Table 7).

Table 8 and Figure 6 compare the range of household incomes for all surveyed households in the study year with the range of incomes for the five study communities for 1999 as reported by the federal decennial census. For this comparison, nonrespondents to the income question on the survey were removed from the analysis. A similar percentage of households from the combined survey sample (49%) and the federal census (47%) reported incomes of $50,000 or more. A higher proportion of the survey households (19%) had incomes below $10,000 compared to federal census results (9%). However, 17 of the 20 surveyed households with incomes below $10,000 lived in Nondalton (Table 7) where a census sample was the goal rather than a reference sample of households involved in barter or cash trade. If Nondalton is removed from the combined community comparison, as reported in Table 8 and illustrated in Figure 6, only 4% of surveyed households had incomes under $10,000, compared to 8% for the federal census. Also, a much higher proportion of surveyed households (70%) had incomes above $50,000 than reported by the federal census (48%). This finding suggests that the surveyed households reported to be involved in barter and cash trade generally had higher incomes than other households in their communities. This comparison is limited by the relatively small sample sizes for the survey and the difference between the survey year (2004) and the decennial census year (1999 for income).

Only in Togiak were a majority of respondents (75%) involved in commercial fisheries, with 67% participating in commercial salmon fisheries, 58% in the herring roe-on-kelp fishery, 17% in herring fishery, 8% in halibut, and 8% in other fisheries (Table 9). Close to half of the respondents in Dillingham and Naknek participated in commercial salmon fisheries (45% and 46%, respectively), as did 20% of King Salmon respondents and 11% in Nondalton. A large majority of respondents in King Salmon (80%) and Nondalton (89%) had no commercial fishing involvement.

CASH TRADE

Table 10 (see also Figure 7) shows that 27 of the 128 interviewed households in the five study communities combined (21%) reported some involvement in trade of subsistence-caught fish for cash in the 2004 study year or in the past. Sixteen households (13%) indicated involvement in cash trade of subsistence-caught fish in 2004. For sampled households, Togiak (33%) and Naknek (32%) had the highest percentage of households with any involvement with cash trade in the past, followed by Dillingham (23%), King Salmon (20%), and Nondalton (8%). The same community ranking pertained to involvement in cash trade in the 2004 study year: Togiak ranked first with 25% of respondents involved, followed by Naknek (21%), Dillingham (13%), King Salmon (10%), and Nondalton (3%).

As reported in Table 11 (see also Figure 8), most households with some involvement in cash trade said they traded multiple times per year (33%) or once each year (48%). Only 19% said they "almost never" traded. In each study community, the majority of participants in cash trade of fish said it was an activity in which they participated regularly, at least once a year.

Households were asked why they exchanged subsistence-harvested fish for cash, and which of these reasons was most important (Tables 12 and 13). For all study communities combined, most respondents said that either they needed the fish (44%) or someone else did (37%); fewer said they exchanged the fish for cash because they needed money (26%) or someone else needed money (19%) (Figure 9). As a percentage of total responses, needing money as a reason for trade was mentioned most in Nondalton (the community with the most households in the lowest income category) (67% of respondents; two households) and Naknek (44%; four households). When asked to specify the most important reason for buying or selling subsistence-caught fish, most respondents cited the need for fish (39% for their household, 15% for another household) rather than the need for money (19% for themselves, 4% for someone else) (Figure 10).

As noted, 16 of the 128 interviewed households were involved in cash trade of subsistence-caught fish during the 2004 study year. They reported 40 instances of cash trade in 2004. Of these, most involved sockeye salmon (75%; 30 transactions) or Chinook salmon (20%; eight transactions) (Table 10, Figure 11). Of the 40 cash trade transactions in the study year, 14 were sales by the surveyed households and 26 were purchases (Table 14). The total cash involved in these 40 transactions was $6,570. Because a reference sample was interviewed in all communities but Nondalton, and only five Bristol Bay communities were included in the study, this total represents the minimum values of cash trade of subsistence fish in the Bristol Bay area in the study year. Transactions ranged in size from $7 for a half pint of pickled fish (likely sockeye or Chinook salmon) to $750 for 30 dried and smoked sockeye salmon. Of the 40 transactions, 28 involved less than $100. Of the 16 surveyed households that engaged in cash trades of subsistence fish in 2004, five had one trading partner, five had two partners, one had three partners, one had four partners, and two had multiple partners but the exact number was unknown because the products were traded for cash at a business and a bazaar.

BARTER

Table 15 shows that 54 of the 128 interviewed households (42%) in the five study communities combined reported some involvement in barter of fish in the 2004 study year or in the past; 48 households bartered fish for other natural resources, market goods, or services in 2004 (38%) (Figure 12). The highest level of involvement in barter at any time in the past was among the samples in Dillingham (65%) and Naknek (64%), followed by Togiak (50%), King Salmon (30%), and Nondalton (11%). In the 2004 study year, Dillingham was the community with the largest percentage of interviewed households that were involved in barter (65%), followed by Togiak (50%), Naknek (46%), King Salmon (30%), and Nondalton (8%). The 48 households described 143 barter transactions that took place during the study year. In most, surveyed households gave Chinook salmon (40%), other natural resources (38%), or sockeye salmon (33%). In return, they received fish (36%), other natural resources (29%), services (15%), groceries (14%), or other market goods (15%) (Table 15).

Table 16 reports the frequency of households' involvement in barter of fish. For the study communities combined, most households said they bartered fish more than once a year (43%) or about once a year (35%) (Figure 13). Far fewer said they bartered less than once a year (7%) or

very rarely (15%). In all the study communities, a majority of the households with any involvement in bartering fish said they did so annually or more frequently.

Households were asked why they bartered subsistence-harvested fish for other resources, other products, or services, and which of these reasons was most important (Tables 17 and 18). Most frequently, for the five study communities combined, households engaged in barter because someone else needed the fish (69%); or the respondent needed another natural resource (other than fish) or non-resource product or service (63%); or because they had extra fish to exchange (48%) (Figure 14). At the community level, someone else needing fish was a key reason for bartering among the Dillingham sample (95% of respondents); most (95%) of Dillingham households interviewed also said they engaged in barter because they needed something other than fish and 85% stated they had extra fish to barter. Someone else needing fish was also the most frequently cited reason for bartering in Togiak (67%), King Salmon (50%), Naknek (50%), and Nondalton (50%).

Responses were varied regarding the most important reason for bartering (Table 18, Figure 15). For all respondents combined, the most cited needing something other than fish (24%), while 23% said they bartered because someone else needed fish, and 17% reported they had extra fish to exchange for another product or service they wanted.

Table 19 lists the items or services that were involved in each barter exchange reported by the surveyed households for 2004. Since only cases involving fish were recorded on the survey, fish predominate in these barter exchanges. Some notable patterns emerged. By far, Chinook and sockeye salmon were the fish most often involved in barter: Chinook salmon represented 24% of the items or services involved in barters in 2004. There were 94 instances in which Chinook salmon were bartered, of 386 total items or services in included in the 143 barter exchanges. Sockeye salmon ranked second with 18% of all cases. This finding is not surprising, given that sockeye and Chinook salmon are the most abundant fish in Bristol Bay subsistence harvests.

Nevertheless, a wide range of resources was involved in bartering by the interviewed households in 2004 (Table 19). Resources included other salmon, herring, smelt, halibut, land mammals, marine mammals, and berries. The surveyed households bartered fish they had harvested for groceries (10% of all cases), other goods, or services (7% of all cases), such as child care and "food processing services," which likely involved giving a portion of the subsistence catch to the person who processed it. Some respondents were aware that exchanging subsistence-caught fish for cash is prohibited under state regulations. Therefore, some households converted cash into a good (such as groceries or supplies) prior to the exchange for the fish.

COMMUNITY EXAMPLES OF BARTER AND CASH TRADE

During the survey, respondents were asked to give examples of barter of fish and trade of fish for cash they thought occurred in their community. These were not necessarily exchanges the household was involved in or had witnessed. The initial question was, "What kind of fish do you think is traded or bartered most often in your community?" Next, they were asked, "How are these fish usually processed?" (that is, fresh unprocessed, frozen, dried, smoked, etc.) and, "What is a typical amount (quantity of the resource) that someone might trade or barter?"

Table 20 summarizes responses for each community regarding what type of fish respondents thought was bartered for another resource or traded for cash most commonly. Of 106 respondents who answered this question (of 128 total surveys), most (98%) named a type of

salmon. One respondent in King Salmon named halibut as the most often bartered or traded fish[8] and one respondent in Togiak named smelt. Sockeye salmon was, by far, the most frequently named type of fish, by 73 respondents (69%), followed by Chinook salmon (27 respondents, 25%). However, in Dillingham, a large majority of respondents (24 of 28 Dillingham respondents; 86%) named Chinook salmon as the most frequently bartered or traded fish. Only three respondents in other communities named Chinook salmon (two respondents in King Salmon, one in Togiak).

Of all the examples of trade and barter noted by respondents, a large majority involved fish that had been processed (85; 80%), while 20 respondents (19%) named unprocessed fish (either fresh or frozen). Of all types of products, dried and smoked sockeye salmon were named by the most respondents (34; 32%) (mostly in Naknek and Nondalton), followed by jarred strips of sockeye salmon (24; 23%) (mostly in Nondalton), and Chinook salmon strips (11; 10%), all in Dillingham. Most examples of trade or barter of unprocessed fish came from Dillingham (11 of the 20 examples from all five communities). More detail on responses to this set of questions appears in the individual study community chapters.

As part of the question on types of barter and cash trade of fish that take place in their community, respondents were asked to provide an estimate of the cash involved in trade of the most commonly traded item. Table 21 includes a list of all the examples of exchanges of fish for cash by study community. These examples are also discussed in more detail in each community chapter.

A few other general observations about these findings are offered here–these are discussed further in the community chapters and in Chapter 9, which includes discussion, conclusions, and recommendations:

1. Prices for subsistence fish varied widely even within communities. This might suggest some speculation on the part of respondents about trade in their communities, rather than direct experience, as no specific question asked about the basis for the price estimate.
2. Only one respondent in Togiak thought any exchanges of subsistence-harvested fish for cash occurred "often." Togiak is the study community with the largest percentage of Yup'ik residents and is a predominantly Yup'ik-speaking community. This finding is consistent with the discussion in Chapter 2 about traditions which discourage the "sale" of subsistence resources. Chapter 5 has more details about the study findings for Togiak.
3. Ten respondents in Nondalton gave a cash equivalent for a subsistence product, but said the exchange "never occurred"; 20 other households in the other study communities were unsure of the frequency of the cash trades they suggested might be most common in their community, with 12 of these respondents from Naknek (Table 21). This finding, again, suggests speculation on the part of respondents rather than actual experience or knowledge. The frequency of exchanges of subsistence-harvested fish for money in several communities might therefore be lower than the responses to this question suggest.

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[8] Federal subsistence fishing regulations for halibut allow customary trade (exchange for cash if of a noncommercial nature) (68 FR 18145, April 15, 2003). Subsistence halibut fishing regulations are promulgated by the North Pacific Fishery Management Council and adopted by the US Department of Commerce, National Marine Fisheries Service. Subsistence halibut fishing is not under the authority of the Federal Subsistence Board or the Alaska Board of Fisheries.

4. Naknek and Dillingham appear to have the most community examples that are described as occurring "often." This may reflect the more developed cash sector of the economy in Dillingham and the Bristol Bay Borough, and their roles as regional hubs. Chapters 4 and 6 provide further evidence of the greater frequency of customary trade in the communities of Dillingham and Naknek, respectively.

CHAPTER 4. STUDY FINDINGS: DILLINGHAM

SURVEY FINDINGS

Demography and Cash Economy

According to the U.S. Census, Dillingham had 2,466 people living in 884 households in 2000 with an average household size of 2.8 people (U.S. Bureau of the Census 2001). Sixty-one percent of the population was Alaska Native. In 2005, the Alaska Department of Labor (2006) population estimate for Dillingham was 2,370 people (Table 1). For this study, the 31 Dillingham households that were sampled (about 4% of the community total[9]) had a mean household size of 3.6 persons and totaled 113 people. Of the total sample population, 69 were adults and households averaged of 2.2 adults each. Eighty-one percent of the sample population (92 individuals) were Alaska Native. The average age of the household head was 50 years, and the average length of residency of household heads in Dillingham was 35 years (Table 6). Most Dillingham household heads were lifelong residents of the Bristol Bay region.

In Dillingham, 42% of sampled households (14 households) had a household income of over $75,000; 29% (nine households) had an income range of $50,000 to $74,999; 13% (four households) had an income range of $25,000 to $49,999; 7% (two households) had an annual income of less than $10,000; and 7% (two households) declined to answer the household income question (Table 7). The survey sample had a larger proportion of households with incomes of $50,000 or more (79%) compared to the federal decennial census findings for 1999 (51%) (Table 8).

Most interviewed Dillingham households (17 households; 55%) held no commercial fishing permits. Of the remaining households, 14 (45%) held commercial fishing permits for salmon, three (10%) for herring; two (7%) for halibut, and one household (3%) held a permit for herring roe (Table 9).

Cash Trade

Of the 31 households interviewed in Dillingham, seven (23%) reported participation in the trade of subsistence-caught fish for cash some time in the past (Table 10). Four households (13%) participated in cash trade in the 2004 study year, citing five instances of exchange (Table 14). Three of these households traded fish for cash on four different occasions. One household bought fish. One household reported two trade exchanges in 2004 with two individuals from Iliamna, unrelated men of recent acquaintance to the seller. As part of the exchange, the two men bought 10 quarts of dried, smoked Chinook salmon, purchased for $200, and 30 dried smoked whole sockeye salmon, purchased for $300. Another Dillingham household bought a one gallon bag of dried pike for $30 from a friend from Alegnegik. The final two of the five exchanges were each instances of multiple sales at an event. A Dillingham household sold 36 pints of pickled Chinook salmon for $15 a pint at bingo to multiple individuals. Some of the buyers purchased two jars, while most purchased one jar. Another household sold 60 half-pint jars of "fish" for $7 each to multiple individuals at an unspecified time and location. Neither household knew or was familiar with the persons to whom they traded the items for cash.

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[9] Sixteen other households who held subsistence salmon permits were contacted by phone but reported no involvement in cash trade or barter (see Chapter 1).

Of the 7 Dillingham households with a history of trading fish for cash, three reported engaging in this activity more than once a year, two about once a year, and the other two households reported almost never participating in this kind of trade (Table 11). None of the households reported buying and then selling the same fish. This is most likely because the majority of the households reported selling fish, not buying it, and the ones who bought it, did so because they needed the fish for their own family's use, according to their accounts.

Out of the 7 Dillingham households that reported ever having bought or sold subsistence-caught fish, two named the single-most important factor in motivating their participation in trade as their household's need for fish (Table 13). Two households said someone else needing fish was the single most important factor, one said they had extra fish to exchange for cash, one gave another reason, and one gave no reason for their trade. When asked to list all contributing factors for trading fish for cash, four Dillingham respondents included their household's need for fish, two listed someone else's need for fish, two listed other reasons, two listed having extra fish to exchange, one listed a need for money, and one listed someone else's need for money as all having influenced their household's participation in trade (Table 12).

Barter

Twenty of the 31 households (65%) that were surveyed in Dillingham reported participating in some form of barter at some time in the past, and all 20 of these households bartered in 2004 (Table 15). Many of these 20 households practiced barter and sharing. Another nine Dillingham households reported they only shared their subsistence-caught fish. The least number of exchanges reported to have taken place per household was two; the largest number reported was 28. The resource most commonly bartered by interviewed households in Dillingham was some form of Chinook salmon. Chinook salmon accounted for 50 of the 99 instances of barter exchanges in 2004, or 51% of all exchanges noted). Sockeye salmon was another important resource bartered in 24 of the 99 cases (24%). Other natural resources including other salmon and non-salmon fish species, marine and land mammals, as well as berries were bartered by surveyed households in exchange for natural resources, services, or market goods (39 of the 99 cases; 39%). In just four cases (4%), interviewed households said they provided services or market products in exchange for subsistence-caught fish. However, in Dillingham it was very common for interviewed households to report exchanging fish they had harvested for assistance in processing the fish or for other services (17 of 99 barter exchanges; 17%). In other barter exchanges, Dillingham households received fish (34 exchanges; 34%), other natural resources (33 exchanges; 33%), groceries (14 exchanges; 14%), or other market goods (11 exchanges; 11%) (Table 19).

Of the 20 Dillingham households with a history of bartering subsistence-caught fish, 12 said they bartered fish more than once a year on average, 7 households noted they bartered about once a year, and one household said they almost never bartered (Table 16). Most of these households (12) said they never bartered the same fish more than once, 6 said rarely, and 2 said that this was a frequent activity. Most commonly, this means that people may be given freshly caught fish in exchange for processed products. They, in turn, keep much of the processed fish for their own household's use, as well as pass on excess fish to others in bartering or sharing. Sometimes this redistribution is an exchange of processed products, one household to another, with an excess of the newly received processed product exchanged again for another item, or gifted to friends and family.

Out of the 20 Dillingham households that reported having bartered, 7 gave the single-most important factor motivating the barter as someone else needing fish, 5 reported that having extra fish was the single most important factor, 4 said they needed something other than fish, 2 gave "other reasons" as a responses, one said someone else needed something, and one gave no reason (Table 18). When asked to list all the factors involved in motivating barter 19 of the 20 households said "someone else needed fish;" 19 of the 20 also listed their household's need for something. Seventeen included having extra fish as an important factor; 8 included someone else's need for something; 7 needed fish; and 2 included other reasons (Table 17).

Community Examples of Cash Trade and Barter

Twenty-eight Dillingham households responded to the questions on the community example page during the survey. The remaining three did not feel they knew enough about community patterns to provide any helpful answers. There was general consensus from the Dillingham respondents that Chinook salmon was the most traded and bartered resource in the community: 24 households said that Chinook was traded or bartered most often in the community, but there was less agreement on the how the fish was processed before the exchange (Table 22). Six households said that fresh unprocessed Chinook salmon was the most traded or bartered, and three others said frozen, unprocessed Chinook were traded or bartered most often.[10] More respondents said that Chinook salmon were processed before being exchanged. Most respondents (12) said Chinook salmon strips, either loose or packed in jars, were most often exchanged. One mentioned dried and smoked Chinook, another cited salted Chinook, and a third listed jars of pickled Chinook salmon.

Four Dillingham households said that sockeye salmon was the most traded or bartered resource in their community with one household each naming whole fresh unprocessed sockeye salmon, frozen unprocessed fish by the pound, dried and smoked fish by the pound, and dried and smoked fish by the gallon (Table 22).

In total, 11 of the examples cited by the 28 households (39%) as the most commonly traded or bartered fish involved "unprocessed" fish and the remaining 17 (61%) involved fish that had been processed through smoking, salting, or pickling (Table 22).

Table 23 gives more specific information for the examples of barter or trade in Dillingham listed in Table 22. In the first example, Scenario 1, one household reported that six fresh unprocessed Chinook salmon could be bartered in Dillingham for 90 lb of caribou or moose, 3 gallons of seal oil, 10 gallons of berries, or one day of subsistence resource processing services. If purchased from a subsistence fisher, one could expect to pay $225 for the six Chinook salmon, according to one household.

DILLINGHAM EXAMPLES OF HOUSEHOLDS INVOLVED IN CASH TRADE

Case 1. This household consists of seven individuals, six of whom are Alaska Natives, and two of whom are adults. The head of the household is 44 years old, with 42 years of residency in Dillingham. One adult has full-time, seasonal wage employment. The second adult has

[10] In the tables for community examples of barter and cash trade, fresh and frozen Chinook and sockeye are listed. While "individual" fish either fresh or frozen were considered "unprocessed," those listed in pounds are not necessarily "unprocessed" in that some of the fish have been filleted and vacuum packed, or just filleted, or gutted and split, or otherwise minimally "processed."

seasonal, part-time employment. This household owns one drift and one set gillnet permit for commercial salmon fishing. The combined income for the household falls in the range of $25,000 to $49,999.

This household does not normally trade, but early in 2005 they sold 36 pints (in half-pint jars) of salted and pickled Chinook salmon at a bingo fundraiser during Beaver Round-Up, an annual community event. Some of the pints were sold in pairs, but most people bought one jar for $15 each. The respondent estimated that approximately 50 people from the community of Dillingham and surrounding villages bought fish from them. The household made $745, all of which went to the basketball team to cover travel costs to the regional tournament. At the same event, the respondent observed that cups of *akutaq* were being sold with a piece of a Chinook salmon strip stuck in each cup. These cost $3 each.

The household does not barter subsistence-caught fish, and aside from selling fish at bingo to raise funds for the basketball team, they do not practice trade either. This household does share their processed traditional foods, and during the study year gave away approximately 2 gallons of Chinook strips, 2 gallons of dried sockeye salmon, 3 gallons of sockeye *egumcaat* (locally pronounced "*gumchuk")* and one gallon of dried smelt. (*Egumcaat* refers to the fatty portion of the salmon belly that is not used for strips. These are hung to smoke for three days, and then marinated and basked as a succulent main dish.) These resources were shared with extended family members, all women from Dillingham. Two of the husband's sisters, both in their middle 40s, have received fish approximately seven times a year since 1980, and two elderly aunts, one 70 and the other 84 at the time of the study, received fish approximately six times a year since the early 1990s. All the fish involved in trade and sharing were caught at Ekuk Beach except for the smelt, which came from Kanakanak Beach.

During the survey, the respondents for this household offered that they had heard someone from New Stuyahok advertising the sale of fish on the radio during "open line," a daily local radio show, but no price was mentioned. Also on "open line," someone was selling a "giant bag" of Chinook strips for $50 during summer 2005, they said.

This household also volunteered that, in Dillingham, subsistence-caught fish were usually given away at potlucks and as gifts. Dillingham residents shared fish for a number of reasons, including to help others. People often gave away excess salmon after all their totes were full after pulling a gillnet from a set. Also, unused set net sites were often worked by friends without any expectation of receiving fish or any other sort of compensation in return.

Case 2. This household consisted of four Alaska Native adults. The household head was 67 years old, and had lived in Dillingham for 60 years. Household members participated in the commercial salmon fishery. They declined to provide an income estimate. This household sold eight cases of half-pint jars of pickled "fish" caught in Nushagak Bay for $7 per jar at their local business (not a grocery). They did not remember who purchased the fish. They made a total of $420.

This household also shared with eight members of their extended family, and did not receive anything in return. Each of the eight persons received approximately two cases of jarred Chinook salmon, 15 lbs of smoked Chinook, and 3 lbs of Chinook jerky. The respondent considered this form of sharing as a gift.

*Case 3***.** This household consisted of two people, both Alaska Natives. The head of the household was 46 years old and a life-long Dillingham resident. This household did not hold any commercial fishing permits. Neither person was employed and the total household annual income was less than $10,000.

In 2004, the household sold 10 quart bags of dried and smoked Chinook salmon for a total of $200 ($20 per quart bag), and 30 dried and smoked sockeye salmon for a total of $300 ($10 per fish) to two men from Iliamna. These were people the respondent had met in 1999. This was a first-time sale initiated by the buyers, who stopped by the respondent's smokehouse during processing. The sale took place for the dried and smoked Chinook and sockeye, and a barter arrangement was also struck for 15 gallons of salted Chinook "tips"[11] and heads in exchange for 15 gallons of blackberries. They called this exchange "a trade."

This household also traded with extended family members and a friend during the study year. They gave 5 gallons of salted Chinook tips and heads to a 36-year-old relative living in Nondalton, who in exchange gave them 5 lb of cranberries. Twenty gallons of salted Chinook tips and heads were given to a 44-year-old female friend in Manokotak in exchange for 3 gallons of fresh frozen herring eggs from Kulukak Bay and 20 air-dried, spawned-out sockeye from Amanka Lake near Manokotak Finally, 5 gallons of salted Chinook tips and heads, 8 quarts of dried and smoked Chinook, 20 dried and smoked sockeye, and 2 air-dried spawned out sockeye from Amanka Lake were given to a 40-year-old sister living in Anchorage, who then gave them 7 lb of store-bought meat in return. All fish given by this case household were caught at Kanakanak Beach, except for the spawned out sockeye from Amanka Lake near Manokotak.

This household reported that 2004 was the first year they bought or sold subsistence-caught fish. They gave the most important factor in initiation of this sale as someone else's need for fish, but included having extra fish, the lack of berries in Dillingham, and the absence of Chinook salmon at Iliamna as other important factors. They said that 2004 was also the first year they bartered subsistence-caught fish. The most important factor in these exchanges was the household's need for berries, but having extra fish, and someone else's need for fish also played a role in the exchanges.

*Case 4***.** This household consisted of two adults and two children. Three of the members are Alaska Natives. The household head is 51 years old, and has lived in Dillingham for 22 years. One adult works part time and other adult is employed full time. They do not a hold a commercial fishing license, and the combined household income was in the range of $25,000 to $49,999.

This household bought subsistence-caught fish from a 40-year-old female friend from Aleknagik. This was the first time they bought subsistence-caught fish from this individual. They paid $30 for a one-gallon bag of dried pike. They did not know where the fish were caught. Aside from this instance of trade, this household did not participate in any other trade or barter of subsistence-caught fish during the study year, and said they never bartered subsistence-caught fish, because they only share. During 2004, this household gave away approximately 22 cans of sockeye salmon and an unspecified number of quart jars of smoked Chinook salmon to family members and friends. They also received 5 gallons of Chinook heads from a 52-year-old

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[11] "Tips" are the stumps of the pectoral fins and the collarbone of a salmon that are usually removed during traditional salmon processing from the body of a fish after the removal of the head (see Foster 1982:13-16).

brother. This household said they started processing and storing fish not too long ago. This household expressed interest in continuing to buy subsistence-caught fish as full time work makes the harvesting and processing of fish difficult. The respondents admitted to knowing little about bartering goods and resources and did not want to guess about the community patterns for the survey. This household listed the most important factor in participating in trade as their need for fish.

OTHER EXAMPLES OF CASH TRADE OF SUBSISTENCE FISH IN DILLINGHAM

During the project, researchers observed the following additional examples of exchanges or potential exchanges of subsistence-caught fish in Dillingham. These supplement the information collected through the surveys and interviews.

During Beaver Round-Up in 2006, pickled salmon was being sold at a fundraiser for children's extracurricular activities, in one pint jars for $10 and quart jars for $20. "Open Line," a program on the local radio station (KDLG), ran several announcements about the availability of fish to purchase while this project was underway, including: quart bags of salmon strips for $50, available at the hospital from a person from New Stuyahok; salted herring roe for $50 (unknown quantity); and smelt from the Togiak River that a person from Aleknagik was selling for her sister in Togiak. In May 2006, the Open Line broadcast a message that "an elder is looking for herring roe on kelp if anyone has any to share." In July 2006, an individual was selling smoked fish and salmonberries outside the local supermarket. These examples suggest a small but steady volume of subsistence-caught fish being exchanged for cash in Dillingham, facilitated by Dillingham's role as the regional center for western Bristol Bay.

DILLINGHAM CASE STUDIES: HOUSEHOLDS INVOLVED IN BARTER

*Case 1***.** This was a two-person, Alaska Native household. The household head was 52 and a lifelong resident of Dillingham. Both people were employed full time, while also having seasonal employment. The household held commercial salmon and commercial herring permits. This indicates that while both household members hold full-time positions, they also commercial fish in the summer. The household had an income of over $75,000 a year.

The household practiced what they called "trade"–the exchange of fish for something (called "barter" in this report)– as well as sharing. The respondents explained they do not buy or sell fish, they just "trade" (meaning "exchange" or "barter") and give away subsistence-caught fish. They have never had a desire or need to sell subsistence resources, they said. They would rather share and have always shared, as that was how they were raised.

During 2004, this household participated in two instances of barter and six cases of sharing. The first exchange involved bartering five quart jars of Chinook salmon strips for four flats, or about 3 gallons, of blueberries with a friend from Anchorage. The salmon were caught at Kanakanak Beach in Dillingham, and the berries were purchased at Costco in Anchorage. They first started exchanging items with this individual around the time they first met, in 1975, but not on an annual basis. The respondents estimated this sort of exchange occurs with their Anchorage friend once every five years. They also bartered 20 fresh frozen Chinook salmon for 20 lb of crab, 20 lb of shrimp, and about 40 lb of fresh frozen halibut, all caught in Southeast Alaska, with a friend from Juneau. They had a similar exchange about seven years before, and these are the only two reported cases of barter with this individual since they first met in 1992.

During the study year, this household shared subsistence-caught fish with three family members and three friends, including a brother-in-law from Talkeetna, a sister in Portland, a niece in Anchorage, two friends in Anchorage, and one friend in Dillingham. The respondents have known almost all of these people for their entire lives, and sharing appears to be a consistent annual activity with each of them. During 2004, the respondents gave away 14 gallons of Chinook salmon strips, approximately 22 fresh sockeye, about 20 fresh frozen Chinook, 20 smoked Chinook, and about 48 pints of freshly canned Chinook. One significant note is that one friend from Dillingham assisted this family in harvesting and processing for the season and took half of the fish home (smoked, canned, and fresh frozen), but the respondents still called this activity "sharing."

*Case 2***.** This household consisted of three adults, all Alaska Native. One person worked part time and two others held full-time positions for a combined household annual income of over $75,000. This household did not hold any commercial fishing permits. They did not buy or sell subsistence-caught fish during the 2004 study year, and have never done so. The respondent said he was taught never to sell subsistence-caught fish, and to share when there was plenty or when others were in need.

This household participated in numerous exchanges over the course of the study year. In 2004, there were 14 individuals with whom they bartered or shared fish, in some cases multiple times. Some of the barters were annual, standing arrangements with family members and close friends that took place as needed over the year. A couple of barters occurred as there was need or interest in more varied resources than the household had in possession. The household had 8 exchanges with a 69-year-old sister living in Anchorage. Fish and products were exchanged between households as they became available or were needed. The respondents sent two fresh Chinook salmon and six fresh sockeye salmon from a Nushagak River beach as soon as the family pulled their net. After processing began, the sister received two cases of half pint cans of Chinook, and one case of half pint cans of three-day-smoked Chinook. Another shipment included four pint bags of sockeye jerky, and late in the summer, a five-gallon bucket of salted coho. Throughout the year, and intentionally meted out in small amounts, the sister received packages of four quart bags of Chinook strips, and two gallon bags of smoked flat sockeye in six separate shipments. The respondent stated this was necessary to ensure the sister did not give away all of the fish at work and to friends, which would result in her requesting more. In exchange for the fish, the sister sent one shipment of three cases of assorted paper goods; another later shipment of five cases of glass jars; 12 to 15 knives that were arranged to be sharpened and returned; and a final shipment of one case of books, one knife, and one pair of rubber gloves, all upon request of the respondents.

To a 67-year-old brother in Anchorage, this household gave 2 quarts of smoked fish six times throughout the course of the year. The species of fish was unspecified in the survey, but were most likely smoked Chinook strips, as this was the primary processed product of the household. In return, the respondents received three boxes of licorice, one bag of pistachios, one case of Yoshida's gourmet sauce, and parts for the household vacuum packer. Later, the household also received 5 gallons of berries from this brother in Anchorage.

This household had a similar arrangement with a 48-year-old niece, also living in Anchorage. They sent her three fresh Chinook salmon and 6 fresh sockeye soon after they were caught, then two cases of half pint cans of Chinook and two quart bags of smoked strips. Later, they sent her a one pint bag of sockeye jerky. As with the other exchanges, 4 more times throughout the year,

the household sent two quart bags of smoked strips. In exchange, the respondents received from the niece two bottles each of shampoo and conditioner, a body care gift package, and two cases of paper goods.

A relative in Anchorage provides vehicle care and upkeep to this household in exchange for six fresh Chinook salmon and three separate shipments of one quart bags of Chinook strips, and a one quart bag of Chinook jerky. This is another standing arrangement.

A female friend in Alegnagik provided the household with a gallon of salmonberries in exchange for three quart bags of salmon strips. A female cousin in Dillingham provided a jar of seal oil for two quart bags of strips.

A nephew living in Dillingham provides the household with salmon, and the household does the processing for him. In 2004, the nephew provided 30 Chinook, 50 coho, and 20 sockeye salmon. For this service, the respondents gave him two packages of Chinook strips, one package of sockeye jerky, six half pint jars of canned Chinook, and three half pint jars of three-day-smoked Chinook.

Four nieces living in Dillingham assist this household with processing salmon. For their labor, the respondents give them two fresh Chinook salmon each, 12 quart bags each of salmon strips, and a couple each of *egumcaat* ("*gumchuk*," a locally-made delicacy of Chinook or sockeye salmon bellies, which are smoked for three days and then baked in *Yoshida's* gourmet sauce).

This household bartered once during the study year with a woman from Bethel who was interested in exchanging 5 gallons of salmonberries for six quart bags of Chinook salmon strips. The respondents met this person at the airport and she is not related to them. The exchange was a one-time arrangement.

This household recently started bartering with a 60-year-old male friend in Anchorage. Since 2002, they have exchanged six fresh Chinook salmon for one case of corned beef and one case of spam on a once-a-year basis.

This household has bartered subsistence-caught fish multiple times a year since 1984. There are many occasions when this household redistributes fish they have received through bartering. They consider their need of something, in particular their need for services, to be the single most important factor in household barters, but they also cited the need for fish, others' need for fish, or an excess of household fish to be contributing factors leading to bartering arrangements.

*Case 3***.** This household consisted of four individuals, all Alaska Native, three of whom were adults. The head of the household was 47 years old and a lifelong resident of Dillingham. Two adults were employed full time and the third held a part-time position. The household had a commercial salmon fishing permit. They declined to state the combined household income.

This household did not participate in trade during the 2004 study year, but they purchased herring eggs in spring 2005. The respondents said that 1977 was the first year they ever bought or sold subsistence-caught fish, and they have only done so when they have needed fish. The respondents said that they almost never buy or sell subsistence-caught fish.

This household engages in annual exchanges with two individuals. While these exchanges entail giving fish and receiving other resources in return, the respondents do not consider these activities to be a "barter" or "trade." They stated that this kind of exchange was just the way things were and the word "trade" to describe this activity did not enter their minds. The words

they used to describe this kind of exchange were "customary behavior," "more like sharing," and "friendly exchange." The respondents said that they have bartered subsistence-caught fish since 1977 and do this often, more than once a year. For them, the most important reason for barter is "someone else needed something" but also said that their need for something other than fish as well as someone else needing fish also were factors in the exchange. In the first exchange of the study year, the household gave 1.75 lb of Chinook salmon strips and 1.75 lb of dried and smoked sockeye salmon to a friend in Iliamna, and received 50 lb of caribou in return. This exchange has occurred every two years or so since 1996, when the friend comes through Dillingham. At that time he is given fish, and when he returns home, he sends the caribou. Later in the same year, the respondents sent another pound of dried, smoked sockeye, and the friend sent one quart of freshwater seal oil from Iliamna. A second exchange occurred with a female cousin from Clarks Point. It was the first exchange of this kind between the two individuals. The respondents gave one pound of dried, smoked sockeye salmon and received one pint of seal oil in return. All the fish described in the above exchanges were caught in Nushagak Bay.

This respondent recommended covering five years of activities in the survey, as he felt that he had been unusually inactive in the 2004 study year. He also said that once you start bartering and trading, you would be more likely to keep doing it.

*Case 4***.** This household consisted of three people, two adults and one child. One adult and the child were Alaska Native. The head of the household was 49 years old, and a life-long resident of Dillingham. Both adults were employed full-time, and neither held a commercial fishing permit. The household income range was $50,000 to $74,999 a year.

The survey was conducted with the wife of Case Household 3 (bartering) and her sister who was visiting at the time of the interview. The sister lives in Anchorage and flies out to help harvest the bulk of the family's summer subsistence catches. She helps process in exchange for a number of fresh and processed fish. When they catch more fish than they can process, they call other households to come to pick up fresh unprocessed fish. This is a very common occurrence in Dillingham. There is frequent sharing of fishing sites and gear without any expectation of compensation. This case household considers most of the exchanges with the sister as "sharing" because they give fish to her without any previous arrangement for receiving items in return. The following information is representative of their average annual exchange patterns.

In exchange for two days of her labor, the household's 46-year-old sister from Anchorage received two cases of canned Chinook, 15 quarts of Chinook strips, and 10 to 15 gallons of sockeye *egumcaat*. All fish for this and subsequent exchanges were caught at Scandinavian Beach in Dillingham. A male friend from Dillingham in his 30s gave them 5 lb of prime rib in exchange for one 16 oz jar of pickled Chinook salmon, a 12 oz jar of canned sockeye salmon, a 12 oz jar of three-day-smoked Chinook, one quart bag of Chinook strips, and 2 lb of sockeye *egumcaat*. Also in the year, the household gave to the same individual one fresh jack salmon, three or four Chinook fish heads, and 2 skeins of fresh Chinook roe in exchange for one day of labor. This kind of exchange takes place about twice a year, and has been a standing arrangement since 1992.

This household gave a one quart bag of king strips to a new (since 2003) 67-year-old female friend from Soldotna for two loaves of zucchini bread, a first time exchange. A female 45-year-old cousin from Dillingham received one 12 oz jar of three-day smoked Chinook, a one gallon bag of sockeye *gumchaq*, a 16 oz jar of pickled Chinook, five slabs of salted Chinook, one gallon

of fresh salmon berries, one gallon of fresh black berries, and one 12 oz jar of huckleberry jam. In exchange, the respondents received two dozen cookies. When asked about the value of this exchange, the respondent answered, “They were good cookies!” The same cousin also received 36 fresh sockeye salmon as a gift. The household called this “sharing.” The 78-year-old mother of this respondent received two cases of canned Chinook salmon, 20 lb of sockeye *gumchaq*, and 10 quarts of Chinook strips, and gave one hindquarter of moose and two hindquarters of caribou in barter. The household gave a one quart bag of Chinook strips to a 40-year-old female friend from Dillingham. This same friend gave Case Household 3 fresh whitefish (two), fresh Dolly Varden (one), and fresh pike (two), all from Alegnagik. They did not consider this barter as there was no expectation of items in return for what was given from either household.

This household has bartered subsistence-caught fish since 1981. They indicated having extra fresh, unprocessed fish as the most important factor when it comes to barter; however, needing fish, someone else needing fish, others needing something other than fish, and the household’s need for something other than fish were contributing factors.

This household has also participated in trade, but as a very rare occurrence. They cite someone else needing fish to be the single most important factor in this exchange, but the household’s need for fish, and someone else needing money are other considerations.

*Case 5***.** This household’s membership was two Alaska Native adults. The head of the household was 51 years of age, with 30 years of residency in Dillingham. One adult was employed full-time, while the other worked part-time. Neither member of the household holds a commercial fishing license, and the combined household income range is $50,000 to $74,999 annually.

This household did not participate in customary trade in 2004 and has never done so. They did participate in barter and sharing. Over the course of the summer, the household gave meals once a month, four round trip boat rides, 100 gallons of fresh drinking water, and a box of store-bought food in exchange for one box of smoked sockeye strips given by a 59-year-old sister living in Dillingham. The household gave 70 lb of fresh frozen sockeye caught in Nushagak Bay to a 54-year-old male cousin living in Barrow, in exchange for 50 lb of caribou, 50 lb of *maktak* (whale blubber), and 15 lb of fresh whitefish, all from the North Slope. A 46-year-old relative from Barrow gave 100 lb of *maktak* for 70 lb of fresh-frozen sockeye. Members of this household gave their 84-year-old mother-in-law 20 lb of fresh smelt and 15 lb of fresh sockeye caught in Nushagak Bay in exchange for 30 lb of *maktak*. To their 23-year-old daughter living in Anchorage, the respondents gave 10 lb of fresh Chinook salmon and 15 lb of fresh coho salmon each time they came into town to stay for a couple of days on a monthly basis.

Members of this household gave their 82-year-old mother 20 lb of fresh smelt, caught at Kanakanak Beach. The household received a gift of 12 coho from a 70-year-old friend living in Dillingham.

This household has been bartering and sharing subsistence-caught fish since 1968, and cite as the most important factor in their barter someone else’s need for fish. But they also cite their household’s need for something other than fish and having extra fish as important factors in barter as well.

Case 6. This household consisted of four people, all adults, three of whom were Alaska Native. The household head was 49 years old and was a life-long resident of Dillingham. Two adults

were employed full-time, while the other two were seasonally employed. This household held a commercial salmon fishing permit, a commercial herring permit, and a commercial halibut permit. They reported their household income range as more than $75,000 a year.

This household has never bought or sold subsistence-caught fish, but its members have standing arrangements to barter with many individuals. Respondents for this household said that they "trade" 25 lb of Chinook salmon fillets caught in Nushagak Bay for 15 lb of Pacific geoduck clams from a 32-year-old nephew living in Washington state. Similar exchanges with this person have taken place annually for the last five years. This household gave 5 gallons of frozen herring from Togiak Bay to a Dillingham male friend of 54 in exchange for half a caribou. They gave 30 lb of Chinook salmon fillets and 10 lb of frozen halibut to a 46-year-old male friend from Dillingham in exchange for 2 gallons of salmonberries. This household sent the same amounts of fish, crab, and shrimp to its 81-year-old father-in-law living in California and its 81-year-old mother-in-law living in Arizona. Both in-laws received 10 lb of frozen Chinook salmon fillets, 8 lb of filleted halibut, 12.5 lb of frozen king crab, and 12.5 lb of frozen shrimp. For this exchange, two 25 pound boxes of crab and shrimp were split between both in-laws. In return the household received 10 avocados, 2 salami rounds, and 4 lb of macadamia nuts from the father-in-law in California, and 10 avocados and 15 lb of oranges from the mother-in-law in Arizona. This exchange has been taking place twice a year with both individuals since 1981.

Three opportunities to barter subsistence-caught fish in 2004 arose with a 54-year-old brother-in-law from Washington state. The respondents explained that the first exchange involved the "trade" of 75 lb of vacuum-packed Chinook salmon fillets and 50 lb of vacuum-packed halibut for 30 lb of Dungeness crab and 20 lb of oysters. The second transaction involved the exchange of 15 lb of smoked Chinook salmon and 10 lb of frozen Bering Sea king crab for another 30 lb of Dungeness crab and 20 lb of oysters. There was a third exchange during the study year with the same person, in which the respondents gave moose for more oysters and crab. Sharing for the year 2004 included sending a five-gallon bucket each of frozen Togiak herring to two cousins in Clarks Point and an elderly friend in Perryville.

All cases of barter and sharing for this household occur at least once a year and most are standing arrangements that have taken place over the course of many years, stretching in length from two to approximately 25 years. The household lists the most important factor for their barters as someone else's need for fish, but included the household need for something other than fish, having extra fish, and someone else's need for something to be contributing factors.

*Case 7***.** This household consisted of two adults and two children, all Alaska Natives. The household head was 39 years old and a life-long Dillingham resident. He was employed full-time and the other adult was employed part-time. The household possessed a commercial salmon permit and the combined annual income range was more than $75,000.

This household focused most of its exchange efforts on giving or sharing subsistence-caught fish. There were two instances out of five where the household actively participated in barter. The first instance involved giving two cases of three-day smoked coho salmon from Wood River to their 48-year-old mother-in-law in exchange for a quart of seal oil. Barter and sharing with this person takes place twice a year. The second instance involved giving 5 gallons of frozen smelt caught in Nushagak Bay to a 63-year-old father living in Anchorage for a case of canned sockeye salmon from Cook Inlet. Bartering and sharing with this person also takes place about twice a year. All other activities were gifts, for a total of 20 sockeye salmon, 5 smoked Chinook, 40 lb

frozen Chinook, and 40 lb of frozen coho, shared with three other members of the household's extended family.

This household has been involved in the barter and sharing of subsistence-caught fish since 1985. They listed the most important factor for barter as the household's need for something other than fish, but included needing fish, having extra fish, others' need for fish, and others' need for something else as contributing factors. In a note to the interviewer, the respondent said they share with those who cannot hunt or fish.

While responding to questions for the community profile portion of the survey, the household volunteered that cash sales of salmon are not tracked. They do not think there is a big market and that it mostly takes place out of the area, during the Alaska Federation of Natives convention, Beaver Roundup in Dillingham, or in Anchorage.

*Case 8***.** This household consisted of five people, two of whom were adults and four of whom were Alaska Natives. The household head was 45 years old and a life-long Dillingham resident. Both adults were employed full-time, and the household also held a commercial salmon fishing permit. The combined annual income for the household was over $75,000.

The household has never participated in trade of subsistence-caught fish for cash. During 2004, household members bartered twice (they called it "trade"), and had two instances of sharing. The household gave two cases of canned Chinook salmon to a 40-year-old male life-long friend from Dillingham, in exchange for two cases of three-day smoked Chinook. All the fish were caught in Nushagak Bay. They also gave 10 frozen sockeye and 5 frozen Chinook to a 50-year-old female friend in Fairbanks in exchange for a tote of used clothing. This household gave a total of 10 Chinook to a 55-year-old uncle in Dillingham and one case of three-day smoked Chinook salmon to their daughter in California. This was the extent of their sharing.

This household has bartered subsistence-caught fish since 1973, and says they usually participate in bartering activities about once a year. They list someone else needing fish as the single most important factor in their "trading", but also included needing fish, needing something other than fish, having extra fish, and someone else needing something other than fish as contributing factors.

This household was knowledgeable about community patterns of exchange in Dillingham, offering specific portions on items for exchange. This household thought that one case of jars of smoked Chinook salmon was the most traded or bartered resource in Dillingham. They thought that one case of Chinook salmon could be exchanged for 1 quart of seal oil from Togiak, or 5 gallons of salmonberries from Goodnews Bay, or half a caribou from the Nushagak River area, or a quarter of a moose from the Nushagak River area, and that all of these kinds of exchanges happened regularly. They thought that maybe one case of jars of smoked Chinook could be exchanged for 50 gallons of gas, but that they thought this kind of exchange never happens. They felt that maybe one could exchange a case of smoked Chinook for 15 lb of king crab from Dutch Harbor but they thought this type of exchange rarely happened. They felt that the exchange of one case of smoked kings for $240 was a fair price and happened often in the community of Dillingham.

*Case 9***.** This household consisted of five individuals, all Alaska Native and two of whom were adults. The head of the household was 57 years old, and had lived in Dillingham four years.

Both adults were employed full-time and neither had a commercial fishing permit. The total annual income for the household was over $75,000.

This household had purchased halibut from the owner of a boat at the harbor, but they were uncertain whether this was trade or a commercial sale. Further investigation confirmed that this was a commercial transaction, because the seller had a commercial permit for selling fish and engaged in commerce.

This household's members primarily share subsistence-caught fish, but occasionally barter. During the 2004 study year, they gave one case of smoked sockeye salmon and 1 gallon or 2 gallon bags of dried sockeye to a 54-year-old male friend from Dillingham in exchange for a whole caribou. This man is a recent acquaintance since 2001, and bartering began in 2002. They barter with this person about three or four times a year. They also gave half a case of jars of smoked sockeye salmon to a female friend in her late 20s in exchange for babysitting services. This friend is also a recent acquaintance, first met in 2002. The study year was the first year for barter between these two individuals. All the fish in these barters came from the Newhalen River.

This household's sharing most consistently takes place with an 80-year-old first cousin and godmother who lives in Nondalton, a 60-year-old sister living in Anchorage, and a 35-year-old son living in Seattle. One case or half a case of jars of smoked sockeye salmon is sent to the sister and son at least twice a year, and about 6 times a year to the godmother.

This household has been involved in barter since 1986, and barters subsistence-caught fish about once a year. They listed the most important factor in motivating them to barter is having extra fish, but they included someone else's need for fish and the household's need for something other than fish as contributing factors.

This household thought that 25 lb of fresh Chinook was the most traded or bartered fish in Dillingham. They thought that a fair barter for 25 lb of Chinook would be 2 pints of seal oil from Togiak, or 5 gallons of salmon and blackberries from the Bristol Bay Borough, or one hindquarter of caribou, or 25 lb of moose meat, and that all of these kinds of exchanges were common in Dillingham. They also volunteered that perhaps 25 lb of fresh Chinook could be bartered from personal services, and that this, too, was common in Dillingham. They thought that maybe 25 lb of Chinook salmon could be exchanged for 20 gallons of gas, but that this probably never happened in Dillingham. They estimated that 25 lb of fresh Chinook could be exchanged for $80, and this often happened locally.

DILLINGHAM CASE STUDIES: HOUSEHOLDS INVOLVED IN BARTER AND SHARING

The next group of households are involved in exchanges that can be viewed as either barter or sharing.[12] These households do not call what they do "barter." Resources go from their household to another household and other resources come back from the same household, generally at a later time and not in any negotiated, equivalent quantity. Therefore, these households felt strongly about not using the term "barter" to describe their activities, but agreed to participate in the survey none-the-less.

[12] Only in Dillingham were surveyed households' descriptions of "sharing" recorded in addition to barter and cash trade. This section describes activities that might be classified as either sharing or barter.

*Case 1***.** This household consisted of four people, two of whom were adults, and three of whom were Alaska Natives. The head of the household was 49 years old, and the household had lived in Dillingham for 25 years. One adult was employed full-time while the other was seasonally employed. This household did not have a commercial fishing permit. The combined income of the household fell in the range of $50,000 to $74,999 a year.

This household has never participated in trade and, when asked if they bartered, said, "No, we only share." They did agree that in sharing, some resources go to a particular household and then other resources are received from the same household. In the 2004 study year, the household gave two cases of canned coho from Kanakanak Beach to a 50-year-old sister in Dillingham, and received two cases of empty jars. They called this "family sharing." The household sent 2 gallons of frozen smelt to a 53-year-old female friend from Chignik Bay and received two or three king crab. This they called a "fair exchange." All other activities were sharing, from this household to others.

This household said they did not engage in barter often, perhaps once a year, and listed 2001 as the year of their first barter. This household often receives a variety of nonsalmon species like whitefish from Nondalton and Igiugig, grayling from New Stuyahok, or trout from Iliamna, though not during the study year. They said that someone else needing fish was the most important factor in their barter, but included having extra fish or the household's need for something other than fish as influential to the exchange. This household most commonly shares with members of the family and once a year receives jars and assistance with canning fish. They also receive fish, such as Chinook salmon, when others have extra.

*Case 2***.** This household consisted of two non-Native adults. The head of the household was 63 years old, and this household had lived in Dillingham for 23 years. One adult worked full-time, while the other held a part-time position. This household did not have a commercial fishing permit and the combined household income totaled in the range of $50,000 to $74,999 annually.

This household has never engaged in trade of subsistence-caught fish for cash, and did not know if this activity was happening in Dillingham. They primarily share their resources, but on occasion they barter for produce. In 2005, this household gave five pint packages of Chinook strips, 2 lb of frozen halibut from Togiak, 1 ½ cases of canned sockeye strips, and two one-pint packages of canned coho strips to their 41-year-old daughter living in Washington State, who in turn sent them 25 lb of strawberries and one cooler of cucumbers. They listed 1997 as the year they first bartered and said that the most important factor in a barter was their need for something other than fish, but someone else needing fish was also important in considering whether to barter. This household gives subsistence-caught halibut that they harvest near Togiak to their children and friends.

*Case 3***.** This household consisted of four people, two were adults and none were Alaska Natives. The head of the household was 48 years old and the household had lived in Dillingham for 22 years. Both adults were full-time employed, neither had a commercial fish license, and the combined household income totaled more than $75,000.

This household was aware of state regulations prohibiting the sale of subsistence-harvested fish and has never engaged in the activity. They do barter, however, and listed 2003 as the year they first engaged in this sort of exchange in addition to sharing. The most important factor motivating barter for this household is someone else's need for fish, but the household's need for something other than fish and having extra fish also featured significantly. In the 2004 study

year, this household exchanged 40 lb of fresh frozen Chinook salmon for 10 lb of king crab with a 50-year-old male friend from Dutch Harbor. They called this exchange "being a helpful friend." All other exchanges were sharing with family and close friends.

*Case 4***.** This household consisted of three people, two of whom were adults and all of whom were Alaska Natives. The head of the household was 52 years old and a life-long resident of Dillingham. Both adults worked full-time and neither held a commercial fishing license. They indicated that it was not worth commercial fishing any more as this activity required too much work. The combined household income was in the range of $25,000 to $49,999 annually.

The respondents said they have never felt the need to "sell" subsistence foods. They mostly share their foods and feel good about what they do. They listed their first year of "trade' (barter) as 2003 and said that this kind of exchange happens about once a year. In 2004, the household gave 20 pints of canned Chinook salmon caught in the Squaw Creek area of Dillingham to a 56-year-old sister living in Kotzebue. The sister sent half a pound of *maktak*, one gallon of cranberries, one gallon of blackberries, 15 lb of reindeer meat, and one fresh sheefish. They called this a "family trade." This family has been sharing with the sister since 1970 but this was the first year for barter. They listed someone else's need for fish as the most important factor in their barter, but included the household's need for something other than fish, having extra fish, and someone else's need of something other than fish as important contributing factors.

The household works together with five other siblings to process their salmon. The dried, smoked, fresh frozen and, sometimes, canned fish are equally shared among the six households at the end of the season.

This household offered some comments on the survey. Neither adult ever observed the selling of subsistence foods while they were growing up in Dillingham. Both indicated that selling food harvested for personal use is not what they believe in, saying:

> We have always shared with people and vice versa and feel better about this way of doing things. Since one of my siblings lives in another region where their subsistence foods are different than in the Bristol Bay, we don't mind exchanging food with them. That way we are able to obtain foods we are not able to harvest locally and the sibling is able to taste the fish of her home. When a person barters, they exchange subsistence resources they normally cannot harvest and this is like when a person goes to the store, they normally don't buy what they already have. Reindeer meat from Kotzebue is enjoyed, but the sheefish are too rich in their fat content and are also too boney to eat. With a large family in Dillingham and other places, sharing goes on all the time not only with fish, but with other resources. Sharing is a part of our way of life and we do this from the kindness of our hearts for people less fortunate as far as having the food they are craving.

During this interview, the head of the household gave a visiting woman vacuum-packed fresh frozen Chinook salmon. He indicated that he needed to make more room in the freezer. The woman then sat and listened to the questions being asked of the household and finally said, "So many questions! And what questions the *kass'aqs* (non-Natives) ask!" She thought to ask one's age and income was far too personal, and that it was enough for the subsistence fishers to count their harvests every year. To ask how people share was "our own business. What will they ask us next?" She was an elderly widow, and when asked if she would be interested in participating in a survey, she indicated that she mainly receives fish and, in turn, shares what she is given.

CHAPTER 5. STUDY FINDINGS: TOGIAK

SURVEY FINDINGS

Demography and Cash Economy

According to the U.S. Census (U.S. Bureau of the Census 2001), Togiak had 809 people living in 202 households in 2000, with an average household size of 4.0 people. Ninety-three percent of the population was Alaska Native. In 2005, the Alaska Department of Labor (2006) population estimate for Togiak was 779 people (Table 1). For this study, 12 Togiak households that key respondents reported to project researchers were involved in cash trade or barter were interviewed. The population of these households was 54, with an average household size of 4.5 people. Eighty-nine percent of the sampled households' population was Alaska Native, the average age of the household heads was 52 years, and on average household heads had lived in Togiak for 49 years (Table 6).

Of the 12 interviewed Togiak households, 8% (one household) had an income below $10,000; 17% (two households) had incomes in the $10,000 to $24,999 range; 17% (two households) were in the $25,000 to $49,999 range; 42% (five households) were in the $50,000 to $74,999 range; none had incomes over $75,000; and 17% (two households) declined to answer the income question (Table 7). For comparison, the findings of the federal decennial census for 1999 reported a lower proportion of Togiak households with incomes below $25,000 (30% for surveys, 52% for the census) and a lower proportion of households with incomes above $50,000 (50% for surveys, 27% for the census) (Table 8).

Of the 12 interviewed Togiak households, 75% held commercial fishing permits; 67% (eight households) held salmon permits. In addition, 58% (seven households) had a herring roe-on-kelp permit; 17% (two households) had herring permits; 8% (one household) had a halibut permit; and 8% (one household) had another commercial fishing permit (Table 9).

Cash Trade

Of the 12 interviewed Togiak households, four (33%) said they had participated in trade of subsistence-caught fish for cash (Table 10). Of these, three said they engaged in trade about once a year, and the other respondent said they "almost never" participated. (Table 11). Their household's need for fish was cited as the most important reason for participating in trade for three of the four respondents (Table 13).

In the 2004 study year, three of the 12 interviewed Togiak households (25%) reported examples of trade of subsistence-caught fish for cash. The total number of instances was three; three involved the exchange of Chinook salmon for cash and one involved sockeye salmon (Table 9).

Barter

Of the 12 interviewed Togiak households, six (50%) had bartered subsistence-caught fish (Table 15). Of these, one said they bartered more than once a year, three said they bartered about once a year, one said they bartered less than annually, and one said that bartering for them was a rare occurrence (Table 16). The primary reason for bartering fish varied among the Togiak respondents. Two said that needing something other than fish was the primary motivation; one each gave the following primary reasons for bartering: needing fish, someone else needing fish, someone else needing something other than fish, and an unspecified reason (Table 18).

In the 2004 study year, six interviewed Togiak households were involved in 12 instances of barter (Table 15). These cases involved 16 resources given by the interviewed households, and 12 resources, other goods, or services received in exchange. Chinook salmon (six of 12 cases of barter; 50%; and sockeye salmon (three cases; 25%) were most often given by Togiak households in barter. Household goods (four of 12 cases; 33%) and natural resources other than fish (six of 12 cases; 50%) were most often received by the interviewed households.

Community Examples of Cash Trade and Barter

Households were asked to give examples of barter and trade that they were aware of that occur in their community. These are not necessarily exchanges that the household was involved in. The initial question was, "What kind of fish do you think is traded or bartered most often in your community?" They were then asked in what state of processing the fish were usually traded or bartered (e.g. fresh unprocessed, frozen, dried, smoked, etc.) and "what is a typical amount that someone might trade or barter?"

Table 24 lists the examples provided by interviewed Togiak households. Only nine of the 12 interviewed Togiak households responded to this set of questions, and they provided diverse answers. Two households gave examples of barter or cash trade that involved frozen, unprocessed coho salmon, another named fresh unprocessed Chinook salmon, and a fourth respondent named frozen, unprocessed sockeye salmon. Another household said dried sockeye salmon were most frequently exchanged, and a sixth said dried and smoked sockeye salmon, measured in gallons, appeared most often in resource exchanges in Togiak. Two other Togiak households thought that dried, spawning sockeye salmon were the most frequently bartered or traded resource in their community. Finally, a ninth household said that dried smelt was the fish most frequently bartered or traded in Togiak.

Table 25 gives more specific information for the examples of barter or trade in Togiak listed in Table 24. In the first example (Scenario 1), one household reported that 10 frozen, unprocessed coho salmon could be bartered in Togiak for 7.5 whitefish or purchased for $20, but that this type of trade occurred "rarely" (less than once a year). In the second example (Scenario 2), one household reported rare instances of the exchange of 20 frozen, unprocessed coho salmon for 40 lb of caribou meat, 5 lb of moose meat, a quart of seal oil, a gallon of berries, 5 gallons of gasoline, or for $100. In Scenario 5, one respondent said that three individual, dried sockeye salmon could be bartered in Togiak for 2 quarts of seal oil (a "rare" exchange) or 5 gallons of berries (an exchange that occurs "often"). In Scenario 6, 10 gallons of dried, smoked sockeye salmon could be exchanged for 40 lb of caribou, 20 lb of moose, 2 quarts of seal oil, 4 gallons of berries, 6 quarts of fiddlehead ferns, or 10 gallons of gasoline. Seven of these cases include exchanges of subsistence-caught fish for cash (Table 19). Three of these involved unprocessed fish (coho or sockeye salmon) and the other four involved processed sockeye salmon.

Also notable is the lack of consistency among Togiak respondents to this set of questions. For example, in Scenario 7, three dried spawned-out sockeye salmon are reported to trade for 1 quart of seal oil (about 0.33 quart per fish). In Scenario 8, 10 dried spawned out sockeye salmon are said to trade for one pint (half a quart) of seal oil (0.05 quart per fish). Such variation in equivalents might indicate that such exchanges are rare, or that the perceived values of the items themselves are not the key aspect of the exchange. Such exchanges more likely occur to maintain social relationships or to provide another household with a needed item while receiving a small amount of some other item as an expression of gratitude, as described in Chapter 2.

GENERAL CONSIDERATIONS ABOUT SHARING IN TOGIAK FROM KEY RESPONDENT INTERVIEWS

According to key respondents, residents of Togiak have always shared by giving (*aruqun*: the distribution of harvested resources as gifts) all subsistence resources, including fish, that they have harvested or received from others (redistribution). Some residents give subsistence resources or other items in gratitude for a kindness done to them. Such an item is called a *cikiun* (a gift). In such cases, the gifted item is not a common gift, but a needed resource that the recipient does not have. The receiver of this *cikiun* may not have had a chance to harvest or process the resource, to dry spawned-out salmon for example, so this would be a perfect "thank you" or appreciation gift.

The dried spawned-out sockeye salmon, called *tumuana,* are a delicacy in Togiak because of the unique flavor and intensive effort of harvesting and processing these fish. The fish are air-dried, and due to their low fat content, they are considered delicious when eaten with seal oil. The spawned-out fish are the last salmon that Togiak residents harvest, usually in the month of October. The fish are "hardest to harvest and process" because the fish are only available from Togiak Lake, located about 60 river miles north of the village. The harvesters work with the tides in order to leave the village in skiffs and arrive back to Nasauriuq Creek, where the skiffs are parked when not in use. Normally, the travelers stay overnight to process fish before taking them home to hang and dry. The skin of the salmon when processed becomes very slimy, and placing the filleted fish back in the lake water removes the slime. The long trip in open skiffs and camping overnight can be very cold, and all the effort to harvest, process, and dry the fish can end in disaster if weather conditions are not good. If the weather turns warm and wet with no breeze, moisture collects on the fillets causing the fish to sour and stretch, termed "*nengqertuq*." Togiak spawned-out sockeye salmon are also larger in size than those from other locations such as the Manokotak Lake and the Wood River Lake systems, and thus are particularly prized.

Togiak residents rarely barter or trade Chinook salmon that they have harvested. Chinook salmon are not as available as other salmon species at Togiak so people normally process the fish solely for their own home use. Coho and sockeye are usually used for bartering and sharing. The coho harvest occurs into August so this fish is more commonly used for sharing and bartering with other communities outside of Bristol Bay.

The people of Togiak share many other subsistence resources besides fish. According to one interviewed household, the most commonly shared resources are seal oil, herring eggs, walrus, murre eggs, and clams.

Fresh and frozen fish may be the most often shared and bartered subsistence resource in Togiak because sockeye and coho salmon are the most available and people are likely to share and barter fresh unprocessed fish. The fresh, frozen fish requires some processing, but there is no drying or smoking involved in this process. If the residents of Togiak wanted to barter with 25 fresh or frozen sockeye or coho, they would not barter this item for seal oil because sockeye and coho are so readily available in the community. Berries, moose meat, and caribou meat are also available and households might be less likely to barter for these items as well. Some gasoline may be given to someone who is planning to harvest fish for another household, but it is hard to estimate the dollar amount when compensation is not given "value for value." This type of exchange is considered more of a donation (*ikayur-*, to help with, or *cikir-*, to give) than a trade or barter with

an expectation of a return. For example, as one respondent stated, "I am giving you 5 gallons of gasoline. Now you give me 5 gallons of fish." When the receiver of the gasoline is not able to harvest the fish due to some circumstance, the giver of the fuel usually does not ask for it back. The traditional counsel is to avoid *palrutaq* ("to encounter other people negatively or cause conflict and uneasiness unnecessarily") and if an individual was to continually *umyuacuk* ("negative state of mind against other people") the end result would be that they *iquiruciiquq* ("find themselves at the end of their rope"). This is the reason individuals who adhere to traditional values avoid haggling over anything, especially pertaining to subsistence harvest and foods.

A number of surveyed Togiak households did not report participating in barter or trade. Most reported they only share and filled out no other portions of the survey than the household information and community example pages. Many offered that barter or trade just were not the way of people in the community and thus they could not give informed responses about the kinds of barter or trade that occur in Togiak.

One household offered that "Our custom is to give and share, instead of sell. We may not have money, but we feel better sharing what we have rather than selling." While this household gave very little information that could contribute to the survey regarding instances of cash trade or barter, they provided these following comments, summarized by the local research assistant:

> We have come to realize that the community subsistence resource study surveys for Togiak are important and we welcome them, knowing that in some way this will help the community and those that use this information. Since the community relies heavily on subsistence resources and will hunt, fish, and gather seasonally, the surveys such as this should be done during the off seasons. During this month of October, people are now harvesting spawn-out reds, "Togiak trout," cranberries, and seals, and people travel whenever the weather permits them.
>
> Selling subsistence resources is something our parents never did. They shared everything they had even if whatever they are giving may be the last available time for the season. The food tastes even better eaten with someone else that enjoys the same food *kelgun* (an invitation to eat–a form of sharing). In the traditional culture what was in supply was shared, given without expectation of return.

After the interviewer explained to them how barter was defined for the survey, this household mentioned that it is considered *tun'ernarquq* ("to feel embarrassed because one is imposing on someone") to request an exchange for something intended to be given expecting nothing in return. To ask for an exchange or replacement of a gift "is not what we do." If the receiver asks to make an exchange for a resource or item given, that would be different. The *cikiun* (gift) usually is a special or needed item and not something already available to the receiver:

> Sharing is who we are. Another form of sharing is by *allaniuq* ("welcoming people") into one's home to stay the night or just to eat. *Allanitamken* ("welcoming you with this gift"), residents will give a gift of berries, fish, etc. if they haven't had a chance to *allaniqeq* ("invite to eat") a visiting person into their community. Unselfish sharing creates closeness within families, friends, and community. Money is fine for purchasing gas, sugar, tea, coffee, and so on, but not very useful for canned goods, or store bought meats that seem to lack nourishment. Traditionally, people that lack subsistence resources were considered *piitulriit* ("one who is lacking necessities")

> especially if the head of the household is capable of hunting and fishing. The traditional form of "richness" (meaning plenty of harvested and processed subsistence resources) is opposite from Western style of requiring money-security.

One woman who was asked to participate in the survey said she did not trade for cash or barter her fish. She just shares with the extended family. Her parents taught her to never sell her subsistence-caught fish, that if someone needed it you must give it freely if you have it. However, she did buy berries, $500 for 5 lb of salmonberries and $250 for 3 lb of huckleberries. She expressed interest in what she called "trade" (that is, "barter" as the term is used in this report) for these and other similar resources and asked the interviewer if ADF&G and BBNA would be publishing a list of people who wanted to barter at the end of the project or with the final report. Her interest in this activity seemed to derive from her need for berries. While she took time off from work to process fish, she did not have the time to gather berries. She indicated she might be interested in a barter exchange of fish for berries.

TOGIAK CASE STUDIES: HOUSEHOLDS INVOLVED IN CASH TRADE

*Case 1***.** This household included seven people, two of whom were adults, and all of whom were Alaska Native. The head of the household was 44 years old and was originally from Manokotak, and hid wife was a life-long resident of Togiak. One adult was seasonally employed and the other worked full-time. The household had a commercial salmon fishing permit and the combined annual income was in the range of $25,000 to $49,999.

In the 2004 study year, this household sold 2 quarts of dried, smoked sockeye for $50 to a 47-year-old female friend of recent acquaintance living in Barrow. During 2005, due to work and a death in the family, the household did not harvest or process fish. They were considering purchasing dried spawned-out salmon later, as people were still harvesting them at the time the survey was conducted.

This household also bartered with the same individual to whom they sold the sockeye salmon. They gave them 1 gallon of fresh frozen Chinook salmon, 1 quart of dried herring, and 1 quart of dried smelt for 10 lb of *maktak*. They called this exchange *naverte-* –"trade" as commonly translated, but "barter" as defined by state and federal regulations. All these fish were caught in the Togiak River.

Members of this household have been involved in barter about once a year since 1995. They listed their household's need for something other than fish as the most important factor in their exchanges, but included someone else's need for fish, having extra fish, and someone else's need for something other than fish as contributing factors. They have bought or sold subsistence-caught fish since 2000, usually about once a year. The only factor they mentioned for trade is their household's need for fish. The wife of the household head has been purchasing subsistence resources, including dried fish, since her children were small. Because she works full-time she has limited time to process fish. Her father died in spring of 2005 and it was hard for her to even think about processing fish. Her father had always harvested fish for her and her mother to process. Consequently, it was easier this past year for this household to purchase fish. As the husband's father is also deceased, the household makes every effort to provide subsistence resources to both widowed mothers. The wife mainly buys spawned-out sockeye salmon, which she and her family enjoy eating with seal oil. The "seller" or the recipient of the cash for the fish usually feels *tunriq* ("embarrassment"–especially if the buyer is an elder, widow, or family with children that is financially or subsistence resource poor) at receiving money for the items

exchanged, but this household assures them that "it is hard work to harvest, process, and dry fish and they deserve receiving this cash to buy transportation, gas, tea, sugar, or flour to make fried bread."

The respondents said that dried spawned- out sockeye salmon are the most commonly traded fish in Togiak. These fish are only available from Togiak Lake, and therefore it takes more financial resources to purchase fuel and effort to harvest them. The drying season is unpredictable. Two or three dried fish are often traded for one quart of seal oil in Togiak, and rarely traded for $10. This household offered that it is very rare for people ask for cash; rather, the buyer offers the price. The buyer normally seeks out processed fish to buy and also initiates the dollar amount of the purchased fish. The households with extra fish usually do not advertise their fish for sale and when this trade is initiated, the sale is not value for value due to the fact that the "seller" would rather give than receive cash for the items.

The parents in this household have made a point to share whatever they have with relatives, friends, and neighbors, so that their sons may learn the traditions of sharing, especially with the elders and widows of the community.

*Case 2***.** This household consisted of seven people, three of whom were adults, and six of whom were Alaska Native. The household head was 57 years old, and the longest any one person in the household had lived in Togiak was 46 years. One adult worked both full-time and seasonally. The other two adults both worked seasonally only. The household held a commercial salmon fishing permit and the total combined income fell in the range of $50,000 to $74,999 a year. The wife fished for salmon commercially using a set net and the husband helps as crew on a boat that fishes for salmon with a draft gillnet.

In the 2004 study year, members of this household bought 2 quarts of dried and smoked Chinook salmon from the Moravian Women's Fellowship fundraiser, a non-profit organization. The salmon were from the Kuskokwim River. This was an unusual activity for this household and they said 2004 was the first time they ever bought or sold subsistence-caught fish. They listed a household need for fish as the most important factor in this exchange.

This family was reluctant at first to participate in the survey due to the recent death of their son, who was their primary subsistence resource harvester and provider. Although the son had his own household, he hunted and fished for his parents. At the end of the survey, they were uncomfortable in filling out the community example page because they felt they would be guessing for their community or relying on hearsay. This household volunteered the following comment: "We mainly share our subsistence resources we received from our son. What we now have left of his harvests, we will treasure until we have eaten or shared all."

In 2004, the Moravian Women Fellowship fundraiser sold dried and smoked Chinook salmon in Togiak, among other locally donated gifts and craft items. The reason this household bought the fish was to support the cause and also get a taste of dried fish from the Bethel area. The dried fish were donated from a household that had harvested their fish in the Kuskokwim River. The respondent added:

> We were taught to respect our harvested subsistence resources and not to use them to buy or sell with. The resources are our gift from God, therefore we need to respect them and in turn, share them with people in need.

> If sharing is practiced unselfishly usually there is no stress involved. We give and nothing is expected in return and we can sleep well knowing that the receiver has joy in what is received and or shared with them. The sharing of resources and other items creates close friendships, families, and communities within the local and other sharing villages. Living in the village, "no man is an island" and one way to show friendship is to share resources with people in need.

*Case 3***.** This household consisted of three individuals, two of whom were adults; all three were Alaska Native. The household head was 62 years old and a life-long resident of Togiak. Both adults held part-time and seasonal employment and no commercial fishing permits. The combined total household income was less than $10,000 a year.

During the 2004 study year, this household sold 1 gallon of dried smoked Chinook salmon from the Kuskokwim River for $30 dollars, and on a separate occasion, sold the same amount for $25. Both buyers were female Togiak residents whom the seller has known since moving to Togiak in 1995. The wife of the household head did not feel comfortable having her cash trade activities recorded because she was not soliciting sales; all exchanges for cash were initiated by the buyers, and the buyers set the price. She feels most comfortable sharing her fish, which she has learned to process for home use primarily but also shares with elders and widows. She felt the trades in these cases were not value for value, and therefore is not a "western style of trade," but more or less a customary exchange. She feels most rewarded when she can share her fish with elders upon her return from the Kuskokwim area. She said that the inner joy she feels when she can give this gift to those who have no means of repaying her, to experience their humble joy, is a blessing that money could never replace.

In the one instance of barter this household engaged in, 1 gallon of dried smoked Chinook salmon was given to a male Togiak resident who gave them a one quart jar of seal oil as a "thank you." For this exchange, the household did not ask for items in return for the fish, as she was taught it was more blessed to give than to receive. People that request items in exchange for what they have given are known to be *qunutungaq* ("stingy"). The people that have grown up *mayiteqeq* ("needy and hungry") and have not been taught the meaning of sharing are likely to become stingy and selfish. The motto of this household's members is that it is more blessed to give than to receive, and therefore if anyone is hungry, they provide them with nourishment.

The wife of the household head is originally from the Kuskokwim area and has lived in Togiak since the mid 1990s. She is not employed, although she makes items to sell whenever she has time to sew. She mentioned that she does not obtain a Bristol Bay subsistence salmon permit because she goes home every summer to harvest and process fish at her fish camp along the Kuskokwim River. She lost her father at a young age and being the oldest of four siblings, she had the responsibility of helping her mother process harvested resources, including fish, and also helped care for her younger siblings. She remembers hunters and harvesters of her village providing her mother with resources after their father died. Her mother taught her to process the received resources right away to show respect and thankfulness for that resource. She said, "To this day, I do not let any resources harvested and or received sit to be processed later."

The husband was born and raised in Togiak. He normally fishes commercially for salmon, but was unable to during the past fishing season due to surgery. He has no other employment. He mentioned traveling to Togiak Lake to harvest and process spawned-out sockeye salmon in the

past. Togiak residents were just heading up to the lake at the time of the interview, but he was unable to make the trip this year.

*Case 4***.** This household consisted of six people, five of whom were adults, and all six of whom were Alaska Native. The head of the household was 68 years old and a life-long resident of Togiak. Two adults were retired, and two others were seasonally and part-time employed, respectively. The household held both a commercial salmon fishing permit and a roe-on-kelp commercial permit. The total annual income for the household fell in the range of $10,000 to $24,999.

This household does not participate in barter and did not practice trade during the study year. They have bought subsistence-caught fish in the past however, and listed the most important factor for motivating this exchange as household need for fish, but included someone else's need for money as a contributing factor. The first time this household was involved in trade was 2000. Since then this household has bought whitefish from the Bethel area.

The local research assistant noted:

> The interview was administered in the household while the elderly husband was cutting up for soup the plucked and gutted *tengesqaaq* (green winged teal). The processed teal were fat and mighty yummy-looking for soup. The wife was busy keeping several of her grandkids off her lap. She offered coffee, but looked busy enough as it was, so we declined. Both the husband and wife are retired (from traveling to harvest fish, seal, and land mammals) and really do not have much income, but they continue to be rich with subsistence resources harvested by their family and received from the community. The wife/grandma still harvests berries and greens and enjoys ice fishing. She takes her older grandkids when she goes to harvest the berries and greens and said, "The grandkids scout out the berry patches and also the greens. The wilderness for them is a classroom, gym, and church." She mentioned that the grandkids learn about the edible resources, meet their much needed exercise requirements, and learn to respect what God has created for them to eat and the nature for them to enjoy. Both husband and wife have lived most of their lives in Togiak.

The couple indicated that they mainly share their subsistence resources and have never sold fish. They added:

> We know the stress of not being able to pay for electricity, fuel, and gas, but we also know the joy of sharing with people and receiving from people. We don't have a dollar to our name right now, but the gift of four *tengesqaaq* [green winged teal] my husband is now preparing to cook will feed this household plus you if you would like to join us for lunch. The giver of the ducks did not ask for anything in exchange for his gift; he just dropped them off for us and left. His inner feelings probably gave him more peace and satisfaction than if he would have asked for payment or requested an exchange. We would have gotten stressed out because we do not have the money to pay him. If he would have asked for an exchange, we would feel indebted to him until we were able to meet his request. We would likely [then] ask him not to bring us anymore resources again to avoid stress in the future.

TOGIAK CASE STUDIES: HOUSEHOLDS INVOLVED IN BARTER

*Case 1***.** This household had three people, two of whom were adults and all were Alaska Native. The head of the household was 56 years old, and a life-long resident of Togiak. Both adults were seasonally employed, and the household held both a commercial salmon fishing permit and a roe-on-kelp commercial permit. The household income fell within the range of $50,000 to $74,999 a year.

Both adults in this household were raised in Togiak and have spent most of their lives in the community. The wife of the household held commercial set nets at *Qulukaq* (Kulukak Bay) for salmon and her husband helps her. Members of the household are able to pick clams to bring home while staying at *Qulukaq* during the commercial salmon fishing opening. They also pick salmonberries at *Qulukaq*.

This household's member do not trade subsistence-caught fish for cash, but they engaged in barter in the 2004 study year. They gave 25 fresh frozen whole coho salmon to a male friend of longstanding who lives in Barrow in exchange for 10 gallons of muktuk (*magtak).* They called this exchange *naverrniaq* or "a trade." They said that this was their first such exchange, and claimed 2004 as the year when they first bartered subsistence-caught fish. They listed their household's need for something other than fish as the most important factor in this trade, however their partner's need for fish was a contributing factor.

*Case 2***.** Four people lived in this household, including two adults, and three Alaska Natives. The household head was 50 years old and a life-long resident of Togiak. One adult was employed full-time. The household held two commercial fishing permits, one for salmon and the other for herring roe-on-kelp. The combined total income for the household was in the range of $50,000 to $74,999 a year.

This household has never engaged in trade, and did not barter during the 2004 study year. This household did barter during 2005; they exchanged three cleaned sockeye salmon from Togiak for 3 lb of *maktak* with a brother in his 40s from Togiak. This was their first year for barter, something which they almost never do. They listed someone else needing something as the single most important factor for the barter, but also included their household's need for something other than fish.

*Case 3***.** This household consisted of three Alaska Native individuals, two of whom were adults. The head of the household was 55 years old and a life-long resident of Togiak. One adult was employed part-time and the other was seasonally employed. They held a commercial permit for roe on kelp and the combined household income was between $25,000 to $49,999.

This household does not trade fish, but participated in barter during the 2004 study year. They gave 10 gallons of blackberries to a male cousin from Tuluksak in exchange for 5 gallons of dried Chinook salmon. They called this exchange "a trade." They said that 2004 was the first year they bartered and listed their need for fish as the single most important factor motivating the exchange, but also mentioned a household need for something other than fish.

*Case 4***.** This household was made up of five people, with two adults, and four Alaska Natives. The head of the household was 48 years old, and the person who had lived longest in the community was a life-long resident of 52 years. One adult was employed both seasonally and part-time. The other adult worked both full-time and seasonally in commercial fishing. The

household held commercial fishing permits for salmon, herring, halibut, herring roe-on-kelp, and had another commercial fishing permit as well. They declined to provide their income range.

This household's members have never been involved in trade of subsistence-caught fish for cash, but they have an extensive barter and sharing network. During the 2004 study year, they gave a 5 gallon bucket of fresh frozen smelt caught in the Togiak River to a 64-year-old male friend in Oregon. In exchange, they received 20 lb of moose meat. They exchange with this partner approximately three times a year. They gave eight grocery bags of fresh smelt to a 48-year-old male friend from Hoonah; in exchange they received three bags of spawned-out sockeye salmon caught at Togiak Lake. The household may exchange with this individual four times a year on average. The household also gave five fresh halibut to a lodge owner in exchange for two weekends at the lodge. This was the first time such an exchange took place because this person was a recent acquaintance. They gave 13 frozen filleted Chinook salmon to a 50-year-old male friend in California who in turn sent them two boxes of vacuum packer bags. They trade with this person about five times a year. Their final barter in the study year involved 10 frozen filleted Chinook salmon and 20 sockeye salmon, given in exchange for an 11-inch roll of vacuum pack bags. This exchange was with a 58-year-old male friend from Michigan, and exchanges such as this one happen with this person about 6 times a year. Although their 2004 set of exchanges was limited, during the interview it became apparent that for many of the people they exchange with, the fish was given multiple times over the course of the season, as it came in, not just as a one time event. The couple also expressed a little uncertainty as to the legality of some of their barters, demonstrating the ambiguity surrounding these sorts of activities. They listed the single most important factor for barter as "being able to share," but included needing fish, someone else needing fish, a household need for something other than fish, having some extra fish, and someone else needing something other than fish all as contributing factors. The first year that members of this household ever bartered subsistence-caught fish was 1960.

All other activities of this household throughout the study year were sharing, or giving without expectation of anything in return. During 2004, this household estimated it shared 32 one-gallon ziplock bags of Chinook strips, 3 whole fresh Chinook salmon, 10 whole fresh sockeye salmon, 2 whole fresh chum salmon, 3 gallon bags of herring roe on kelp from Summit Island, and 23 Chinook salmon heads and carcasses with friends and family.

DISCUSSION

The activities of barter or trade for the Kuskokwim area Chinook in Trade Case Example 3 appear to have occurred more out of desire for variety in diet, than any kind of substantial need on either side, although the family that sold the fish certainly could use more cash.

Many of the households in Togiak did not offer much information on the community sample page. Most said they have no idea about what resources are traded and would not like to guess. This may truly be because very little of the barter type of activity occurs in their community, or it could be because it is considered inappropriate to expect a "value for value" exchange. In almost all the cases of barter and trade in Togiak, the "price" was set by the buyer, or in some cases of "barter," a resource was given with no expectation of receiving anything in return. Often, the receiver provided something in return voluntarily as a "thank you" rather than an as an equal payment. To try to set a standard exchange amount, resource for resource, might be seen in Togiak as "stingy" or ungrateful. The one case household involved in a great deal of barter

appeared to barter most with people outside of the community and with non-Native individuals. They did a great deal of sharing within Togiak, without expectation of anything in return.

The key respondent's point that the traditional concept of wealth is based on the possession of subsistence foods, both fresh and processed, is worth noting. Very telling are their remarks that canned goods and frozen meat from the grocery store seem to lack nourishment, and that regardless of a person's income, if they do not have traditional foods in their house they are viewed as resource poor by the people of Togiak.

CHAPTER 6. STUDY FINDINGS: NAKNEK

SURVEY FINDINGS

Demography and Cash Economy

According to the U.S. Census, Naknek had 678 people living in 247 households in 2000 with an average household size of 2.7 people (U.S. Bureau of the Census 2001). Forty-seven percent of the population was Alaska Native. In 2005, the Alaska Department of Labor (2006) population estimate for Naknek was 577 people (Table 1). For this study, 28 Naknek households that knowledgeable local residents identified as likely to be involved in trade or barter were interviewed. These households contained 91 people for an average household size of 3.3 people. Sixty-six percent of the sampled households' population was Alaska Native, the average age of the household heads was 52 years, and on average household heads had lived in Naknek for 41 years (Table 6)

Of the interviewed Naknek households, none had incomes below $10,000; 11% had incomes in the $10,000 to $24,999 range; 18% were in the $25,000 to $49,999 range; 14% were in the $50,000 to $74,999 range; 21% had incomes over $75,000; and 36% declined to answer the income question (Table 7). Income ranges for the surveyed Naknek households were broadly similar to those recorded by the federal decennial census for 1999 (Table 8); 17% of surveyed households had incomes less than $25,000, compared to 16% for the census, and 55% of surveyed Naknek households had incomes over $50,000, compared to 56% for the census.

Of the 28 interviewed Naknek households, 46% held commercial fishing permits; all 13 of these households held salmon permits. In addition, one (4%) had a herring permit and 2 (7%) had halibut permits (Table 9).

Cash Trade

Of the 28 interviewed Naknek households, nine (32%) had experience in trade of subsistence-caught fish for cash (Table 10). Of these, eight said they were involved fairly regularly: four said they bought or sold subsistence-caught fish more than once each year, and 4 others said they engaged in cash trade of fish about once a year (Table 11). The remaining household "almost never" is involved. Reasons for trading fish varied. Most common (five of nine households) was "someone else needed fish;" ranking second was that the respondent needed money (four of nine households) (Table 12). When asked to state the most important reason for customary trade of fish, four Naknek households said that they needed money, and two said that someone else needed fish (Table 13).

In the 2004 study year, six Naknek households (21% of those interviewed; 67% of those with experience in trading fish) were involved in at least one cash trade transaction. In total, these households described 12 instances of cash trade; of those, nine (75%) involved sockeye salmon and three (25%) involved Chinook salmon (Table 10).

Barter

Eighteen of the 28 interviewed Naknek households (64%) had experience bartering subsistence-caught fish (Table 15). Their history of involvement varied (Table 16). While seven households bartered more than once each year and another four about once every year, two bartered less than once a year and five "almost never" bartered. Reasons for bartering also varied, including

needing fish (seven households), someone else needing fish (nine households), needing something other than fish (six households), or someone else needing something other than fish (two households) (Table 17). The most important reason cited by the most Naknek households for bartering fish was needing something other than fish (five of 18 households) (Table 18).

In 2004, 13 of the 28 interviewed Naknek households (46%) participated in barter that involved subsistence-caught fish (Table 15). They described 17 instances of bartering. All the interviewed households gave fish, most often sockeye salmon (10 instances; 59%) or another natural resource (seven instances; 41%); in return, they most often received fish (nine exchanges; 53%), groceries (four exchanges; 24%), or services (three exchanges; 18%).

Community Examples of Cash Trade and Barter

Households in Naknek were asked to give examples of barter and cash trade that they were aware of that occur in their community. These were not necessarily exchanges that the household was involved in. The initial question was, "What kind of fish do you think is traded or bartered most often in your community?" They were then asked in what state of processing the fish were usually traded or bartered (e.g. fresh unprocessed, frozen, dried, smoked, etc.) and "What is a typical amount that someone might trade or barter?"

Table 26 lists the examples provided by interviewed Naknek households. Of the 28 households, 24 responded to this set of questions. All the Naknek respondents said that sockeye salmon was the fish most often included in cash trading or bartering in their community. Only one mentioned unprocessed sockeye salmon. All the other respondents said that sockeye salmon that had been dried and smoked was the product involved in exchanges.

Table 27 gives more specific information for the examples of barter or cash trade in Naknek listed in Table 25. In the second example (Scenario 2), households mentioned the following exchanges for one dried sockeye salmon: 2.5 lb of caribou meat, or 3.33 lb of moose meat, or 5 lb of moose meat, or a gallon of seal oil, or a gallon of berries. Five households said that a dried sockeye could be purchased for $20, and six others said it would cost $25. Twelve of the responses included exchanges of subsistence-caught fish for cash (Table 19). One of these involved unprocessed sockeye salmon and the other 11 involved processed sockeye salmon. In most cases where Naknek respondents thought that sales of dried/smoked sockeye salmon or strips in jars or loose were exchanged for cash, they did not offer to estimate the frequency of these exchanges.

NAKNEK CASE STUDIES: HOUSEHOLDS INVOLVED IN CASH TRADE

*Case 1***.** This household participated in 4 instances of trade for subsistence-caught fish for cash during the study year. In one case, one household member bought 200 lb of Chinook salmon, caught in the Egegik area, for $200. The exchange was with a distant cousin who lives in Naknek, whom the respondent has known since 1975, and has traded with annually since 2003. He also bought 20 lb of smoked Chinook strips from the Yukon River area for $500. The individual lives in St. Mary's and the respondent only knows her by the telephone conversations that they have had. He had heard that she sold strips and set up the trade that has taken place once a year since 2001. The third trade was for 30 smoked, whole sockeye salmon caught in the Naknek River. For these, he paid $750 to a friend in Naknek he has known since 1980. The trade started in 1990 and has continued annually. The fourth cash trade was for 25 lb of smoked sockeye strips. He paid a nephew who lives in Naknek $500 for the fish, that were harvested in

the Naknek River. The first year of cash trade with this person was 2002 and it now happens once a year. The respondent also stated that he has bought or sold subsistence-caught fish more that once a year since 1964. When asked to describe community examples, the respondent indicated that trade for smoked, whole sockeye salmon "happens on a regular basis" in Naknek. He also indicated that $15 per hour for the labor to process the fish determined what to offer in trade.

Case 2. This household described three cases of trade for subsistence-caught fish for cash during the study year. As indicated in more detail below, additional sales of fish by this household took place shortly after the study year and responses from other community members indicate an extensive cash trade of subsistence fish by this household. In the first trade, the respondent sold 20 smoked whole sockeye salmon caught in the Naknek River for $500 to an individual in Juneau. In this case the "trade partner" is two brothers who the respondent met in 1975. Before 2000, the respondent's mother (in a different household) sold processed subsistence fish, and then the respondent assumed trade with the individuals the mother exchanged with. Until 2000, exchanges with the Juneau brothers were barters with the respondent's mother in exchange for artwork, but in 2000 the brothers started buying fish with cash because their artwork is now so valuable that it is no longer an equitable barter for fish.

The second exchange was 29 smoked, whole sockeye salmon caught in the Naknek River, sold for $725 to a 62-year-old female friend, also living in Naknek, who the respondent has known her whole life. The year of their first trade was in 2000 and they traded an average of five times a year. The third involved selling eight smoked, whole sockeyes to another lifelong 41-year-old Naknek female friend for $200. The first year they traded was 2000 and they trade an average of two times a year. An interesting footnote to this exchange is the friend sells this fish to her aunt "who is an old lady." The aunt does not feel comfortable buying fish from the respondent because she does not know her. Therefore, the niece acts as the "middleman." The reasons that this respondent cited for buying or selling fish were "someone else needed fish" and "I needed money." However, the most important factor in her trade was, she said, that she needed money. In describing community patterns, the respondent observed that one smoked, whole sockeye sold for $25 but the price increased this season for some sellers–two people were selling it for $30 per fish. In response to the question "how do you decide how much to offer in trades?" she said, "value for value I do not reduce the price."

In the past, the respondent's grandmother sold fish for $1 each–when the respondent's mother started selling she raised the price for one fish to $2–and (the respondent's) grandmother said "don't rob people." This was in 1965 or 1966. Her grandmother had a hard time with the higher price. The respondent's mother used to sell 1,500 fish each season. At the time of the surveys, the respondent said that she planned to sell fish at the bazaar to be held in November 2005 and that she had about 100 fish that she was going to try to sell. At the bazaar she sold smoked, whole sockeye salmon for $25 (half a salmon could be purchased for $15); smoked sockeye strips for $15; jarred smoked sockeye strips for $15 a pint; and a little half pint or smaller (quarter pint) jar of *civiche* (Greek spiced salmon spread) for $7. For this respondent, selling salmon is a family tradition–her grandmother passed "customers" on to her mother and her mother passed them on to her. She added that a number of the elders have passed away that she traded with in Juneau–only the two brothers remain to exchange, or trade, with.

Case 3. This household sold 25 smoked whole, sockeye salmon caught in the Naknek River for $500 to a life-long male friend who lives in Naknek. They have traded annually since 1990. Her

reason given for selling fish was that the "money goes toward heating fuel." She related that her mother also used to sell fish to buy fuel oil and other things. Her mother used to put up a 1,000 fish, and sell some of these to people from outside the community to supplement her income. The respondent stated that she "only puts up 500 fish." She also stated that she "didn't like the idea of selling fish, but saw it as an opportunity to supplement income." She observed her mother doing it and, when she started, $500 could buy enough fuel for the entire winter. In describing community patterns, she observed that one smoked, whole sockeye salmon selling for $25 was the most common trade item in Naknek and added that "everybody does it." She has a set price: "People try to haggle, but it is so much work (to put up the fish) that we don't go down in price. The person that has the fish sets the price."

Case 4. This household bought three smoked, whole sockeye salmon caught in the Naknek River for $60 from an acquaintance that she first met in 1955. The 67-year-old woman lives in Anchorage, but she was selling fish at the King Salmon airport. The respondent said that she bought the fish because she had not put up her own and she was going to Anchorage and wanted to take some along to give to her friends and family there. The second transaction was for one smoked, whole sockeye salmon caught in the Naknek River. She paid $20 and said that she bought it for a friend in Anchorage. She also stated, "The fish from this seller was processed better than the first one (described above)." The seller of this fish is a lifelong female friend who lives in Naknek and is about 42 years old. The year of their first trade was 2004 and they trade twice a year. Her only reason for buying fish was that someone else needed fish. The first year that she bought or sold subsistence-caught fish was 2004 and she said that she almost never buys or sells subsistence-caught fish. In response to the question, "How do you decide how much to offer in trades," she said, "if it's too expensive, I won't buy it." She also commented, "Families help each other out," and that "people go to the people to get the best product." Putting up fish is lots of work, it is shared a lot at potlucks. This respondent also reported that donated fish is sold for fundraisers. At one raffle fundraiser a case of processed salmon sold for $250.

Case 5. This household sold 3 lb of smoked Chinook salmon strips for $75. The fish were caught in the Naknek River. A male Naknek friend that he first met in 1969 who is about 50 years old bought the fish. He said the year of their first trade was 1998 and that they have participated in trade on an average of twice per year. He said that making smoked Chinook salmon strips is a 13-day process and that the strips sell for $25 per pound. In the past he "did it (sold smoked fish) big time." Needing money is also the most important factor for him to sell fish. Since 1974, he has bought or sold subsistence-caught fish more than once a year. Regarding community patterns, he said that smoked, whole sockeye salmon are the most likely subsistence-caught fish to be sold in Naknek. He declined to say what the going rate for selling 1 smoked, whole sockeye was, but said that he sells it for $25 and he also knows of a person that sells half a fish for $30, which seems high to him. He said that he often haggles about the price, but only sells it for his going rate. People have approached him to smoke Chinook that they caught in exchange for part of the catch. He did not engage in this type of exchange this year and it was unclear if he has done this in the past.

Case 6. This household sold 20 smoked whole sockeyes caught in the Naknek River for $500 to a male commercial fisherman friend in his early 50s that they first met in 1995. The individual is only in Naknek in the summer. They first participated in a trade in 2001 and have done it on average of once a year. The first year she first bought or sold subsistence-caught fish was 1991, and she has since done it more than once a year. Her reasons for selling fish were that someone

else "wanted fish" and she had some extra fish. But her most important reason was, "I needed money." For community examples, this respondent said that smoked, whole sockeye are most likely to be sold and the asking price is $25 a fish. They are sold often "in the fall when people are ready to leave (after commercial fishing)."

The mother of the respondent in Case 2 and the mother of this respondent and Case 3 are sisters**.** Both mothers have been identified by key respondents as people that sell or have sold smoked subsistence-caught salmon in the past. This respondent said that the price was set by her mother and before that her grandmother. She said that when she was small she used to help her grandmother and the price for each smoked whole fish was $15, then it went up to $20, and now it is $25. She said that when her mother traveled to Anchorage, she planned to sell fish there. At the November 2005 bazaar, in addition to the displayed merchandized, this respondent was selling quart jars of smoked Chinook salmon strips for $16 per jar.

Case 7. This respondent did not participate in trade during the study year but has bought subsistence-caught fish in the past because he "didn't have the time to put up own fish and [he] couldn't go without" and "because it's the best fish around." This respondent commented that some people can use the money from selling subsistence-caught fish but this sale "could get out of hand if you let anybody sell fish. Those that need it based on income should be allowed to do it." He stressed that guidelines for selling subsistence-caught fish are needed so that abuse does not occur. He also commented that the state and federal regulations need to be separated because they are confusing. "People in D.C. don't know what goes on up here." The regulations should be simplified because they need to be understandable to everybody.

Case 8. Concerning trade, this respondent commented that if people took the time to put up fish to sell they could make a lot of money. The product could be sold at bingo in Anchorage. He would like the sale of subsistence-caught fish legalized. He said,

> I don't see where selling subsistence-caught fish could affect commercial. People from commercial fishing bring kings to me and I pickle them and give them some. I couldn't get enough kings from subsistence [fishing] to pickle. I only pickle kings in a 60-lb butter barrel, which is about 15 gallons. I bought a [wooden] barrel [for processing and storing the fish] for $150.

He uses wood barrels because heat does not transfer through it, so it does not get too hot. If the fish get too warm, like in a bucket in the sun, they will spoil. This does not happen in barrels. This respondent also observed that people sell canned, smoked, jarred, and dried fish strips at bazaars. It takes work to process fish and to obtain the right wood for the smoking.

Case 9. This household consists of four people, two of whom are adults, and three of whom are Alaska Native. The head of the household is 53 years old and has lived in Naknek for 52 years. The male head of the household fished commercially during the study year. When asked about his personal history of cash trade he commented that he "always thought it was illegal and didn't want to lose his right" (to subsistence fish). He thought that smoked sockeye and Chinook would be sold in the community for as much as $20 a pound. He said that he was guessing, but he'd heard that a case of smoked canned half pint jars of salmon sold for $300. "Too much work to can." But he also said these people have commercial fishing permits, so it may be commercially-caught, processed fish. He also made additional comments that shed light on attitudes toward selling subsistence-caught fish.

> I hope that it won't make it so people won't be able to make a little extra money. I don't know who (those people might be), but it's a lot or work to put up fish. People in Naknek are always taken care of. If they need something they are given food. This is a giving community. Some people aren't able, due to health, to commercial fish anymore, but they are good at putting up fish. So it is good for them to have some income, so they can live. I don't want to see this opportunity taken away.

He added that, through experience with the Elks Club, they know who they can call to donate salmon if some are needed for a charity function.

Case 10. This household consists of three non-Native adults. The head of the household is 46 and the maximum residency in the community of any household member is 37 years. No household members fish commercially. This household has never participated in trade and has bartered only one time. The respondent said that someone told her that as a non-Native she could not sell smoked salmon and if that were true she would have a problem with that.[13] She went on to say that her family relies on fish and game and that they do not buy any red meat–"Subsistence is a way of life." She believes that subsistence-caught fish are being sold to non-Alaska residents. Other people reported this also.

Case 11. This household consists of two adults, one of whom is Alaska Native. The household head is 64 and the longest residency in Naknek of any household member is 57 years. The household shares a commercial fishing permit. Household members have never participated in trade or barter of subsistence-caught fish but the wife "gets fish for kids and for a friend who loves salmon." She stated that she does not know of anyone who barters or trades subsistence-caught fish for cash. She also commented that,

> Subsistence is not selling. Selling should be done commercially. I don't believe in selling [fresh] fish–[but] maybe a little bit of smoked [fish] is okay. This is just opening the door for people to do it illegally and sell it to the cannery–this will ruin subsistence. Smoked salmon or salted in a bucket, like for pickled fish, to sell a little bit is okay–but fresh salmon should not be sold. We already have commercial and that is what you sell.

Case 12. This is an Alaskan Native household consisting of four people, including three adults. The head of the household is 45 years old with a length of residency in Naknek of 39 years. This household does not own a commercial fishing permit. The household has never participated in trade and the respondent stated that he frowns on buying or selling subsistence-caught fish. The household first bartered in 1982 and does it on average less than once a year. The reasons for bartering are that he wanted a different type of fish (specifically, crab) and that he had some extra fish. The most important factor in his barter is that he had some extra fish and stated that he "puts up a lot of fish." At the beginning of the survey, he stated that he "shares from the heart" and that he keeps just a small portion of the first Chinook salmon he catches each year and gives away the rest. He commented in response to the questions on buying and selling fish that, "Fish is more for giving. I smoke a lot of fish." His comment about bartering during the study year was that he "doesn't really expect anything back–might get something back–but that is not the point." His best estimate was that 10 lb of smoked, sockeye salmon would sell for $150: "people that leave after the summer want to take some (smoked fish) with them, (they) might be families and/or commercial fishers." He commented: "Subsistence is so important to us that I

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[13] Researchers conducting the survey assured her that federal subsistence regulations apply to all rural residents.

don't want to see a dollar amount put to it. Subsistence is part of the way of life–you really need to do these things to be part of the land and pass this on to children. That's why it's important not to waste fish because it shows respect." He strongly expressed that "subsistence is from the heart" by pointing to his heart a couple of times when he was talking about subsistence.

Case 13. Although this household has not participated in customary trade in two or three years, he provided some valuable insights about trade that also pertain to barter where the subsistence-caught fish is exchanged for services that would cost money:

> If people want to put in the work to smoke salmon and sell it they should be able to do it. Depleted salmon runs up north create the need for salmon in those areas. Culturally, people need to have fish in those areas–I used to take smoked fish up to Nome and people would go crazy over it. Locally people should be able to put up and sell as much salmon as they need to continue the subsistence lifestyle–to live. It is a lot of work to put up fish.

Basically, he was stating that selling smoked fish is a part of a subsistence way of life because the income is necessary for fishing and hunting. He also said that he attended the Bristol Bay Subsistence Regional Advisory Council meeting in Naknek a few years back and, speaking for his grandmother, stated that the dollar amount set for customary trade was too low and that if people involved in subsistence fishing need the income they should be allowed to sell processed fish. In the past, this household bought or sold subsistence-caught fish for 4 reasons: someone else needed fish, the household needed money, someone else needed money, and as "experimentation, to see how much we could put up and sell." The single most important factor in this household's buying or selling subsistence-caught fish was that the household needed money. The first year that he bought or sold subsistence-caught fish was 1985 and he does it on average about once a year. Basically, he considers barter and cash trade as something that has been a part of his entire life. At the November 2005 bazaar at the Naknek school, he sold pint jars of smoked Chinook salmon that his grandmother made for $12.50 per jar. The strips were cut shorter and therefore the jar was less full than the other jars being sold at the bazaar (which were generally priced at $15/pint).

Case 14. This is an Alaska Native household. The household head is 44 years old and lived in Naknek 22 years. This household has never participated in trade or barter. When asked if the household bartered fish, the response was "we just give it away." The respondent said that she has observed kippered, jarred sockeyes in pint jars selling for $15 at two bazaars–Fishtival and Winterfest (a mid-summer and mid-winter celebration organized by the community, similar to Fourth of July celebrations and Anchorage's Fur Rondevous). She also commented that people ask her "all the time" if she will sell her fish, but she does not have the time to put up enough to sell. She keeps it for her family and to share.

NAKNEK CASE STUDIES: HOUSEHOLDS INVOLVED WITH BARTER

Case 1. During the study year, this household bartered glaucous gull eggs for halibut with a friend who lives in Chignik Bay. They first met in 1985 and have bartered annually since 1995. Both households had access to something that the other desired or needed and this transaction was considered "trading/sharing." When asked, "how do you decide how much to offer in barters" the respondent stated "if someone needs something you give it to them and then you take whatever they offer."

Case 2. This respondent bartered 6 lb of smoked sockeye strips for the use of a friend's car in Naknek for five days. Based on the respondent's calculations, this amount of fish equaled about $35 per day for the use of the car. This transaction has taken place about once a year since 2003. Overall, this household barters fish more than once a year. In the past, he has received fuel for processed fish, the recipient of the fish used it as Christmas presents. Other respondents stated that this family was known for making good smoked fish. The advantage to bartering or buying fish from this household is that the recipient receives smoked fish that they really like and they do not have to invest time to make it themselves–in many cases because they don't have the time to do it themselves. In addition to bartering smoked fish for fuel, this respondent in the past has bartered for moose meat, but was not aware of anyone else in the community doing this. In the past this household also bartered for other commodities and services. When asked how to decide on the amount to offered in barters and trades, the respondent said, "Value for value. We do not reduce our price for smoked fish."

Case 3. This is a non-Native household that bartered with a local Alaska Native woman they first met in 1975. They harvest the fish and the individual makes smoked strips and keeps half of the strips in return. In the end, the friend did not want anything in return because they are friends. The respondent household helped throughout the entire process and the friend's expertise and instruction was relied on to produce the desired smoked fish. They first bartered in 2001 and barter on average about once a year. They stated that "the real art of smoking is only done by a few people," which is why they approached their friend to smoke fish for them.

Case 4. This household bartered 10 smoked Chinook salmon heads for two boxes of fresh produce from the husband's brother, who lives in Anchorage. The produce included bananas, oranges, apples, lettuce, tomatoes, carrots, avocadoes, and a watermelon, with an estimated value of $100. One reason for this exchange is that fresh produce is cheaper in Anchorage than in Naknek. Another reason, and the most important factor in all of this household's barter, is that the other party needed the fish. The unprocessed heads came from the Peter Pan Cannery in Dillingham. Chinook heads are a valuable subsistence commodity. During the commercial Chinook salmon fishery in the Nushagak Commercial Fishing District, the cannery saves the fish heads so that people can come by and get them for their own use. This household also bartered a 5-gallon bucket of salted sockeye salmon for two frozen turkeys. This exchange took place with the husband's sister, who lives in King Salmon. These exchanges were described as "trading." Barter with both started in 1976 and occurs annually. The wife in this family is in charge of putting up fish and stated that she loves to do it and it is a lot of work. Once, this household obtained herring roe in a barter from a person who stayed at their home. Also related was that people try to negotiate the "price" of the fish but that the producer of the fish sets the price and does not reduce it because of the work involved. A parent of the wife barters one smoked whole sockeye for a gallon of seal oil with a person who lives in South Naknek.

Case 5. This household has participated in 2 identical barters on a yearly basis since 2001. The barters are with friends from Minnesota that they met in 1975 who come to Naknek each summer to fish commercially. The household provides a case of pint jars of smoked salmon and the individuals each provide a gallon of pickled freshwater herring from Lake Superior. These exchanges are described as "friendly." Another annual barter for this household is with a friend from another state who they met in 2002 and bartered with for the first time in 2003. He works at a cannery and gives them leftover odds and ends like bread and lunch meat in exchange for a case of pint jars of smoked sockeye salmon. The single most important factor in barter for this

household is expressing "friendship." They also said that barter is "not a certain thing every time."

Case 6. This respondent gave a friend, who he has known since 1982, 11 whole unprocessed coho salmon from the Naknek River. The friend smoked the salmon and gave 9 1/2 lb back to the respondent and kept the remainder for his own use. Basically, the respondent did the work to catch the fish and the friend did the work to smoke the fish. The respondent stated that this was "a trade": they needed someone who could process the fish for them because they did not have the time to do it. This exchange has happened every year since 1995. The reason given for bartering was that they need fish processed differently and the single most important factor in barter is that it provides another food source that is important to have for the winter. In the past, this household has also bartered salmon for halibut. The respondent also stated that the "salmon barter system is alive and well and widely used." In response to the question, "how do you decide how much to offer," the respondent stated: "what a person is willing to buy or sell, try to get as much as you can."

Case 7. This respondent gave a friend of eight years in Anchorage a case of smoked pint jars of sockeye salmon. In return, the respondent received a sewing lamp. Although this was described as barter, the household did not expect anything back. "I had some extra fish," was the response and the single most important factor in the barter. The household also responded that they almost never barter subsistence-caught fish.

Case 8. This household received one quart of unspecified salmon that was dried and smoked from the Bethel area for one quart of salmonberries. This barter was with a friend they met in 2003, and has happened for the last two years. This exchange was described as "friendly." Apparently they tried barter in the past because this household responded that she did not like her friend's "stink fish." This household's members bartered for two reasons: they needed fish and someone else needed fish. The first time they bartered subsistence-caught fish was in 1975. They also stated that "families help each other out" and "people go to the people to get the best product." A general comment that this household offered at the end of the survey was: "excellent project if you contact the Natives–if you talk to non-Natives who aren't from here they will give a different story–because they prepare it (the fish) a different way. Putting up fish is lots of work–it is shared a lot at potlucks."

Case 9. This household received 10 smoked sockeye salmon caught in the Naknek River in exchange for 11 lb of moose meat made into breakfast sausage, jerky, pepperoni sticks, polish sausage, and bratwurst. This exchange was described as "bartering." The respondent stated the smoked salmon he received was of the best quality possible. The person who processed the salmon learned her skills from her mother. Before he started bartering for processed salmon, he took his subsistence-caught salmon to her mother, who processed it, returning half of it to the respondent and keeping half for herself. He often shared his portion with family and friends.

This household first met the individual mentioned above's daughter in 1992 and has bartered with her once a year since 1998. The most important factor for him to barter is that he needed fish. The respondent stated that he "gives the (barter) partner what she believes is fair because her fish is the best." A general comment from this household was that it is a "good thing to document all this."

Case 10. This household gave 10 lb of smoked sockeye strips caught in the Naknek River to a household in Perryville and received six frozen Pacific cod in return. This exchange was

described as a "family exchange." One member of the Perryville household is a cousin and their first barter occurred in 1995. They exchange fish about 3 times a year. Because the Perryville person travels a lot they have been able to make these exchanges with little or no charge for the freight. The reason given for the barter was "We don't get cod and they don't get smoked salmon." In the past this household has also sent rainbow smelt to the exchange individual in Perryville. One additional comment from this household is that "[we] don't get enough kings in the Naknek River to barter or trade them."

Case 11. This household gave 200 lb of fresh, headed and gutted halibut caught in Kvichak Bay to a friend he has known since 1998 who lives half the time in Naknek and half the time in Washington State. In return, he received two hours of welding work. This was considered a "buddy exchange" and barter. This exchange has happened every year since 2000. The respondent stated that he "barters other things to keep the welding bill down." Another barter during the study year involved giving 50 lb of fresh, headed and gutted sockeye to his sister. He described it as a gift, but also stated that he is compensating her because she "baby-sits, watches my child a lot, stuff like that." This exchange has taken place about three times a year since 1998. This household identified three reasons for bartering subsistence-caught fish: someone else needed fish, the household needed something other than fish, and the household had some extra fish. The single most important factor for this household to barter is that they need something other than fish. He also stated that he was "too busy (commercial fishing) to put up smoked fish or I would trade and sell it." This household first participated in bartering subsistence-caught fish in 1985, and he considers barter and customary trade as something that has been a part of his entire life.

Case 12. This individual bartered with someone from King Salmon that he did not previously know. He learned of the opportunity for this barter through a friend. He gave 60 fresh whole sockeye that were caught in the Naknek River and received 2 old boats that he estimated to be worth about $300 each. He described this as a "friend agreement–he needed fish and I needed the boats." This year was the first year that he participated in barter.

Case 13. In a barter for multiple items, this household received 5 lb of smoked sockeye strips, 5 lb of "blackberries," and 2 1/2 lb of blueberries, for 10 lb each of moose and caribou meat. This exchange took place with a close family friend who lives in Newhalen. This exchange was called an "equal trade" and "because of location both parties have needs." They have bartered once a year since 2002 and the respondent stated that they "do other barters also, but fish is once a year." The first year that the respondent bartered subsistence-caught-fish was 1981 and she listed reasons for bartering as: I needed fish, someone else needed fish, I needed something other than fish, someone else needed something, and I had some extra fish. The single most important reason to barter was that she needed fish. Another comment from this respondent is that putting up fish is sometimes "too much work" which may increase the frequency of bartering from one year to the next. The amount offered in barters "depends on needs" and the respondent thought that haggling over exchanges occurs "rarely" (as opposed to never and often) with an attached advice to "know what you are going to get and who you are dealing with," so that haggling is not necessary. Additional comments included:

> Putting up fish is too much work so we don't sell it. In the middle 1990s when they didn't have fish up at Iliamna, I sent reds and kings up to them. *Nudelvay* [referring to spawned out sockeye] is harder to get at Naknek Lake due to timing and the weather.

> Enough water in the river is also a consideration–some years there is not enough water. I spent a year in Iliamna when I was little so I appreciate subsistence foods.

Case 14. This respondent gave his nephew four cases of pint jars of canned (but not smoked) sockeye salmon, and in return he received three cases of half pint jars of smoked (canned) sockeye and 10 smoked, whole sockeyes. The respondent said that he gave away the fish that he received and explained that he does not have a smokehouse but his nephew does. He also said that his nephew "did a better job of smoking fish when he wasn't commercial fishing" as he is now. The year of their first barter was 2001 and they do it once a year. The two reasons he offered for bartering are "[to] help each other out" and "I don't smoke fish." The most import factor in his barter is that he does not smoke fish. He makes kippered fish and gives most of it away, "gift package style." He does not consider that trading.

EXCERPTS FROM THE KEY RESPONDENT GROUP DISCUSSION

The following excerpts from the key respondent group discussion in Naknek involving Naknek and King Salmon residents highlight comments about sharing, sale of subsistence foods, and the value of subsistence resources that transcends money. The first expresses a very widespread value about sharing:

> I like the feeling of giving and not wanting anything in return. It gives me joy. Subsistence food means more to me than money. I think it is wrong when people from outside who come here and exploit our natural resources, coming here and not leaving things behind. The people are impacted by that, we are always left out. Like people fishing and they come here only for fishing to get the money.

However, some participants in this interview expressed an interest in trade as a means to help them cover basic living expenses.

> You know if we knew about being able to sell subsistence fish long time ago that would have been nice, that would help some of us out a lot. I talked to this lady last night and she has 3 kids and I think, you know, because just one income in her house she is having a hard time to pay her fuel bill and I learned a lot from this [discussion].

The following discussion included several examples of circumstances where subsistence resources were exchanged for cash.

> *Interviewer*: In your life have you ever observed any buying or selling of subsistence foods?
>
> *Respondent*: Oh yeah. My mom would put up smoked salmon and the people who didn't put up fish would buy them for $2 a fish and people would even come from out of town to buy the fish from them too.
>
> *Interviewer*: This was in the '60s and '70s?
>
> *Respondent*: Yeah. There were a couple of lodges and they had rich people come there and they would buy fish from the ladies in the villages because they always put up good smoked fish. [Three lodge owners] would bring people over there to buy fish within our villages. They did buy smoked salmon, the only thing that was sold was smoked fish. Furs too, they would sell furs though. A couple of other guys bought a lot of fox, too, to use for mittens and fur hats also. People who came to the lodges would buy them from them. To make a fur hat you don't want plain beaver and like mukluks and you

> want different things to make these things to work on their fur projects. Everything else was shared or traded not selling.

This final excerpt illustrates the widely held concept that subsistence foods are worth much more than money:

> *Respondent*: I know a man in Levelock had three beautiful wolf furs and his wife was going to make him a coat and these people came from out of town and they offered them money for them and he laughed and told them that he couldn't wear his cash and the coat was more important.
>
> *Interviewer*: Yes I have heard that many of times, you can't wear or eat money. A bucket of berries is more important than money and so even though the cash economy is still present the value of resources is more than money.
>
> *Respondent*: Yes, like all the salmonberries have been dried out and you don't want to sell them. Maybe you take it to a potluck and share it but you don't sell it.

DISCUSSION

More households involved in cash trade (six in the study year and nine at some time in the past [Table 10]) were documented in Naknek than in any other study community. A key point is that most respondents talked about selling or buying processed fish, that is, smoked salmon that takes a lot of work to produce. In all but one of the trade exchanges documented in Naknek, it was processed salmon that was being bought or sold. This is an important factor in the attitude about buying or selling fish–it is the processing that is being paid for. The fish are there for everyone if they put in the effort to catch them, but producing good smoked fish is a matter of skill as well as time, a craft that is highly valued by local residents.

Although not everyone approved the sale of processed, subsistence-caught fish, there was more support for this activity expressed in Naknek than in the other study communities. One reason for this acceptance is that processing and selling some small portion of the subsistence catch appears to have been practiced across several generations in a few local families. These individuals have an acknowledged skill in preparing a high quality product that others have neither the skill nor the time to produce. The sale of relatively small amounts of processed salmon plays a role in local bazaars and charity events–these likely enhance the general (but not universal) acceptance of trade. On the other hand, sale of unprocessed fish appears to be frowned upon because it might "get out of hand," because it would be too easy to harvest salmon and simply sell it to a commercial processor. Although there is concern about the potential "abuse" if sale is allowed, there appeared to be support for limited sales of processed fish.

Another attitude expressed by several responses in support of the sale of processed subsistence salmon is that their buying some is helping someone else out–the seller has the skill and the time to produce a good product and, in addition, they need some money. Prices appear to be fixed. There is little to no haggling over the price in recognition of the time and skill that is involved in the processing.

Nevertheless, the project encountered reluctance by some to talk about the sale of processed subsistence fish. This may be due to the knowledge that state regulations do not allow these sales, as well as a lack of knowledge about the federal rules that allow limited sales if a permit is obtained. A few respondents expressed ambiguous attitudes about exchanging subsistence fish

for cash, but engaged in the activity because it was considered a family tradition and because small income they derived from this practice helped them meet their living expenses.

Many of the case examples of barter in Naknek appear to be long standing relationships. Differences between communities factor into bartering–people trade for resources that are not readily available in their harvest areas. Bartering fish and fish products for services and commodities also appears to not be uncommon in Naknek. The high value placed on salmon, and especially skillfully processed salmon, facilitates these exchanges. There is also the expressed view that bartering with others assists the partner in obtaining needed resources.

CHAPTER 7. FINDINGS: KING SALMON

SURVEY FINDINGS

Demography and Cash Economy

According to the U.S. Census, King Salmon had 442 people living in 196 households in 2000 with an average household size of 2.3 people (U.S. Bureau of the Census 2001). Thirty percent of the population was Alaska Native. In 2005, the Alaska Department of Labor (2006) population estimate for King Salmon was 420 people (Table 1). For this study, 20 King Salmon households that key respondents reported were likely to be involved in cash trade or barter were interviewed. These households contained 68 people for an average household size of 3.4 people. Forty-three percent of the sampled households' population was Alaska Native, the average age of the household heads was 52 years, and, on average, household heads had lived in King Salmon for 26 years (Table 6).

Of the interviewed King Salmon households, none had incomes below $10,000; 5% had incomes in the $10,000 to $24,999 range; 10% were in the $25,000 to $49,999 range; 25% were in the $50,000 to $74,999 range; 45% had incomes over $75,000; and 15% declined to answer the income question (Table 7). Surveyed households tended to have higher incomes than reported for King Salmon by the federal decennial census for 1999 (Table 8). While 6% of the surveyed households had incomes below $25,000, the federal census reported 14% of King Salmon households in this category. Eighty-two percent of surveyed households had incomes above $50,000; the corresponding proportion for 1999 based on the federal census was 55%.

Of the 20 interviewed King Salmon households, only 20% held commercial fishing permits; all 4 of these households held salmon permits, and none of these households participated in any other commercial fisheries (Table 9).

Cash Trade

Of the 20 households interviewed in King Salmon, four (20%) had experience in trading subsistence-caught fish for cash (Table 10). Of these, three said they engaged in trade of fish about once a year; the other said they traded more than once a year (Table 11). Needing fish (three households) or someone else needing fish (two households) were most often cited as reasons for trade. One King Salmon household traded because someone else needed money (Table 12). Three of the four households said that their needing fish was the primary reason they used money to obtain subsistence-caught fish (Table 13).

In the 2004 study year, two interviewed King Salmon households (10%) described examples of trade of subsistence-caught fish for cash in which they were involved. In total, they participated in 17 trades, all of which included sockeye salmon (Table 10).

Barter

Six of the 20 interviewed King Salmon households (30%) had some experience with bartering subsistence-harvested fish (Table 15). For three, bartering takes place about once a year; for two others, bartering is more frequent, more than once a year. For the other household, bartering is rare (occurs "almost never") (Table 16). Reasons for bartering varied. Needing fish (two households), needing something else (two households), someone else needing fish (three households), and having extra fish to barter (two households) were all cited by King Salmon

respondents (Table 17). The most important reason for bartering also varied (Table 18). Two King Salmon households bartered primarily because someone else needed fish; one needed fish; one needed something else; one had extra fish; and one gave another reason.

In the 2004 study year, 6 interviewed King Salmon households (30%), all of the households with any history of bartering, were involved in barter that included subsistence-caught fish (Table 15). They described 10 exchanges. Sockeye salmon were involved in 6 of these exchanges (60%). In 3 cases (30%), the households provided services in exchange for fish. In six cases (60%), the households received fish, in one case (10%) they received another natural resource, and in three exchanges (30%) they received market goods or services.

Community Examples of Cash Trade and Barter

Households in King Salmon were asked to give examples of barter and trade of subsistence-caught fish for cash that they were aware of that occur in their community. These were not necessarily exchanges that the household was involved in. The initial question was, "What kind of fish do you think is traded or bartered most often in your community?" They were then asked in what state of processing the fish were usually traded or bartered (e.g. fresh unprocessed, frozen, dried, smoked, etc) and "what is a typical amount that someone might trade or barter?"

Table 28 lists the examples provided by interviewed King Salmon households. Only 11 of the 20 interviewed King Salmon households responded to this set of questions. Two households gave examples of barter or trade that involved Chinook salmon–eight pint jars of strips or filleted. Eight King Salmon households thought that sockeye salmon are the most frequently bartered or traded resource in their community. Two mentioned unprocessed sockeye salmon, four mentioned dried and smoked sockeye salmon, and two did not report a processing method for exchanged sockeye. Finally, one household said that halibut is the fish most frequently bartered or traded in King Salmon.

Table 29 gives more specific information for the examples of barter or cash trade in King Salmon listed in Table 28. In the first example (Scenario 1), one household reported that a one pint jar of Chinook salmon strips would sell for $10 in King Salmon, and that this type of trade occurs "often" (at least once a year). In the second example (Scenario 2), one household reported that 50 lb of frozen, unprocessed sockeye salmon might be sold for $200 in King Salmon, but was not certain of how frequently this trade occurs. In Scenario 3, one respondent said that one pound of dried, smoked sockeye salmon could be bartered in King Salmon for 15 lb of moose or caribou meat, and that this exchange takes place "often." A pound of dried, smoked sockeye could also be bartered for 1.25 gallons of berries. Six of these scenarios include exchanges of subsistence-caught fish for cash (Table 21). Two of these involved unprocessed fish (sockeye salmon or halibut) and the other three involved processed sockeye salmon.

KING SALMON CASE STUDIES: HOUSEHOLDS INVOLVED IN CASH TRADE

*Case 1***.** This case example is a single, 68-year-old Alaska Native man who has lived in King Salmon for 40 years. He fished commercially through the early 1990s, and then started working a seasonal job during the summer. In the study year, he bought one smoked whole sockeye salmon for $25. He said that he bought 4 the year before, but only bought one fish this year because it was "too salty." He bought the fish from a female friend who is approximately 40 years old and who lives in Naknek. He said that she smokes fish every year and he has purchased some each July since 2003. The only reason he gave for buying fish is that he "likes

smoked salmon when fresh in July–still hanging in the smokehouse, real fresh." He also said that he did not put out a subsistence net in the study year. As a comment in the community example section of the survey, he stated "people that put up their own fish don't have to buy any." He said that in addition to smoked whole sockeye salmon, Chinook salmon strips are also sold in King Salmon. When he was at the smokehouse buying the sockeye salmon, the Chinook salmon strips were not ready. He was planning to buy some at Fishtival, but they were too expensive. He was not aware of people bartering subsistence fish. He commented that, "When I'm hungry for fish, I go buy it. I bought one fish and it was too salty so I didn't buy any more. I was going to buy three or four."

Case 2. This example is an Alaska Native household. The household head is 50 years old and has lived in King Salmon for 10 years. The family owns one commercial salmon fishing permit. During the study year, members of this household bought 5 quarts of kippered sockeye salmon for $15 per quart and 5 pints of sockeye *civiche* for $15 per pint. The fish was caught in the Naknek River and processed by a 40-year-old female friend from Naknek. They first met her in 1996. The year of their first trade was 1998. Since then, they have traded approximately two times per year. Another trade this household made during the study year was for one quart of kippered sockeye salmon, for which they gave $15. They also paid $15 for one pint of *civiche*. The fish were caught in the Naknek River by a 60-year-old friend from Naknek. They first met this woman in 1996, traded with her for the first time in 1998, and have bought fish from her about two times per year since then. These fish were purchased at bazaars that occur "only two or three times a year." Members of this household first bought or sold subsistence-caught fish in 1975 and they do it more than once a year. They gave two reasons for buying or selling subsistence-caught fish: they needed fish and someone else needed fish, with the explanation that they "bought fish and gave it to someone else." Their most important factor in buying or selling fish was that they needed fish. They added the following comment: "Customary and traditional is to trade what the person needs; the person that needs something initiates the deal."

KING SALMON CASE STUDIES: HOUSEHOLDS INVOLVED IN BARTERING

*Case 1***.** This respondent gave four whole, unprocessed sockeye salmon caught in the Naknek River to an acquaintance from Soldotna whom he met in 2004 and who is in the King Salmon area only in the summer. In return, the respondent received 36 quail eggs. This was a one time event that came about because the respondent caught more fish than he needed for processing that day. He kept the fish that he needed and gave the rest away to others and to the identified exchange partner who wanted fish to eat. The respondent called the exchange "giving" because he did not expect anything in return, but he did not refuse the offer of the eggs. The single most important factor in the barter was that he had extra fish. He stated, "Usually I put in the net and keep what I want and the rest goes to family members."

Case 2. A member of this household gave 10 gallons of cranberries to a lifelong friend who lives in Aleknagik and in return received 40 lb of smoked whole sockeye salmon that were caught at Aleknagik. The respondent explained, "She needed berries and we needed fish. She puts up an excellent product." The respondent described this exchange as "trade[ing] product for product." This was the first time that this household bartered with this individual. The respondent said that they barter once a year and the most import factor in their barter is that they needed fish. The first time that they bartered fish was 1952. The respondent also stated that he has shared his whole life. The respondent offered an additional comment:

> Sometimes we need seal oil so we buy it. It's part of our winter diet. Freshwater fish are traded for seal oil–whitefish–when we get a good batch (of whitefish) we share it and get seal oil in return.

According to this respondent, smoked whole sockeye salmon is the most likely product to be bartered or traded in the Bristol Bay Borough. Canned sockeye is the second most popular, and halibut is also bartered or traded. "You could go all day with (the energy you would get from) a piece of smoked salmon" he said. He said that $20 to $25 for one smoked whole salmon is what he has paid and is what he is willing to pay for a good product. He also stated that fresh or dried caribou and moose meat were usually just shared in the past. He likened bartering to sharing as something that has gone on for a long time. In his grandfather's time they had to put up fish for dog food. They used to put up 1,500 to 3,000 fish at that time in the 1950s to provide for dog teams, but after airplanes arrived, use of dogs diminished.

Case 3. The individual in this household has lived in King Salmon for 16 years. In one example of bartering, he gave 20 lb of sockeye salmon fillets caught in the Naknek River and in return received medical services in another state. He estimated the value of the services to be $100, but also said that he was not sure "how much a surgeon's time is worth." He also received quicker service by giving the fish. He called this exchange an "appreciation gift" and the exchange individual (the doctor) was previously unknown to him. In another exchange, that might better be described as sharing with a friend, he gave 10 lb of fresh frozen sockeye salmon roe and 15 lb of salted frozen sockeye roe to a friend who lives in another state. The friend gave the fish to his boss in a Japanese corporation. This was also considered an "appreciation gift." This was the first time an exchange with this person has taken place. This household has also traded salmon in the past for fresh vegetables from a family in the state of Washington. The year of their first barter was 1995 and they barter on an average of more than once a year. Reasons for bartering included someone else needed fish and needing something other than fish. The single most important factor in this household's bartering is that someone else needed fish. The respondent stated that he "never has extra fish."

*Case 4***.** Members of this household gave 85 lb of fresh frozen sockeye salmon that was caught in the Naknek River to a cousin (and former resident of the area) who lives in Hawaii. This gift was in advance of an expected two-week trip to Hawaii and was considered compensation in advance for staying at the cousin's house, although the respondents stated that they would have stayed at the cousin's house even if they had not sent the fish. However, they decided to go somewhere else so never actually received anything in return for the fish. In describing this exchange, the respondents said, "She [the cousin] enjoys the fish because she's from here." In another example of barter, this household's members gave two pint jars of smoked sockeye salmon caught in the Naknek River to the husband's cousin's husband who lives in Anchorage. In return, the family received one kippered sockeye salmon caught in the Kenai River. The fish was kippered by brining and smoking in a Little Chief Smoker. The exchange occurred because "we like the taste of each other's fish." Barter between these two individuals started in 1990 and it "just kind of happened. We did it before we lived in King Salmon starting in 1997."

*Case 5***.** This respondent repairs appliances and in some cases he accepts fish in lieu of payment for this service. The respondent said he does not set up the barter. In his view, he volunteers to do the repairs–he does not expect payment–and then people give him fish "more just [as] gifts." In the study year, he gave repair services to households in King Salmon, Naknek, and South Naknek and in return received a total of approximately 25 lb of smoked sockeye salmon. There

were too many exchanges for him to sort out any additional person information for the survey. In another exchange, one that could be described as a business arrangement with a lodge, he maintained the lodge's fish smoker, helped winterize the lodge, and fixed the washer and dryer. In return, he received the use of the smoker to smoke his harvest of 32 sockeye salmon. Fish were not involved in this exchange, but access to equipment to process fish was received by the respondent.

Case 6. The household head gave three smoked, whole sockeye salmon caught in the Naknek River to his brother, who lives is Chignik Lake, and received three fresh sockeye salmon caught in the Chignik area. The respondent described this barter as an "exchange/trade." This exchange between these two persons has taken place annually since 1978. In another barter, the household exchanged one of the Chignik sockeye salmon for 40 lb of moose meat. This exchange, described as "bartering," was with a friend who lives in King Salmon that he has known since 1999 and first bartered with in 2000. They barter about once a year. The respondent listed several reasons for bartering: "I needed fish, someone else needed fish, I needed something other than fish, and I had some extra fish." The single most important factor for his bartering is that he needed something other than fish. The first year that he bartered subsistence-caught fish was in 1975. He barters subsistence-caught fish on an average of more than once a year and will on a rare basis barter the same fish more than once. He also related that in the past while living in a village, he has bartered smoked whole sockeye salmon for 100 twenty-two caliber rifle shells.

DISCUSSION

Some general observations about barter and cash trade in Naknek also apply to the neighboring Bristol Bay Borough community of King Salmon. Some trade of subsistence fish for cash occurs, especially of processed products that are considered to be of high quality. People who do not have time to set a subsistence net also sometimes offer cash for subsistence-caught fish. Also, barter of subsistence fish appears to be not infrequent in King Salmon. Fish are used as compensation for services, or to exchange for other valued subsistence products.

Although they are connected by road and share services including a school, Naknek and King Salmon differ in several ways that are reflected in the surveyed households' involvement in and comments about barter and cash trade of subsistence-caught fish. Naknek is an older community with a large Alaska Native population. While King Salmon also has Alaska Native residents, much of its population consists of state and federal agency workers and their families who are not long-term residents of the area and often have not established resource exchange relationships with other families. One King Salmon respondent who is a former resident of Naknek said that, "Naknek is a village. King Salmon is mostly federal workers. Barter is common in Naknek but not in King Salmon due to federal workers."

Several King Salmon respondents disavowed any knowledge about barter or cash trade of subsistence-caught fish. One 20-year resident said he did not know of anyone "who barters or sells fish," although he has "heard rumors but never observed it." An eight-year resident said that none of his acquaintances bartered or sold fish and "those who put up their own fish use it themselves or share it." An Alaska Native woman who had lived in King Salmon for 20 years said she knows no one who sells or barters subsistence-caught fish because "it is lots of work and I wouldn't know what price to put on the fish." She added that she learned to put up salmon from her grandmother and is known for the quality of her smoked fish. People have asked to buy her

smoked and jarred salmon but, she said, “I have a big family so I don’t sell.” A non-Alaska Native person who has lived in King Salmon for 41 years said he was not aware of anyone bartering or selling fish and “If they do, no one tells me.”

Also in King Salmon, a few households expressed opposition to allowing the sale of subsistence-caught salmon. One respondent expressed concern that such sales would create conservation problems if they focused on salmon roe and the harvest of females. Two households reported their belief that subsistence salmon harvests from the Naknek River were being sent out of the area through the King Salmon airport to be sold. It did not appear that in either case had the respondent observed this activity. Also, the subsistence fishers who allegedly engaged in this practice were reported to be nonlocal residents. While one of these respondents appeared concerned about a large volume of subsistence fish being sold, he added that “if someone needs a little money by selling subsistence fish, that’s okay.”

These comments are generally borne out by a comparison of the survey results for King Salmon and Naknek. More Naknek households engaged in cash trades in the study year (six households; 21% of those surveyed) than in King Salmon (two households; 10%). More surveyed Naknek households were involved in barter (13 households; 46%) than in King Salmon (six households; 30%) as well. Generally, project researchers observed more awareness of sales of subsistence-caught fish in Naknek, where, as discussed in the case examples in the Naknek chapter, several families have sold jars of smoked salmon, basically as a craft item, at bazaars and through non-market exchange networks for several generations. Because these producers live in Naknek and the bazaars take place there, it appears that many King Salmon residents are not aware of this activity, or do not associate the sale of such items with subsistence fishing.

CHAPTER 8. STUDY FINDINGS: NONDALTON

BACKGROUND

Nondalton is a Dena'ina Athabascan community, with ties to other Dena'ina communities in the Cook Inlet area. Unlike the Central Yup'ik communities of Bristol Bay with their egalitarian traditions, Nondalton and other Dena'ina communities were traditionally organized as "rank societies," with individuals and families distinguished based on their accumulation and distribution of wealth in the form of food, raw materials such as furs, manufactured items such as clothing, and dentalium (*k'enq'ena*) (Ellanna and Balluta 1992:267-272; Fall 1987; Townsend 1980). Leaders called *qeshqa* ("rich men") directed subsistence activities, managed food supplies for groups of follow-kin, and organized exchanges of resources between villages, often through trading partners (Ellanna and Balluta 1992:270; Fall 1987). Exchanges of subsistence resources between inland and coastal Dena'ina villages occurred on a regular basis (Ellanna and Balluta 1992:215; Fall 1987:34-35). Dena'ina elders sometimes use the English words "buy" and "sell" when discussing the traditional exchange of food and raw materials for wealth items such as dentalium and valued furs (Fall 1987:35). These exchanges were a form of balanced reciprocity, in which the value and quantity of exchanged items mattered in structuring the exchange. For further discussion of the traditional Dena'ina economy and how it changed in the 19th and 20th centuries, see Ellanna and Balluta 1992 and Fall 1987.

For the 1980s, Ellanna and Balluta (1992:215-216; see also Morris 1986:135-148) discussed "trade" of subsistence resources between Nondalton residents and residents of other Bristol Bay and communities and with relatives living in Anchorage. For example (Ellanna and Balluta 1992:215),

> In many cases, this trade was referred to as "visiting" by both Dutna (Central Yup'ik) and Dena'ina, despite the fact that goods and cash were exchanged between the visitors and hosts. The most common occasions for "visiting" and direct economic exchange included Russian Orthodox Christmas ("Slavi"), Easter and the sometimes associated spring carnival, midwinter carnivals, and important socioreligious events such as Russian Orthodox funerals and weddings.
>
> During these occasions, Nondalton residents acted as both hosts and visitors. In either case, visitations had structured expectations of hospitality on the part of visitors and hosts alike. Visitors were provided with substantial food, mostly in the form of meals in individual households or community-wide potlatches. Visitors also were provided places to sleep and other amenities at no cost. Other exchanges included resources available or abundant in one area but not the other, presented as gifts by both visitors and hosts.

Ellanna and Balluta (1992:216) also described exchange of goods and services between Dena'ina living in Nondalton, Lime Village, and Anchorage.

> Temporary inland Dena'ina residents of Anchorage frequently had access to cash employment. The product of this effort, cash, was used to acquire commercially produced goods, some of which were introduced into traditional distribution networks. Nondalton residents had the most lucrative access to caribou, moose, and sockeye of the three settlements, providing them with both processed and unprocessed items of exchange. In the case of Nondalton Dena'ina residing temporarily in Anchorage, there

> was no hesitancy to call upon appropriate kin in the village to supply them with food or raw materials. Alternatively, kin in Nondalton sometimes called upon those in Anchorage to provide commercial goods unavailable or more costly in the local store. . . Exchange networks also provided the principles by which housing was sought by visitors from one settlement to another.

SURVEY FINDINGS

Demography and Cash Economy

According to the U.S. Census, Nondalton had 221 people living in 68 households in 2000 with an average household size of 3.3 people (U.S. Bureau of the Census 2001). Ninety percent of the population was Alaska Native. In 2005, the Alaska Department of Labor (2006) population estimate for Nondalton was 203 people (Table 1). For this study, 37 of 44 year-round households in Nondalton were interviewed. These households contained 144 people with an average household size of 3.9 people. Ninety-two percent of the sampled households' population was Alaska Native, the average age of the household heads was 50 years, and on average household heads had lived in Nondalton for 45 years (Table 6).

Of the interviewed Nondalton households, 46% had incomes below $10,000; 30% had incomes in the $10,000 to $24,999 range; 14% were in the $25,000 to $49,999 range; 3% were in the $50,000 to $74,999 range; none had incomes over $75,000; and 8% declined to answer the income question (Table 7). Surveyed Nondalton households tended to report lower incomes than indicated by the federal decennial census for 1999 (Table 8). Eighty-two percent of surveyed households reported incomes under $25,000, and 19% had incomes over this amount. The federal census reported 62% of households with incomes below $25,000 and 38% above that amount. Only four interviewed Nondalton households (11%) held commercial fishing permits; all four were for salmon (Table 9).

Cash Trade

Only three of the 37 interviewed Nondalton households (8%) had ever participated in trade of subsistence fish for cash (Table 10). One of these households said their involvement in cash trade was rare (they were "almost never" involved), while one said they were involved about once a year, and one reported trading fish for cash more than once each year (Table 11). "Needing fish" was mentioned by one household as a reason for cash trade; two mentioned trading because they needed money, and one bought fish because the person they traded with needed money (Table 12). When asked to cite the most important reason for cash trade, one Nondalton household said they needed fish, one said they needed money, and one said the trading partner needed money (Table 13)

In the 2004 study year, one Nondalton household participated in cash trade. This household reported two incidents of trade involving sockeye salmon (Table 10).

Barter

Of the 37 interviewed Nondalton households, only four (11%) said they had ever bartered subsistence-caught fish (Table 15). One household said they bartered multiple times each year, two said they bartered about once a year, and the fourth said their bartering occurred less than once a year (Table 16). Each respondent gave a different primary reason for bartering: needing

something other than fish, someone else needing fish, the bartering partner needing something other than fish, or having extra fish (Table 18).

Three Nondalton households (8%) had bartered subsistence-caught fish in the 2004 study year, and reported five exchanges that they called "barter." In four of these cases, the Nondalton household gave sockeye salmon (Table 15). In the other case, the Nondalton household provided a service in exchange for fish. Only one case of bartering in Nondalton involved the interviewed household receiving fish; one involved receiving groceries for fish, and four involved receiving other market goods (including gasoline, machine parts, and "household goods").

Community Examples of Cash Trade and Barter

Interviewed households in Nondalton were asked to give examples of barter and cash trade that occur in their community. These were not necessarily exchanges in which their household was involved. The initial question was, "What kind of fish do you think is traded or bartered most often in your community?" They were then asked in what state of processing the fish were usually traded or bartered (e.g. fresh unprocessed, frozen, dried, smoked, etc) and "what is a typical amount that someone might trade or barter?"

Table 30 lists the examples provided by interviewed Nondalton households. Of the 37 interviewed Nondalton households, 34 responded to this set of questions. All of the Nondalton respondents said that some form of sockeye salmon was the fish most often traded or bartered. In only one case were the fish unprocessed. By far, jars of sockeye strips were the resource mentioned the most, by 21 of the 34 respondents to this question. However, in approximately 39% of cases, after describing a scenario, the respondent added that this type of exchange never happens in the community (Table 31). This suggests that respondents in Nondalton were speculating about hypothetical exchange values for products rather than reporting on exchanges they had witnessed or heard about. The frequency of barter and trade of subsistence fish in Nondalton is likely lower than the absolute number of responses to this question might indicate.

Table 31 gives more specific information for the examples of barter or trade in Nondalton listed in Table 30 In the fourth example (Scenario 4), households reported that a gallon of dried, smoked sockeye salmon traded for 7.5 lb of caribou or moose meat, or 2 gallons of berries, or 15 gallons of gasoline. One household said that this gallon of sockeye salmon could be sold for $20, another said $25, and a third said $75. Although 31 of these cases included exchanges of subsistence-caught fish for cash, in 11 of these or 35% of the respondents said that this type of exchange never happens in the community.

NONDALTON CASE STUDIES: HOUSEHOLDS INVOLVED IN CASH TRADE

Case 1. This was the only interviewed Nondalton household that reported any involvement in cash trade of fish in the 2004 study year. This is an Alaska Native household with seven members, four of whom are adults. The household head is 49 years old and has lived in Nondalton his entire life. No one in this household held a commercial fishing permit in the study year. The household's income was in the $50,000 to $74,999 range. The household twice exchanged fish they had caught in subsistence nets in Six Mile Lake for cash. In the first case, the trade was with the sister of one of the household heads, who also lives in Nondalton. She called the household asking if she could buy some fish because she was aware of the high quality of the dried, smoked salmon this household produces. The household sold her 2 gallons for $40. This was the first time an exchange like this had occurred with this household. In the second

instance, a 45-year-old man from Nondalton who is not related to the household called and said he needed fish for a potlatch. He bought 4 gallons of dried, smoked sockeye salmon for $100. This also was the first time the household had exchanged fish for cash with this person.

NONDALTON CASE STUDIES: HOUSEHOLDS INVOLVED IN BARTER

Case 1. This 6 member household included 4 adults and a total of five Alaska Natives, with a maximum of 48 years of residency in Nondalton. No one in this household participated in commercial fishing in 2004, and the total household income was in the $10,000 to $24,999 range. This household was involved in one instance of barter in 2004. The exchange occurred with the wife's niece, who lives in Anchorage. The household gave the niece 55 jars of salmon strips; 20 frozen, unprocessed sockeye salmon; and 20 dried spawned-out sockeye salmon. In return, they received 180 empty pint jars for preserving salmon (15 cases) (classified as "household goods" in Table 13 and Table 17) and 15 lb of groceries. This was the first time the household had bartered with this person.

Case 2. This Alaska Native household of three people included two adults. The household head was a 76-year-old lifelong resident of Nondalton. One household member held a commercial salmon permit in 2004. The household income was in the $10,000 to $24,999 range. This household had three people with whom they bartered in 2004. The first is a 37-year-old friend who lives in Nondalton. They gave this man 3 lb of dried sockeye salmon that had been harvested in the Newhalen River. In return, they received two machine parts. The second person was a 45-year-old male friend who lives in Lime Village. They provided this man with 5 gallons of salted sockeye salmon from the Newhalen River. They received in return 20 gallons of gasoline. The third person was a 70-year-old female friend who lives in Tetlin, with whom they first bartered in 2003. They gave this woman 12 pints of jarred sockeye salmon strips. In return, they received a handicraft item.

Case 3. This is a non-Alaska Native household with nine members, including two adults. The household has lived in Nondalton for about two years. They were not involved in commercial fishing and reported an income in the $10,000 to $24,999 range. This household provided two hours of general mechanical services to a 43-year-old male friend who also lives in Nondalton. They received from the person two dried, smoked sockeye salmon that he had harvested in Six Mile Lake.

KEY RESPONDENT INTERVIEWS

Key Respondent A

This Nondalton male elder stated that sharing with one another is a customary practice in Nondalton, passed on from one generation to the next. In particular, the younger generation is taught to care for their elders by sharing subsistence harvests. He pointed out that when elders can no longer hunt and fish, they are still used to eating "native foods," and it is these resources that are most valued when they receive assistance from younger people.

The respondent discussed a connection with the inland Dena'ina community of Lime Village. Traditionally, runners were sent between Lime Village and Nondalton, keeping track of the abundance of resources harvested in each community. If one community was doing poorly, the whole group would pack up to process fish in the community that received a better run of fish. He agreed that there may be trade between the two communities, most likely whitefish and Chinook salmon, but this trade was uncommon.

There is also a history of trade between Nondalton and the Dena'ina communities of Cook Inlet. Exchanges of fish, other seafood, and dried caribou and moose meat were most common. There was a prearranged time of year to meet for these exchanges. The goods were packed over the Lake Clark Pass to trade with people on the Cook Inlet side, mostly at Tyonek. Newhalen, a Yup'ik community, was also involved in this trade activity.

The respondent said that some exchange of goods occurs between people in Nondalton and Anchorage, but this is a loose arrangement of goods for fish. Often, Nondalton people send fish to family members out of the region or even out of the state. Barter has been rare in recent years because of the scarcity of moose and caribou to harvest for subsistence use. Sometimes sport hunters drop off meat in Nondalton after a hunt, but nothing is usually offered to them in exchange (see also Holen, Krieg, Walker, Nicolson 2005:57, 62-63).

Key Respondent B

This male elder spoke about topics similar to respondent A. Both were concerned that moose and caribou numbers were being affected by mineral exploration (the Pebble Project) and sport hunters from outside of the region. Respondent B was also sensitive to the subsistence activities of people from downriver who travel up into the Nondalton area to put up fish or hunt game. He also confirmed exchange of resources between Nondalton and Lime Village as both an historic and a current practice. He also said that relatives and community members who now reside in Anchorage send goods home to Nondalton in exchange for traditional foods or cash. He thought that perhaps four or five people in Nondalton sell fish for cash, but in general most families with an excess of fish give to those who have less. This respondent appeared pleased when informed that the sale of subsistence-caught fish from federal waters is legal up to $400 to $500. He thought that perhaps more people might practice some customary trade now they know of the regulations allow this sale.

Key Respondent C

This key respondent is a middle-aged man. He said that barter dates to the introduction of cash into the local economy. Prior to that time, people just took care of each other, especially those with family ties. His family has ties to Lake Iliamna communities through his mother. Freshwater seal meat, skins, and oil were valued resources from Iliamna. According to this informant, Nondalton has a history of trade not only with Iliamna, but with Lime Village and Cook Inlet Alaska Native communities as well. The Cook Inlet Dena'ina brought beluga, "whale," and marine resources, and the Nondalton people brought sheep, moose, and caribou meat. He said these trading networks were set in place to make sure people had what they needed to survive.

According to this respondent, with the introduction of cash to the economy also came water and sewer bills. People had to work to pay utilities, but they also had the capability of preserving food in refrigerators and freezers. Once people could preserve food quickly and for extended periods of time, distribution of the fresh resources before it went bad was no longer necessary. The respondent stated:

> the ability to preserve [resources] had good and bad effects on our culture, because our culture was based on sharing and [taking care of each other] and… when the new system came… it left individuals to fend for themselves more… when we fell under the system of the cash economy, but that's just in the name of progress.

He said he knows of a Nondalton person who puts up 10 to 15 extra cases of fish a season and takes them into Anchorage, but is unaware of the actual arrangement for compensation. He said that mostly people put up extra cases of fish in order to have something to give to family members and relatives, but it all depends on how well the fishing season goes. He said that subsistence fishing has been rather poor and consequently people are getting "stingy with their fish." Although he was interested to learn that one may now sell fish caught in federal waters, he does not believe that the costs of the effort could easily be recovered in a strict for cash sale.

He also offered that what has also been common is to bring non-relatives from outside the region to the fish camp in exchange for fuel or camp items. These people help with pulling in the setnets or with camp maintenance, but are not allowed to process the fish for drying and smoking because of their lack of skill. Processing subsistence salmon is considered "serious business" best left to "the professionals!"

Key Respondent D

This key respondent is a female elder. She also mentioned people from outside the community, such as Anchorage residents, coming into the community to put up cans of salmon. She did not know if this was done for sale or for personal use, but she did say a lot of fish was "put up" and taken out of the community.

This elder recalled a time, quite some time ago, when a man arrived in Nondalton wanting to buy whitefish. He wanted to start a business, a café, selling trout. This woman's husband was one of the Nondalton people who went to catch fish though the ice in order to sell them to this man. But the arrangement did not last long because the man was not successful in his business endeavor.

This respondent reported that there are people, friends of the grandchildren of elders or sportsmen from outside the community, who come through Nondalton during the subsistence salmon fishing season and occasionally inquire how much jars of fish or dried fish might go for. This elder always responds, "Those aren't for sale." This has not happened very often. But she wonders if people are willing to pay for these products, and selling is now legal under federal rules, whether some community members might be interested in selling their subsistence fish. She pointed out that it was the friends of the younger generation who seemed interested in purchasing subsistence-caught fish, and that if selling was going on in the community it was more likely to involve those of the younger generation.

She did not recall the kind of extensive exchange of subsistence resources between Nondalton and Lime Village that several other Nondalton respondents reported, despite having been born in Lime Village. She does remember a time when Lime Village did not have enough fish to last the winter, and Nondalton people pooled together to send enough fish to Lime Village to last them until spring.

Key Respondent E

Originally from Old Iliamna, this male elder remembers a time when the community worked together to make sure everyone put up enough salmon for the winter. Each family maintained their own cache, but had help with the initial harvesting and processing of the fish, and no one let community members go hungry. However, he said that now people will not help "unless you show them a dollar."

He did not recall anyone selling subsistence-caught fish for cash; however he reported that trappers from the Naknek area used to travel by dog team up to Iliamna Lake during the trapping season and needed fish for their dogs. He indicated that they traded for the fish, but did not say what was exchanged–perhaps furs? When questioned further, this elder again said that no subsistence fish was ever sold; that people always got what they needed, but now, if you need any help at all, you need to compensate people with money. He added that he might recall outsiders coming to Nondalton needing resources, and that they might have offered money in exchange for services or food. But, regardless, no one was left to go hungry, he said.

As did Key Respondent C, this man recalled changes to the traditional way of life when cash was introduced into the local economy, citing the use of snowmachines and the end of dog teams. He said that many changes have been beneficial, but cash is needed to take advantage of these benefits.

DISCUSSION

Exchange of subsistence-caught fish for cash in Nondalton appears to be uncommon today, and appears to have been so in the recent past as well. Only three (8%) of surveyed households reported any experience with cash trade for subsistence fish. Surveyed households speculated about the cash value of processed sockeye salmon (smoked strips); although 45% thought that this type of exchange rarely happens (less than once a year), and 36% thought that this type exchange never happens in the community. Nondalton respondents expressed concern that exchanges of fish for cash could not compensate an individual and family for the effort involved in harvesting and processing the fish. Such a trade would not be considered value for value. However, in a community that has few opportunities for obtaining cash, the value would be in the cash itself, however poor a compensation. Key respondents indicated that community members might try to sell some fish in order to get cash if it were allowed by regulations. In part, this stems from their view that the role of cash in the local economy is growing.

Among surveyed Nondalton households, bartering was not common either; only 4 households (11%) said they had ever bartered subsistence-caught fish for other goods or services. This finding appears different from Ellanna and Balluta's (1992:215-216), discussed above, that "trade" between Nondalton residents and residents of other communities was common in the 1980s. One explanation is that patterns of exchange have changed in Nondalton over the past 20 years. Another, perhaps more likely explanation, is that, as defined for this study, barter involved direct exchanges of items and could involve a negotiation over the value of the items involved in the exchange. The examples provided by Ellanna and Balluta of exchanges of goods and services that took place during visiting or occurred between relatives living in Nondalton and Anchorage may be perceived as sharing and generosity rather than barter or "trade" that implies a calculation of balance. Sharing of fish and other subsistence resources remained commonplace in Nondalton, as evidenced by the findings of other research (e.g. Fall, Chythlook, Schichnes, and Morris 1996). Additionally, key respondents gave examples of labor and service contributions for a share of a subsistence harvest. Nondalton community members may not view such transactions as "barter," but they provide evidence of reciprocal exchanges involving subsistence products that express and maintain social relationships, as did Ellanna and Balluta's (1992) earlier research.

CHAPTER 9. DISCUSSION, CONCLUSIONS, AND RECOMMENDATIONS

DISCUSSION

Sharing, Barter, and Cash Trade

Exchange of subsistence resources is part of the fabric of life in Bristol Bay communities. Distribution of subsistence foods, whether called sharing, or barter, or customary trade, helps define how people relate to each other, how they establish and maintain relationships. Sharing is so basic that an invitation to "have tea" implies consuming subsistence foods as well. As part of the subsistence sector of local economies, subsistence resources serve as a form of "currency" with which individuals distribute valued goods and services and express social and cultural values. As many of the case studies and key respondent interviews summarized in this report attest, this "currency" rarely has a narrow monetary or market value. Rather, the value is defined by traditions of generosity, obligations, and service to the web of relatives and friends that comprise local communities. Indeed, in the traditions of the Alaska Native people of the area, to hoard and accumulate resources is to be "poor," while to freely distribute what one has, expecting nothing back, means that you are "rich."

Anthropological theory (Langdon and Worl 1981; Sahlins 1972) and state and federal regulatory categories in Alaska distinguish between different types of exchanges based upon whether there is an expectation of a return–a gift that is given freely is "sharing" (generalized reciprocity), but a transaction that involves an exchange of goods or services is barter (balanced reciprocity). When minimal amounts of cash enters the transactions, regulations call it "customary trade" if of a noncommercial nature, while market exchanges that involve haggling, gaining an advantage over the trading partner, or making a profit, grade into forms of negative reciprocity, where expression of social relationships and cultural values related to generosity is not a goal.

In practice, these concepts and categories are an imprecise fit for the range of types of distribution of subsistence resources in Bristol Bay communities. As illustrated by the Yup'ik typology, the regulatory terms "barter" (generally called, in common English, "trade") and "customary trade" (generally called, in plain English, "sale") themselves introduce confusion. This indicates that people are most familiar with the definition of trade meaning "an exchange of goods," rather than an exchange involving cash. In Dillingham, this ambiguity remained even after researchers explained how these terms were used for this study based on the regulatory categories. During the course of the interviews, people used these terms as the researchers defined them, even though it was apparent they were uncomfortable with some of them.

An additional source of confusion arises over the concept of "expectation of a return," which serves to distinguish "sharing" from "barter" or "customary trade" in state and federal statutes. Many, and probably most, of the surveyed households are involved in multiple resource exchange relationships of long-standing, but these exchanges are often not simultaneous or even arranged in advance. If one household in the relationship harvests resources, they share with other households, and the others reciprocate when they, in turn, are successful harvesters. Even though some eventual "return" takes place, most respondents called these kinds of exchanges "sharing" and reserved the term "trade" (that is, "barter") to situations where the exchange is more immediate and the items that are shared back and forth can be directly linked.

The discussion of Central Yup'ik concepts of sharing and exchange in Chapters 2 and 5 raised additional issues about how to equate traditional practices with contemporary regulatory categories. The prevailing Yup'ik ideology of subsistence resource exchanges as summarized in Chapter 2 is that subsistence foods are shared, not bartered or traded or sold. "Bartering" would introduce conflict into sharing relationships, something that is traditionally avoided. In this view, eventually those who share are "rewarded" or "blessed" with gifts themselves, either nonmaterial (gratitude) or shares of others' harvests ("what goes around, comes around"). Resources flow back and forth between harvesting households, not to "balance" the exchange, but as a form of generalized reciprocity that links families together. And individuals who do not share despite having resources are called "stingy" and "poor."

Most interviewed households balked at the idea of a standard of bartering accompanied by haggling. There was an implication that this form of exchange was considered rude. Most exchanges were initiated by the giver when it was recognized that the receiver was in need. No considerations were given to receiving anything in return. Often, when the receiver later had a resource in abundance, they would ensure that the household that once gave something to them received something back, at least as a token of their gratitude.

To the extent that "barter" implies a negotiation of equivalent values, it lacks a direct correspondence to "trading" as described by many respondents. As noted, few survey participants described debates or hard feelings over exchanges of subsistence fish for other resources or services. Rather, many of these cases were matters of convenience where both parties had a surplus of a resource that the other desired for variety. Or, one party had a skill (processing fish for example) that could be 'exchanged" for a portion of another's harvest. Or, one party in an urban location had access to groceries or market goods that the rural household needed. These latter cases can be viewed almost as a type of customary trade as defined by regulation, but one step removed, where money is converted to commodities that are then exchanged for the subsistence fish, thus avoiding the direct cash exchange that is prohibited under state regulations for the Bristol Bay Area.

Trade involving the exchange of subsistence-caught fish for minimal amounts of cash appears to have developed in the 20th century in Bristol Bay communities as a cash sector to the local village economies evolved. Into the 21st century, this practice remained limited. For some Bristol Bay residents, Yup'ik ideology discourages exchanges of subsistence fish for money. In Nondalton, key respondents linked the introduction of cash into their economy as leading to less willingness to assist with subsistence resource processing without being paid. But some of the same respondents expressed interest in exchanging some subsistence fish for cash to assist families with very limited incomes. In Naknek, the development of the cash sector led some families over several generations to begin exchanging some of their processed subsistence fish for money to help pay their bills.

The topic of customary trade is further complicated by the prohibition against sale for subsistence-caught fish in state regulations (see the next section also) and the general unfamiliarity with federal customary trade regulations and permitting requirements. Additionally, as noted in many of the case examples, much, perhaps most, of the subsistence-caught fish that were processed and exchanged were harvested in state waters, such as the Naknek River or beaches around Dillingham. This may discourage individuals who subsistence fish in these waters from discussing their involvement in any exchanges of subsistence-caught fish for cash.

In almost all the examples, the subsistence-caught fish that were exchanged for cash were "value-added" products–they had been processed by drying and smoking, and in many cases canned or jarred. The product being traded resembles in many ways a local, cottage-industry "craft" rather than a commercial commodity. In this trade, individuals were paying for this "craft" processing, and not for raw fish. Regarding both barter and cash trade, it is clear from many case studies that people recognized that the time, skill, and knowledge needed to process subsistence fish have value. In Naknek, for example, there appeared to be several families that are especially well-known for the quality of the salmon they process–some specialization has developed as many people in this regional hub do not have the time to invest in processing their harvests of salmon themselves. Those who supply the processing service or the finished product in barter or trade do not appear to be motivated by profit. Although some acknowledged that the money they receive for their products helps pay some of the bills in a modern, mixed economy, it is unlikely that they receive full compensation for the time they invest in processing the fish. Rather, the exchanges appear to be motivated by an interest in maintaining relationships, providing a service to friends and family, and preserving community traditions. As with barter, key respondents described no haggling involved in the exchanges for cash reported, and no overt attempts at gaining significant cash profit.

Some evidence from the case examples suggests a differing role for barter and cash trade in villages (Togiak, Nondalton) and the regional centers (Dillingham, Naknek, King Salmon). In Dillingham, for example, individuals who do not subsistence fish for themselves find little opportunity to purchase fresh salmon in the stores. There exist many opportunities to receive extra unprocessed fish once totes are full, and it is obvious from the surveys that many people give away subsistence fish, or exchange their fish for some other good or service. In Dillingham, many of the barters took place with people outside the local community, although a significant number of these involved extended family members. This differs from the exchanges that took place in Togiak. Most people there were exchanging with local community members, except for one family that appeared to have an extensive group of individuals with whom they exchanged, similar to those found among households in Dillingham.

Nondalton had the fewest households who reported involvement in barter and cash trade in the survey. Several factors might account for this. There are few resources to exchange in the community other than subsistence resources, which are generally shared through generalized reciprocity. There is also no regular affordable transport to and from Nondalton, which might discourage setting up formal exchanges between village residents and others. In Dillingham and the Bristol Bay Borough, there is daily flight service in and out of the region, a higher percentage of non-Native permanent as well as seasonal residents, a local economy that supports a variety of full-time employment positions, and a more extensive market for typical grocery items. All of these factors might account for the development of cash trade and barter in the regional centers, and their rarer occurrence in the smaller villages.

Some Comments on Methods

Although the experience of the researchers varied in each study community, administration of the survey was challenging for the investigators and the local assistants because many households were involved in extensive and complicated exchanges, some with several partners. This was especially the case in Dillingham. Many documented exchanges included multiple items given in exchange for multiple items received. Additional pages to record the examples of barter were often required. While the survey was designed to be as streamlined as possible, in

some cases, documenting a full annual round of cash trade and barter activities required up to two hours of interviewing.

It is important to keep in mind the imprecision of the terms used to describe the amount of fish exchanged in cash trade or barter by some respondents. For instance, to say that a "one gallon bag of fish strips" was a unit of exchange in a particular barter does not mean that "a gallon bag" was a consistent amount across households. People fill their gallon bags in many different ways, not necessarily equaling a "gallon of fish." In fact, one respondent confessed to filling her one gallon bags of Chinook strips preferentially, depending on who the exchange partner was, and what was received in return. In Naknek, however, the amounts involved in exchanges appeared to be consistent and those individuals involved in trade were well informed of current prices.

In Dillingham, some respondents were highly motivated to participate in the survey, stating that in their view, documenting subsistence activities was paramount to maintaining and retaining them. These individuals were very concerned that this study's focus only on exchanges that included fish was a misleading, partial representation of their exchange and trading relationships–fish are only one of many resources that pass from household to household. These respondents argued that the importance of fish as a subsistence resource could not be fully gauged if not in the context of all other resources trading hands under varying circumstances. Fish most likely is the most exchanged resource in the region, but how can this be known if information on other exchanges is not available? What can we say about the value of this resource exchange if it cannot be compared to others in the household's sharing network?

On the other hand, some households and individuals approached for participation in this study viewed the goals of the project with suspicion, believing that the information would be used to limit subsistence activities in general, or even curtail the specific activities of project participants based on the information they gave. There was a fear of fines, or confrontations with the "law" in some form or another. These individuals expressed reluctance to participate in the project, and some who did gave researchers the sense that information was being withheld or edited. There were also instances where researchers contacted a household with a request to participate, sometimes in person, or sometimes through a phone message, only to be put off to a later date time and time again, until there was unspoken understanding that the household did not wish to participate.

In Togiak, one of the local research assistants reacted strongly against the questions about household income. She felt there was no connection between how much a person worked or how much money they made and their trading and bartering activities. To her, these questions felt invasive and she did not feel comfortable asking them. Further, she worried that households would terminate the interview if these questions were asked. However, the local assistant asked the questions in all five of the interviews she conducted, and all five answered all the household information questions, including the total combined income for the household.

In Togiak also, some discomfort with the project appears to have derived, not from fear of sharing information on potential illegal activities, but from frustration that after so many years of living so close together, non-Native people ask questions about sharing, trading, and buying subsistence foods that reveal that they still do not understand that the tenets of Yup'ik culture proscribe the distribution of subsistence resources for material gain or the accumulation of cash as an end in itself.

The multi-page survey form was intricate and initially a challenge to learn to administer. Regardless, the survey instrument was thorough in obtaining a great deal of detailed, standardized information for five distinct communities in the Bristol Bay area. Differences existed in terms of language use (most people in Togiak spoke Central Yup'ik; English dominated elsewhere), culture (Nondalton is Dena'ina Athabascan; Dillingham, Naknek, and King Salmon have substantial non-Alaska Native populations), economy (Dillingham and the Bristol Bay Borough communities have the most jobs), and available resources (for example, access to marine or freshwater species), among others. The survey instrument employed in this study proved an effective tool for determining community differences as well as similarities.

Implications for Fisheries Management

Exchanges of subsistence resources are a key aspect of local community economies, along with harvesting, processing, and consuming subsistence foods. Also, sharing, bartering, and cash trade are social activities and expressions of cultural values as well as economic transactions. Natural resource exchanges help define and sustain communities.

Consequently, understanding how the different forms of distribution of subsistence resources operate, under what circumstances they come into play, and their persistent importance to Bristol Bay residents is essential for effective management of fisheries resources. In particular, understanding sharing and trade helps to evaluate the size of subsistence harvests and individual and household harvest levels. Subsistence resources are not just harvested for immediate use, or just for one's own household, or for profit or display. Rather, many households harvest resources to share, to support others, and to express values that define their community. Restrictive harvest levels and permitting requirements may interfere with these customary and traditional uses.

Based on the results of this project, the amount of salmon involved in barter or cash trade, rather than sharing, is likely quite small in comparison to all other fishing activities, including the total subsistence harvests. Attempts at regulating these activities may be counterproductive. During this study, one of the researchers heard the following on the radio during "open line:" a woman reported that she had seen a sign at the post office regarding "our subsistence" and wanted to let people know that the "feds are trying to limit our subsistence to $500 a year." Clearly, unnecessarily burdensome regulations can easily be misinterpreted, and the result can be the collection of less, rather than better, information needed to provide for subsistence opportunities as well as other sustainable harvests of fisheries resources.

CONCLUSIONS

Subsistence uses of fish, wildlife, and wild plant resources as an economic system consist of components: production, distribution, and consumption. This study focused on the distribution component of this system. Fishing regulations and anthropological theory recognize several categories of exchange based on the presence or absence of an expectation of a return for the distributed product, whether or not money is part of the exchange, and whether or not the exchange is motivated by profit. Traditional views that still prevail in the region strongly encourage the generous distribution of subsistence resources, although some forms of traditional exchanges included notions of balance as well.

Based on the household interviews and key respondent interviews, it is clear that most subsistence resources in Bristol Bay communities during the study period were distributed

through sharing, rather than barter or cash trade. "Sharing" transactions did not involve an immediate exchange and most had no expectation of any return at all. Rather, the network of sharing in communities rewarded those who freely distributed resources with other resources or services in the future.

Nevertheless, the study also documented many examples of "barter," that involved more immediate and formal exchanges. Sockeye salmon and Chinook salmon were the fisheries resources most often involved in these exchanges, and these were bartered for a variety of other subsistence resources, other commodities, or services. Rarely were such exchanges the result of "haggling" over a fair equivalent. Rather, they were based on recognition of shared needs and opportunities. "Expectation of return" in some trading or bartering relationships was problematic at times, as was the concept of seeking something of equal value, and it could be offensive to suggest that a gift was not freely given, even in long standing relationships that involved exchanges of resources over the course of a year.

During the study period, cash trade also occurred, but on a more limited basis than barter. It appears that the role of cash in exchanges appeared with the development of a mixed economy that includes a subsistence sector and a cash sector. In this contemporary mixed economy, households with excess fish "sold" a portion of their catch for supplemental income. Almost always, the product that was exchanged for cash was a processed, traditional product such as dried or smoked salmon that resembles craft production rather than commercial manufacture. As with barter, cash trade rarely involved much bargaining. Prices were set by tradition. The availability of cash probably resulted in a more immediate exchange than might be the norm for exchanges involving goods or services and, over time, using cash as a medium of exchange might encourage more "value for value" transactions. This might be the reason why some respondents expressed unease with involving cash in exchanges of subsistence fish, and others voiced strong disapproval of "selling" subsistence foods. The difference between commercial fishing and subsistence fishing is important to Bristol Bay residents–they recognize the different motivations behind each activity and, accordingly, the appropriateness of different rules and guidelines to govern each.

Finally, the research found that there is no one-to-one fit between the range of forms that subsistence resource distribution takes in Bristol Bay communities and the fixed regulatory categories of sharing, barter, and customary trade. "Sharing" might eventually result in the receipt of a gift in return; the return for a cash trade or barter might be delayed or not "equivalent" to the item that was given; and "sale" includes both limited transactions between neighbors and friends out of one's home or at a charity bazaar, as well as sale of one's commercial harvest to a processor for a world market. What distinguishes sharing, barter, and customary trade on the one hand from commercial harvests on the other, is that the former activities are embedded in local traditions and governed by the desire to provide valued subsistence foods to one's community rather than to profit at someone else's expense. The goal is not to become wealthy through the accumulation of things or money, but to distribute what one has in support of the community and in conformance with shared values.

RECOMMENDATIONS

The first three recommendations are specific to federal fisheries management. The final recommendation pertains to future research topics.

1. Evaluate the federal permit requirement that attempts to regulate customary trade in the Bristol Bay Management Area. As shown in the study, trade of subsistence-caught fish for cash in the Bristol Bay area is not common–far less so than sharing or barter. The amount of fish involved in cash trade is very small. Of those households that trade fish for cash, almost none obtained or returned the required permits–just six were issued in 2004, one in 2005, and none in 2006 (M. Edwards, USFWS, King Salmon; personal communication).

2. The typology presented in Chapter 2 should be used to guide further key respondent interviews in the Central Yup'ik language about sharing, barter, and cash trade in Togiak and other Yup'ik-speaking communities in the Bristol Bay area. If appropriate key respondents can be identified, similar interviews could be conducted with Dena'ina speakers in Nondalton.

3. A common approach in the state and federal regulatory systems to regulating and documenting trade of subsistence-caught fish would eliminate confusion for subsistence fishers, and enhance the likelihood of collecting more comprehensive information about patterns of distribution and exchange of fisheries resources in the Bristol Bay area in the future.

In addition, further investigations of the history of cash trade of subsistence-caught fish in the Bristol Bay Fisheries Management Area should take place. More precise information is needed about when the use of cash in the exchange of subsistence resources developed in the Bristol Bay Fisheries Management Area. Also, more research is needed on what currencies other than cash were used in natural resource exchanges in Bristol Bay communities in the 19th and early 20th centuries, before money began being used.

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TABLES AND FIGURES

Table 1.–Demographic characteristics of the study communities, 2000 and 2005.

	2000				2005
Study Community	Number of Households	Total Population	Alaska Native Population	% Alaska Native	Total Population
Dilllingham	884	2,466	1,503	60.9%	2,370
King Salmon	196	442	133	30.1%	420
Naknek	247	678	319	47.1%	577
Nondalton	68	221	199	90.0%	203
South Naknek	46	137	115	83.9%	76
Togiak	202	809	750	92.7%	779

Sources: U.S. Bureau of the Census (2001), for 2000; ADOL (2006), for 2005.

Table 2.–Project chronology.

Activity	Date
Community meeting, Nondalton	September 16, 2004
Project approval, Federal Subsistence Board	Mid January 2005
Meeting in Naknek	January 27, 2005
Meeting in South Naknek	January 27, 2005
Meeting in King Salmon	February 3, 2005
Meeting with Curyung tribal administrator, Dillingham	February 23, 2005
Sample identification and local assistant training, Naknek	March 3, 2005
Meeting with South Naknek tribal administrator	March 4, 2005
Survey administration, Nondalton	March 7 to 10, 2005
Community planning meeting, Nondalton	March 24, 2005
Additional survey administration, Nondalton	March 23-26, 2005
Sample identification and local assistant training, Togiak	March 30, 2005
Additional survey administration and interviewing, Nondalton	June 6 to 10, 2005
Interviewing in Dillingham	July & August 2005
Survey administration, Naknek and King Salmon	October 4 to 14, 2005
Additional key respondent interviewing, Nondalton	November 3 & 4, 2005
Survey administration, Naknek and King Salmon	November 14 to 19, 2005
Completion of Togiak surveys	Mid January 2006
Draft final report submitted for review	March 1, 2007
Revised draft submitted for review	June 29, 2007

Table 3.–Project staffing.

Name	Organization/ Community	Role/Activities
Bishop, Heather	ADF&G	Data entry
Chythlook, Molly	ADF&G, BBNA	Fish and Wildlife Technician with ADF&G through March 31, 2006: project design and fieldwork; with BBNA from April 3, 2006: report review
Dyasuk, Eunice	ADF&G	Field Office Assistant. Initial contact with Dillingham subsistence salmon permit holders
Fall, James	ADF&G	Regional Program Manager; assisted with project design and report writing
Koster, David	ADF&G	Program Coordinator. Data analysis
Krieg, Ted	ADF&G	Subsistence Resource Specialist; project design, fieldwork, report writing
Jurgenson, Laura	BBNA	Social Scientist; project design; initial community outreach, through October 2004
LaVine, Robbin	BBNA	Social Scientist; project design, fieldwork, report writing; from April 2005
Lockuk, Elena	BBNA	Temporary hire; interview transcription
Miller, Erin	BBNA	Intern; interview transcription
Spear, Doreen Anderson	BBNA	Intern; interview transcription
Wilson, Ken	BBNA	Subsistence Coordinator with BBNA; community outreach, fieldwork through April 2005
McDermott, Celesta	Naknek/King Salmon	Local surveyor
Edwards, Tiffany	Naknek	Local surveyor
Hanson, Paul	Naknek	Local surveyor
Trefon, Terina	Nondalton	Local surveyor
Kakaruk, Janell	Nondalton	Local key respondent interviewer
Kritz, Anesia	Togiak	Local surveyor
Myas, Elizabeth	Togiak	Local surveyor

Table 4.–Sample achievement.

Community	Identified Households[a]	Moved	Revised Interview Target[c]	Interviewed	Failed to Contact	Declined to Participate	Sample Achievement[c]	Refusal Rate[d]
Dillingham	38	0	38	31	7	0	81.6%	0%
Naknek	42	4	38	28	4	6	73.7%	17.6%
King Salmon	33	5	28	20	6	2	71.4%	9.1%
South Naknek	1	0	1	0	1	0	0.0%	NA
Nondalton	44	0	44	37	6	1	84.1%	2.6%
Togiak[b]	18	0	18	12	5	1	66.7%	7.7%
All six communities	176	9	167	128	29	10	76.6%	7.2%

[a] In Nondalton, a census sample was attempted. Elsewhere, a reference sample was attempted.

[b] In Togiak, the initial referenced households numbered 32, but 14 indicated no involvement in trade or barter when initially contacted and were not interviewed.

[c] Excludes households that had moved.

[d] Based on number of households contacted.

Table 5.–Bristol Bay Central Yup'ik Terms Related to Sharing, Barter, Trade, and Sale of Subsistence Resources.

Central Yup'ik Term[1]	English Meaning (s)
A. Types of sharing and exchange	
Cikir-	1. To give something to
Cikiun:	2. Gift, the thing that one gives.
Akurtuq:	1. To receive without hesitation.
Aruqe-:	1. To distribute gifts or share of a catch
Aruqun:	2. Distributed share of something
Aruquq:	3. He is distributing things or catch to people
Imir-:	1. To put contents in, to fill
Imiraa:	2. He put contents in
Imiun:	3. Contents, replaced shared item with another
Naverte-:	1. To trade, exchange ("barter")
Navertaq:	2. Something traded or exchanged
Navrar-:	1. To borrow
Navrun:	2. Something borrowed
Navriun:	3. A loan or something lent
Navritaa:	4. He lent something to
Atunem cikir-:	1. To match something received, exchange mutually; barter

-continued-

Central Yup'ik Term	English Meaning (s)
Tune-:	1. To exchange, to give, to trade, to sell
Tuniuq:	2. Sold it, he is selling something
Akilir-:	1. To pay; to provide with an equivalent
Akiliun:	2. A payment.
Akiliutaa:	3. He is paying for him or her.
Akiliraa:	4. He is paying for it.
Qunuuq:	1. He is reluctant to part with something.
Qunutungartuq:	2. He is stingy.
Qunuituq:	3. He is generous, not stingy.
Tegleg-:	1. To steal.
Tegleng'arli:	2. A thief.
Teglegtuq:	3. He stole [something].
B. Events that feature sharing of subsistence foods	
Curukaq:	1. Feast wherein one village goes over to another to dance and exchange gifts or challenges (athletic, dance, gift giving, etc.)
Kalukaq:	1. A feast, party
Keleg-:	1. To invite to one's house (usually to eat)
Kelgaa:	2. He invited her
Kellgu:	3. Invite him
Kelgun:	4. Invitation

-continued-

Table 5.–Page 3 of 4.

Central Yup'ik Term	English Meaning (s)
Nerevkarin:	1. A feast, party
Quyurtaq:	1. Gathering wherein several villages go to another to attend a song fest (a religious gathering)
C. Other actions that involve sharing or exchange of subsistence foods	
Kinguvar-:	1. To pass (it) down to succeeding generation
Kinguvartaq:	2. Inheritance
Minaq:	1. Food set aside for someone
Minar-:	2. To leave, keep, or save food for someone else
Payugte-	1. To take food over to someone
Payugun:	2. The food taken over
Payugtaa:	3. He took some food to her
Tuvqake-:	1. To save some to share
Tuvqatartuq:	2. He is generous
D. Names for items involved in exchange	
Cimiq:	1. A substituted item.
Cimir-:	2. To replace; to substitute; to exchange one state or item for another; to change
Cimirtuq:	3. It changed
Cimiraa:	4. He replaced it

-continued-

Table 5.–Page 4 of 4.

Central Yup'ik Term	English Meaning (s)
Ilataq:	1. Brought items
Paitat:	1. Inheritance, reward
Paitaqaa:	2. He inherited it
E. Other concepts related to sharing	
Umyuarrluk:	1. Thinks thoughtlessly of something
Umyuaqeqciuq:	2. Thoughtful
Umyuacuk:	3. A thoughtless person
Yuc'uk:	1. Self centered; he anticipates something bad; thoughtless of others

[1] Central Yup'ik orthography based on Jacobson 1984; translations based on Jacobson 1984 and key respondent interviews conducted by Molly Chythlook, ADF&G, 2004 and 2005.

Table 6.–Demographic characteristics of sampled households, study communities, 2004.

	Demographic Characteristic								
Community	Number of Surveyed Households	Total Population of Surveyed Households	Mean Household Size	Total Number of Adults	Mean Number of Adults per Household	Total Number of Alaska Natives	Percentage of Sample, Alaska Native	Average Age of Household Head	Average Years Household Head Resided in Community
Dillingham	31	113	3.6	69	2.2	92	81.4%	50.3	35.3
King Salmon	20	68	3.4	49	2.5	29	42.6%	51.9	26.1
Naknek	28	91	3.3	63	2.3	60	65.9%	51.9	40.6
Nondalton	37	144	3.9	82	2.2	133	92.1%	50.3	44.5
Togiak	12	54	4.5	29	2.4	48	88.9%	51.8	49.1

Source: Alaska Department of Fish & Game, Household Surveys 2005.

Table 7.–Cash income by category, study communities, 2004.

Community	Surveyed Households	< $10,000 No.	< $10,000 Pctg.	$10,000 - $24,999 No.	$10,000 - $24,999 Pctg.	$25,000 - $49,999 No.	$25,000 - $49,999 Pctg.	$50,000 - $74,999 No.	$50,000 - $74,999 Pctg.	> $75,000 No.	> $75,000 Pctg.	Declined No.	Declined Pctg.
Dillingham	31	2	6.5%	0	0.0%	4	12.9%	9	29.0%	14	45.2%	2	6.5%
King Salmon	20	0	0.0%	1	5.0%	2	10.0%	5	25.0%	9	45.0%	3	15.0%
Naknek	28	0	0.0%	3	10.7%	5	17.9%	4	14.3%	6	21.4%	10	35.7%
Nondalton	37	17	45.9%	11	29.7%	5	13.5%	1	2.7%	0	0.0%	3	8.1%
Togiak	12	1	8.3%	2	16.7%	2	16.7%	5	41.7%	0	0.0%	2	16.7%
All	128	20	15.6%	17	13.3%	18	14.1%	24	18.8%	29	22.7%	20	15.6%

Source: Alaska Department of Fish & Game, Household Surveys 2005.

Table 8.–Comparison of household incomes based on surveys (2004) and federal decennial census (1999), study communities.

Income Range	Percentage of Households													
	Dillingham		King Salmon		Naknek		Nondalton		Togiak		All Communities		All but Nondalton	
	Survey	Census	Survey	Census	Survey	Census	Survey	Census	Survey	Census	Survey	Census	Survey	Census
<10,000	7%	6%	0%	3%	0%	5%	50%	18%	10%	26%	19%	9%	4%	8%
10,000 - 24,999	0%	15%	6%	11%	17%	11%	32%	44%	20%	26%	16%	17%	8%	16%
25,000 - 49,999	14%	27%	12%	31%	28%	29%	15%	27%	20%	22%	17%	27%	18%	27%
50,000 - 74,999	31%	22%	29%	25%	22%	24%	3%	7%	50%	15%	22%	21%	31%	21%
> 75,000	48%	29%	53%	30%	33%	32%	0%	4%	0%	12%	27%	26%	39%	27%

Sources: Alaska Department of Fish and Game, Division of Subsistence Household Surveys; ADOL 2007, for 1999 decennial census data.

Table 9.–Commercial fishing permit information, study communities, 2004.

		Commercial Fishing Permit											
	Suveyed	Salmon		Herring		Halibut		Herring Roe		Other Permit		No Permit	
Community	Households	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.
Dillingham	31	14	45.2%	3	9.7%	2	6.5%	1	3.2%	0	0.0%	17	54.8%
King Salmon	20	4	20.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	16	80.0%
Naknek	28	13	46.4%	1	3.6%	2	7.1%	0	0.0%	0	0.0%	15	53.6%
Nondalton	37	4	10.8%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	33	89.2%
Togiak	12	8	66.7%	2	16.7%	1	8.3%	7	58.3%	1	8.3%	3	25.0%

Source: Alaska Department of Fish & Game, Household Surveys 2005.

Table 10.–Summary of resources included in cash trade, study communities, 2004.

Community	Number of Sampled Households	Number of Households Ever Traded	Number of Households Traded in 2004	Total Cases of Cash Trade	Resources Traded in Reported Cases: Fish (Unspecified Species)	Chinook Salmon	Sockeye Salmon	Pike
Dillingham	31	7	4	5	1	2	1	1
King Salmon	20	4	2	17	0	0	17	0
Naknek	28	9	6	12	0	3	9	0
Nondalton	37	3	1	2	0	0	2	0
Togiak	12	4	3	4	0	3	1	0
Totals	128	27	16	40	1	8	30	1

Source: ADF&G Division of Subsistence Household Surveys, 2005.

Table 11.–Household history of participation in cash trade, study communities, 2004.

Community	Number of Sampled Households	Number of Trading Households*	How Often Do You Buy or Sell Subsistence Caught Fish? More than once per year No.	Pctg.	About Once a Year No.	Pctg.	Less Than Once a Year No.	Pctg.	Almost Never No.	Pctg.	No Response No.	Pctg.	How Often Have You Bought Then Sold The Same Fish? Never No.	Pctg.	Rarely No.	Pctg.	Often No.	Pctg.	No Response No.	Pctg.
Dillingham	31	7	3	42.9%	2	28.6%	0	0.0%	2	28.6%	0	0.0%	7	100.0%	0	0.0%	0	0.0%	0	0.0%
King Salmon	20	4	1	25.0%	3	75.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	3	15.0%	1	5.0%	0	0.0%
Naknek	28	9	4	44.4%	4	44.4%	0	0.0%	1	11.1%	0	0.0%	0	0.0%	9	32.1%	0	0.0%	0	0.0%
Nondalton	37	3	1	33.3%	1	33.3%	0	0.0%	1	33.3%	0	0.0%	0	0.0%	3	8.1%	0	0.0%	0	0.0%
Togiak	12	4	0	0.0%	3	75.0%	0	0.0%	1	25.0%	0	0.0%	0	0.0%	4	33.3%	0	0.0%	0	0.0%

*Trading households are those responding that they have bought or sold subsistence-caught fish in the past.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 12.–Assessment of reasons households have engaged in cash trade in Bristol Bay, study communities, 2004.

Community	Number of Sampled Households	Ever Traded No.	Pctg.	Why Have you Bought or Sold Subsistence-Caught Fish?* Needed Fish No.	Pctg.	Someone Else Needed Fish No.	Pctg.	Needed Money No.	Pctg.	Someone Else Needed Money No.	Pctg.	Had Extra Fish No.	Pctg.	Other Reason No.	Pctg.	Households Never Trading No.	Pctg.
Dillingham	31	7	22.6%	4	57.1%	2	28.6%	1	14.3%	1	14.3%	2	28.6%	2	28.6%	24	77.4%
King Salmon	20	4	20.0%	3	75.0%	2	50.0%	0	0.0%	1	25.0%	0	0.0%	1	25.0%	16	80.0%
Naknek	28	9	32.1%	1	11.1%	5	55.6%	4	44.4%	1	11.1%	1	11.1%	3	33.3%	19	67.9%
Nondalton	37	3	8.1%	1	33.3%	0	0.0%	2	66.7%	1	33.3%	0	0.0%	0	0.0%	34	91.9%
Togiak	12	4	33.3%	3	75.0%	1	25.0%	0	0.0%	1	25.0%	1	25.0%	1	25.0%	8	66.7%

* Percentages based on households who reported having traded for cash in the past.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 13.–Most important reason households engaged in cash trade in Bristol Bay, study communities, 2004.

Community	Number of Sampled Households	Ever Traded No.	Pctg.	What is Usually The Single Most Important Factor in Your Buying or Selling?* Needed Fish No.	Pctg.	Someone Else Needed Fish No.	Pctg.	Needed Money No.	Pctg.	Someone Else Needed Money No.	Pctg.	Had Extra Fish No.	Pctg.	Other Reason No.	Pctg.	No Reason Given No.	Pctg.
Dillingham	31	7	22.6%	2	28.6%	2	28.6%	0	0.0%	0	0.0%	1	14.3%	1	14.3%	1	14.3%
King Salmon	20	4	20.0%	3	75.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	0	0.0%
Naknek	28	9	32.1%	1	11.1%	2	22.2%	4	44.4%	0	0.0%	0	0.0%	2	22.2%	0	0.0%
Nondalton	37	3	8.1%	1	33.3%	0	0.0%	1	33.3%	1	33.3%	0	0.0%	0	0.0%	0	0.0%
Togiak	12	4	33.3%	3	75.0%	0	0.0%	0	0.0%	0	0.0%	0	0.0%	1	25.0%	0	0.0%

* Percentages based on households who reported having traded for cash in the past.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 14.–Characteristics of cash trades of fish, study communities, 2004.[1]

Community	Resource	Quantity	Price	Location of partner	Bought/ sold	Notes
Dillingham	Unspecified fish	60 half pints, pickled	$7/each	multiple	Sell	sold at a local business; number of partners unknown
Dillingham	Chinook salmon	36 pints, pickled	$15/each	multiple	Sell	sold at a bingo fundraiser; number of partners unknown
Dillingham	Chinook salmon	10 quarts, dried smoked	$200	Iliamna	Sell	
Dillingham	Sockeye salmon	30 dried, smoked fish	$300	Iliamna	Sell	
Dillingham	Northern pike	1 gallon, dried	$30	Aleknagik	Buy	
King Salmon	Sockeye salmon	1 fish, dried smoked	$25	Naknek	Buy	purchased at a bazaar
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 5 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 quart, jarred smoked	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
King Salmon	Sockeye salmon	1 pint salted	$15	Naknek	Buy	one of 3 purchases from the same person, at bazaars
Naknek	Chinook salmon	200 lbs fresh, unprocessed	$200	Naknek	Buy	
Naknek	Chinook salmon	20 lbs of strips	$500	St. Mary's	Buy	caught by trade partner in Yukon River
Naknek	Sockeye salmon	30 fish, dried smoked	$750	Naknek	Buy	
Naknek	Sockeye salmon	25 lbs of strips	$500	Naknek	Buy	
Naknek	Sockeye salmon	20 fish, dried smoked	$500	Juneau	Sell	
Naknek	Sockeye salmon	29 fish, dried smoked	$725	Naknek	Sell	
Naknek	Sockeye salmon	8 fish, dried smoked	$200	Naknek	Sell	
Naknek	Sockeye salmon	25 fish, dried smoked	$500	Naknek	Sell	
Naknek	Sockeye salmon	3 fish, dried smoked	$60	Anchorage	Buy	caught by trade partner in Naknek River
Naknek	Sockeye salmon	1 fish, dried smoked	$20	Naknek	Buy	
Naknek	Chinook salmon	3 lbs of strips	$75	Naknek	Sell	
Naknek	Sockeye salmon	20 fish, dried smoked	$500	Unknown	Sell	
Nondalton	Sockeye salmon	2 gallons dried smoked	$40	Nondalton	Sell	
Nondalton	Sockeye salmon	4 gallons dried smoked	$100	Nondalton	Sell	
Togiak	Chinook salmon	2 quarts, dried smoked	$40	Unknown	Buy	purchased at women's fellowship fundraiser
Togiak	Chinook salmon	1 gallon, dried smoked	$30	Togiak	Sell	
Togiak	Chinook salmon	1 gallong, dried smoked	$25	Togiak	Sell	
Togiak	Sockeye Salmon	2 quarts, dried smoked	$50	Barrow	Buy	caught by trade partner in Togiak River

[1] In the table, dashed lines separate households; solid lines separate communities.

Source: Alaska Department of Fish and Game, Division of Subsistence household surveys, 2005.

Table 15.–Summary of resources involved in barter, study communities, 2004.

Community	Number of Sampled Households	Number of Households, Ever Bartered	Number of Households, Bartered in 2004	Total Barter Cases 2004	Household Gave in Barter: Natural Resources: Chinook salmon	Household Gave in Barter: Natural Resources: Sockeye Salmon	Household Gave in Barter: Natural Resources: Other	Household Gave in Barter: Market Resources: Products	Household Gave in Barter: Market Resources: Services	Household Received in Barter: Natural Resources: Fish	Household Received in Barter: Natural Resources: Other	Household Received in Barter: Market Resources: Groceries	Household Received in Barter: Market Resources: Other Goods	Household Received in Barter: Market Resources: Services
Dillingham	31	20	20	99	50	24	39	1	3	34	33	14	11	17
King Salmon	20	6	6	10	0	6	1	0	3	6	1	1	1	1
Naknek	28	18	13	17	1	10	7	0	0	9	2	4	1	3
Nondalton	37	4	3	5	0	4	0	0	1	1	0	1	4	0
Togiak	12	6	6	12	6	3	7	0	0	2	6	0	4	0
Totals	128	54	48	143	57	47	54	1	7	52	42	20	21	21

Source: ADF&G Division of Subsistence Household Surveys, 2005.

Table 16.–Household history of barter, study communities, 2004.

Community	Number of Sampled Households	Number of Bartering Households*	How Often Do You Barter Subsistence Caught Fish?: More than once per year No.	Pctg.	About Once a Year No.	Pctg.	Less Than Once a Year No.	Pctg.	Almost Never No.	Pctg.	No Response No.	Pctg.	How Often Have You Bartered The Same Fish More Than Once?: Never No.	Pctg.	Rarely No.	Pctg.	Often No.	Pctg.	No Response No.	Pctg.
Dillingham	31	20	12	60.0%	7	35.0%	0	0.0%	1	5.0%	0	0.0%	12	60.0%	6	30.0%	2	10.0%	0	0.0%
King Salmon	20	6	2	33.3%	3	50.0%	0	0.0%	1	16.7%	0	0.0%	4	66.7%	1	16.7%	0	0.0%	1	16.7%
Naknek	28	18	7	38.9%	4	22.2%	2	11.1%	5	27.8%	0	0.0%	17	94.4%	1	5.6%	0	0.0%	0	0.0%
Nondalton	37	4	1	25.0%	2	50.0%	1	25.0%	0	0.0%	0	0.0%	4	100.0%	0	0.0%	0	0.0%	0	0.0%
Togiak	12	6	1	16.7%	3	50.0%	1	16.7%	1	16.7%	0	0.0%	5	83.3%	1	16.7%	0	0.0%	0	0.0%

*Bartering households are those responding that they have bartered subsistence-caught fish.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 17.–Reasons households bartered in Bristol Bay, study communities, 2004.

Community	Number of Sampled Households	Ever Bartered		Households Reporting Why They Have Bartered: Needed Fish		Someone Else Needed Fish		Needed Something		Someone Else Needed something		Had Extra Fish		Other Reason		Households Never Bartering	
		No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg
Dillingham	31	20	64.5%	7	35.0%	19	95.0%	19	95.0%	8	40.0%	17	85.0%	2	10.0%	11	35.5%
King Salmon	20	6	30.0%	2	33.3%	3	50.0%	2	33.3%	0	0.0%	2	33.3%	4	66.7%	14	70.0%
Naknek	28	18	64.3%	7	38.9%	9	50.0%	6	33.3%	2	11.1%	4	22.2%	7	38.9%	10	35.7%
Nondalton	37	4	10.8%	1	25.0%	2	50.0%	2	50.0%	2	50.0%	1	25.0%	0	0.0%	33	89.2%
Togiak	12	6	50.0%	2	33.3%	4	66.7%	5	83.3%	3	50.0%	2	33.3%	0	0.0%	6	50.0%

* Percentages based on households who reported having bartered in the past.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 18.–Assessment of the most important factor in barter in Bristol Bay, study communities, 2004.

Community	Number of Sampled Households	Ever Bartered		Households Reporting What has Usually The Single Most Important Factor in Their Barters: Needed Fish		Someone Else Needed Fish		Needed Something		Someone Else Needed something		Had Extra Fish		Other Reason		No Reason Given	
		No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.	No.	Pctg.
Dillingham	31	20	64.5%	0	0.0%	7	35.0%	4	20.0%	1	5.0%	5	25.0%	2	10.0%	1	5.0%
King Salmon	20	6	30.0%	1	16.7%	2	33.3%	1	16.7%	0	0.0%	1	16.7%	1	16.7%	0	0.0%
Naknek	28	18	64.3%	3	16.7%	1	5.6%	5	27.8%	1	5.6%	2	11.1%	6	33.3%	0	0.0%
Nondalton	37	4	10.8%	0	0.0%	1	25.0%	1	25.0%	1	25.0%	1	25.0%	0	0.0%	0	0.0%
Togiak	12	6	50.0%	1	16.7%	1	16.7%	2	33.3%	1	16.7%	0	0.0%	1	16.7%	0	0.0%

* Percentages based on households who reported having bartered in the past.

Source: ADF&G Division of Subsistence, Household Surveys 2005.

Table 19.–Items and services involved in barter, all respondents and study communities, 2004.

	Respondent Gave		Respondent Received		Cases, Gave or Received	
	Cases[1]	% of Cases	Cases	% of Cases	Cases	% of Cases
Natural Resources	195	95.6%	98	53.8%	293	75.9%
Fish	178	87.3%	54	29.7%	232	60.1%
Unspecified fish	1	0.5%	0	0.0%	1	0.3%
Unspecified Salmon	2	1.0%	1	0.5%	3	0.8%
Chum Salmon	3	1.5%	1	0.5%	4	1.0%
Coho Salmon	7	3.4%	3	1.6%	10	2.6%
Chinook Salmon	88	43.1%	6	3.3%	94	24.4%
Sockeye Salmon	52	25.5%	18	9.9%	70	18.1%
Unspecificed Spawning Salmon	6	2.9%	1	0.5%	7	1.8%
Spawning Sockeye	0	0.0%	1	0.5%	1	0.3%
Herring	2	1.0%	3	1.6%	5	1.3%
Smelt	9	4.4%	1	0.5%	10	2.6%
Cod	0	0.0%	1	0.5%	1	0.3%
Halibut	7	3.4%	4	2.2%	11	2.8%
Dolly Varden	0	0.0%	1	0.5%	1	0.3%
Pike	0	0.0%	3	1.6%	3	0.8%
Sheefish	0	0.0%	2	1.1%	2	0.5%
Sucker	0	0.0%	1	0.5%	1	0.3%
Whitefish	1	0.5%	5	2.7%	6	1.6%
Unspecified nonsalmon fish	0	0.0%	2	1.1%	2	0.5%
Other Natural Resources	17	8.3%	44	24.2%	61	15.8%
Caribou	1	0.5%	5	2.7%	6	1.6%
Moose	3	1.5%	4	2.2%	7	1.8%
Reindeer	0	0.0%	1	0.5%	1	0.3%
Beaver	1	0.5%	0	0.0%	1	0.3%
Seal Oil	0	0.0%	6	3.3%	6	1.6%
Walrus	0	0.0%	1	0.5%	1	0.3%
Whale	0	0.0%	8	4.4%	8	2.1%
Duck	0	0.0%	1	0.5%	1	0.3%
Glaucous Gull Eggs	1	0.5%	0	0.0%	1	0.3%
Unspecified Marine Invertebrates	4	2.0%	5	2.7%	9	2.3%
Shrimp	1	0.5%	0	0.0%	1	0.3%
Clams	0	0.0%	1	0.5%	1	0.3%
King Crab	0	0.0%	2	1.1%	2	0.5%
Unspecified Berries	3	1.5%	2	1.1%	5	1.3%
Blueberries	0	0.0%	1	0.5%	1	0.3%
Crowberries	1	0.5%	0	0.0%	1	0.3%
Cranberries	0	0.0%	2	1.1%	2	0.5%
Salmonberries	1	0.5%	2	1.1%	3	0.8%
Blackberries	1	0.5%	3	1.6%	4	1.0%
Market Resources	9	4.4%	84	46.2%	93	24.1%
Goods	2	1.0%	63	34.6%	65	16.8%
Groceries	2	1.0%	35	19.2%	37	9.6%
Mortgage/rent	0	0.0%	4	2.2%	4	1.0%
Gasoline	0	0.0%	1	0.5%	1	0.3%
Unspecified "goods"	0	0.0%	1	0.5%	1	0.3%
Household goods	0	0.0%	16	8.8%	16	4.1%
Clothing	0	0.0%	1	0.5%	1	0.3%
Hand craft resource material	0	0.0%	1	0.5%	1	0.3%
Machine Parts	0	0.0%	2	1.1%	2	0.5%
Subsistence Equipment	0	0.0%	1	0.5%	1	0.3%
Boat	0	0.0%	1	0.5%	1	0.3%
Services	7	3.4%	21	11.5%	28	7.3%
Transportation	1	0.5%	1	0.5%	2	0.5%
Repair Services	3	1.5%	1	0.5%	4	1.0%
Professional Services	1	0.5%	0	0.0%	1	0.3%
Food Processing Services	1	0.5%	9	4.9%	10	2.6%
Child care	0	0.0%	2	1.1%	2	0.5%
Mechnical Services	0	0.0%	1	0.5%	1	0.3%
Medical Services	0	0.0%	1	0.5%	1	0.3%
Other Services	1	0.5%	6	3.3%	7	1.8%
All Cases	204		182		386	

[1]Case = involvement of an item in a barter. A barter involves at least 2 items or services (two "cases") but can involve more if household gave several difference items in exchange for something, or received several items for something it gave.
Surveyed households were involved in 143 barter exchanges in the study year (see Table 15).
Source: Alaska Department of Fish and Game, Division of Subsistence Household Surveys 2005.

Table 20.–Fish reported by respondents to be most commonly bartered or traded by processing type and study community.

Resource	Number of Households[1]					
	Dillingham	King Salmon	Naknek	Nondalton	Togiak	All
Processing Type	n = 28	n = 11	n = 24	n = 34	n = 9	n = 106
Chinook Salmon	24	2			1	27
Fresh, Unprocessed	6				1	7
Frozen, Unprocessed	3					3
Dried - Smoked	1					1
Strips	11					11
Strips -jarred	1	1				2
Salted	1					1
Pickled	1					1
Filleted		1				1
Sockeye Salmon	4	8	24	34	3	73
Unknown		2		1		3
Fresh, Unprocessed	1	1	1			3
Frozen, Unprocessed	1	1		1	1	4
Dried					1	1
Dried - Smoked	2	4	18	9	1	34
Strips			2	1		3
Strips - jarred			3	21		24
Jarred - smoked - other				1		1
Spawning Sockeye Salmon					2	2
Dried					2	2
Coho Salmon					2	2
Frozen - Unprocessed					2	2
Halibut		1				1
Fresh, Unprocessed		1				1
Smelt					1	1
Dried					1	1

[1] n = number of interviewed households that responded to this question. For the survey overall, total surveys = 31 in Dillingham, 28 in Naknek, 20 in King Salmon, 37 in Nondalton, 12 in Togiak
Blank cells indicate no responses for the resource in the community.

Source: Division of Subsistence, Household Surveys, 2005.

Table 21.–Community examples of exchanges of subsistence-caught fish involving cash.

Community	Resource	Processing	Quantity	HHs	Price	Frequency[1]			
						Often	Rarely	Never	Unknown
Nondalton	Sockeye Salmon	Strips - jars	12 pints	1	$150			1	
Nondalton	Sockeye Salmon	Frozen - unprocessed	2 fish	1	20		1		
Nondalton	Sockeye Salmon	Frozen - unprocessed	2 fish	1	25		1		
Nondalton	Sockeye Salmon	Dried - smoked	1 gallon	1	20	1			
Nondalton	Sockeye Salmon	Dried - smoked	1 gallon	1	25		1		
Nondalton	Sockeye Salmon	Dried - smoked	1 gallon	1	75	1			
Nondalton	Sockeye Salmon	Dried - smoked	2 pounds	1	50			1	
Nondalton	Sockeye Salmon	Dried - smoked	20 fish	1	200		1		
Nondalton	Sockeye Salmon	Dried - smoked	40 fish	1	25		1		
Nondalton	Sockeye Salmon	Strips	1 pound	1	35			1	
Nondalton	Sockeye Salmon	Strips - jars	1 quart	1	20	1			
Nondalton	Sockeye Salmon	Strips - jars	1 quart	1	30	1			
Nondalton	Sockeye Salmon	Strips - jars	1 pint	2	5			1	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	1	7.5			1	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	1	10		1		
Nondalton	Sockeye Salmon	Strips - jars	1 pint	3	15		2	1	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	3	20	1		2	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	1	25			1	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	1	40			1	
Nondalton	Sockeye Salmon	Strips - jars	1 pint	2	50		2		
Nondalton	Sockeye Salmon	Strips - jars	2 pints	1	25		1		
Nondalton	Sockeye Salmon	Strips - jars	12 pints	1	100		1		
Nondalton	Sockeye Salmon	Strips - jars	12 pints	1	200	1			
Nondalton	Sockeye Salmon	Strips - jars	40 strips	1	10		1		
Nondalton	Sockeye Salmon	Strips - jars	1 pint	1	20		1		
Togiak	Coho Salmon	Frozen - unprocessed	10 fish	1	20		1		
Togiak	Coho Salmon	Frozen - unprocessed	20 fish	1	100		1		
Togiak	Sockeye Salmon	Fresh - unprocessed	25 fish	1	125		1		
Togiak	Sockeye Salmon	Dried	3 fish	1	20		1		
Togiak	Sockeye Salmon	Dried - smoked	10 gallons	1	missing	1			
Togiak	Spawning Sockeye	Dried	3 fish	1	10		1		
Togiak	Spawning Sockeye	Dried	10 fish	1	40		1		
Naknek	Sockeye Salmon	Fresh - Unprocessed	20 pounds	1	200				1
Naknek	Sockeye Salmon	Dried - Smoked	1 fish	1	missing				1
Naknek	Sockeye Salmon	Dried - Smoked	1 fish	5	20	1			4
Naknek	Sockeye Salmon	Dried - Smoked	1 fish	6	25	4			2
Naknek	Sockeye Salmon	Dried - Smoked	1 pound	1	20				1
Naknek	Sockeye Salmon	Dried - Smoked	10 pounds	1	150				1
Naknek	Sockeye Salmon	Dried - Smoked	200 pounds	1	1450	1			
Naknek	Sockeye Salmon	Strips - dried	2 pounds	1	10				1
Naknek	Sockeye Salmon	Strips - dried	10 pounds	1	170	1			
Naknek	Sockeye Salmon	Strips - jars	1 pint	1	10	1			
Naknek	Sockeye Salmon	Strips - jars	1 pint	1	12				1
Naknek	Sockeye Salmon	Strips - jars	1 pint	1	15	1			
King Salmon	Chinook Salmon	Strips - jars	1 pint	1	10	1			
King Salmon	Sockeye Salmon	Frozen - unprocessed	50 pounds	1	200				1
King Salmon	Sockeye Salmon	Dried - Smoked	1 pound	2	25	1			

-continued-

Table 21.–Page 2 of 2.

Community	Resource	Processing	Quantity	HHs	Price	Frequency: Often	Rarely	Never	Unknown
King Salmon	Sockeye Salmon	Dried - Smoked	40 pounds	1	300				1
King Salmon	Sockeye Salmon	Fresh - Unprocessed	20 pounds	1	200				1
Dillingham	Chinook Salmon	Fresh - Unprocessed	6 fish	1	225		1		
Dillingham	Chinook Salmon	Fresh - Unprocessed	7.5 fish	1	75				1
Dillingham	Chinook Salmon	Fresh - Unprocessed	8 fish	1	400		1		
Dillingham	Chinook Salmon	Fresh - Unprocessed	10 fish	1	100		1		
Dillingham	Chinook Salmon	Fresh - Unprocessed	25 fish	1	150		1		
Dillingham	Chinook Salmon	Fresh - Unprocessed	25 pounds	1	80	1			
Dillingham	Chinook Salmon	Frozen - Unprocessed	20 pounds	1	unkn				1
Dillingham	Chinook Salmon	Frozen - Unprocessed	25 pounds	1	25		1		
Dillingham	Chinook Salmon	Frozen - Unprocessed	40 pounds	1	unkn				1
Dillingham	Chinook Salmon	Dried - Smoked	1 gallon	1	100		1		
Dillingham	Chinook Salmon	Strips	1 gallon	2	50	1	1		
Dillingham	Chinook Salmon	Strips	1 gallon	1	150	1			
Dillingham	Chinook Salmon	Strips	1 quart	1	22.5		1		
Dillingham	Chinook Salmon	Strips	1 quart	2	50		2		
Dillingham	Chinook Salmon	Strips	2 gallons	1	200	1			
Dillingham	Chinook Salmon	Strips	2 quarts	1	60	1			
Dillingham	Chinook Salmon	Strips	5 pounds	1	100				1
Dillingham	Chinook Salmon	Strips	20 pounds	1	unkn				1
Dillingham	Chinook Salmon	Strips - jars	12 pints	1	240	1			
Dillingham	Chinook Salmon	Strips - jars	12 pints	1	225		1		
Dillingham	Chinook Salmon	Pickled	1 pint	1	10	1			
Dillingham	Sockeye Salmon	Fresh - Unprocessed	50 fish	1	88		1		
Dillingham	Sockeye Salmon	Frozen - Unprocessed	25 pounds	1	50	1			
Dillingham	Sockeye Salmon	Dried - Smoked	0.5 pound	1	10	1			
Dillingham	Sockeye Salmon	Dried - Smoked	1 gallon	1	40	1			

[1] Blank cells indicate no responses.

Source: ADF&G, Division of Subsistence, Household Surveys, 2005.

Table 22.–Community examples of most frequently traded or bartered fish in Dillingham.

Most Traded/Bartered Fish Resource	Processing Method	Unit of Exchange	Households[1]
Chinook Salmon	Fresh - Unprocessed	Individual	5
Chinook Salmon	Fresh - Unprocessed	Pounds	1
Chinook Salmon	Frozen - Unprocessed	Individual	1
Chinook Salmon	Frozen - Unprocessed	Pounds	2
Chinook Salmon	Dried-Smoked	Gallons	1
Chinook Salmon	Strips	Unknown	1
Chinook Salmon	Strips	Pounds	2
Chinook Salmon	Strips	Gallons	4
Chinook Salmon	Strips	Quarts	4
Chinook Salmon	Strips-Jarred	Pints	1
Chinook Salmon	Salted	Gallons	1
Chinook Salmon	Pickled	Pints	1
Chinook Subtotal			**24**
Sockeye Salmon	Fresh - Unprocessed	Individual	1
Sockeye Salmon	Frozen - Unprocessed	Pounds	1
Sockeye Salmon	Dried-Smoked	Pounds	1
Sockeye Salmon	Dried-Smoked	Gallons	1
Sockeye Subtotal			**4**
Grand Total			**28**

[1] Of the 31 households interviewed in Dilingham, 3 declined to provide any examples.

Source: ADF&G, Division of Subsistence Household Surveys 2005.

Table 23.–Specific examples of most frequent barters and trades of fish, Dillingham.

Scenario 1. 6 Fresh Unprocessed Chinook Salmon Barters / Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	90	Pounds	1	-	1	-	-	-	-
Moose	90	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	3	Gallons	1	-	-	1	-	-	-
Berries	10	Gallons	1	-	1	-	-	-	-
Cash	225	Dollars	1	-	1	-	-	-	-
Gasoline	5	Gallons	1	1	-	-	-	-	-
Food Processing Services	1	Days	1	-	-	1	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 2. 7.5 Fresh Unprocessed Chinook Salmon Barters / Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	75	Pounds	1	1	-	-	-	-	-
Moose	130	Pounds	1	-	1	-	-	-	-
Beaver	1	Individual	1	-	1	-	-	-	-
Unknown Seal Oil	1.5	Gallons	1	-	1	-	-	-	-
Berries	5	Gallons	1	-	1	-	-	-	-
Cash	75	Dollars	1	-	-	-	1	-	-
Gasoline	4	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 3. 8 Fresh Unprocessed Chinook Salmon Barters / Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	-	Unknown	1	1	-	-	-	-	-
Moose	-	Unknown	1	1	-	-	-	-	-
Unknown Seal Oil	1	Quarts	1	-	-	1	-	-	-
Berries	5	Gallons	1	-	-	1	-	-	-
Cash	400	Dollars	1	-	1	-	-	-	-
Gasoline	25	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 4. 10 Fresh Unprocessed Chinook Salmon Barters / Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Herring Roe	1	Gallons	1	-	-	-	1	-	-
Unknown Seal Oil	1	Pints	1	-	1	-	-	-	-
Berries	2.5	Gallons	1	-	-	-	1	-	-
Cash	100	Dollars	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 5. 25 Fresh Unprocessed Chinook Salmon Barters / Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	80	Pounds	1	-	1	-	-	-	-
Moose	130	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	2	Quarts	1	-	1	-	-	-	-
Berries	2	Gallons	1	-	1	-	-	-	-
Cash	150	Dollars	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

-continued-

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Scenario 11. 1 Gallon Chinook Salmon Strips Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	1	Unknown	1	-	1	-	-	-	-
Caribou	1	Gallons	1	-	1	-	-	-	-
Caribou	5	Pounds	1	-	1	-	-	-	-
Moose	Unknown	Unknown	1	-	-	1	-	-	-
Moose	1	Gallons	1	-	1	-	-	-	-
Unknown Seal Oil	1	Unknown	1	-	-	1	-	-	-
Unknown Seal Oil	1	Quarts	2	1	-	1	-	-	-
Berries	Unknown	Unknown	1	-	1	-	-	-	-
Berries	0.5	Gallons	1	-	1	-	-	-	-
Berries	1	Gallons	1	-	-	1	-	-	-
Cash	50	Dollars	2	-	1	1	-	-	-
Cash	150	Dollars	1	-	-	1	-	-	-
Gasoline	-	Gallons	1	1	-	-	-	-	-
Gasoline	15	Gallons	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 12. 1 Quart Chinook Salmon Strips Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Chinook Salmon	2	Individual	1	-	1	-	-	-	-
Sockeye Salmon	3.5	Individual	1	-	1	-	-	-	-
Caribou	1	Gallons	2	-	1	1	-	-	-
Caribou	15	Pounds	1	-	-	1	-	-	-
Moose	1	Gallons	2	-	-	1	1	-	-
Moose	40	Pounds	1	-	-	1	-	-	-
Unknown Seal Oil	1	Quarts	1	-	-	-	1	-	-
Unknown Seal Oil	1	Pints	2	-	2	-	-	-	-
Berries	1	Gallons	2	-	1	1	-	-	-
Berries	1	Quarts	1	-	1	-	-	-	-
Cash	22.5	Dollars	1	-	1	-	-	-	-
Cash	50	Dollars	2	-	2	-	-	-	-
Gasoline	2	Gallons	1	-	1	-	-	-	-
Gasoline	5	Gallons	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 13. 2 Gallons Chinook Salmon Strips Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	40	Pounds	1	-	1	-	-	-	-
Moose	20	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	1	Quarts	1	-	-	1	-	-	-
Berries	2	Gallons	1	-	-	1	-	-	-
Cash	200	Dollars	1	-	-	1	-	-	-
Gasoline	7	Gallons	1	-	1	-	-	-	-
Housework	2	Hours	1	-	1	-	-	-	-
Child Care	4	Hours	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

-continued-

Table 23.–Page 3 of 4.

Scenario 14. 2 Quarts Chinook Salmon Strips Barters / Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Herring Roe	2	Pounds	1	-	-	1	-	-	-
Caribou	10	Pounds	1	-	-	1	-	-	-
Moose	10	Pounds	1	-	-	1	-	-	-
Unknown Seal Oil	1	Quarts	1	-	-	1	-	-	-
Beluga (Muktuk)	10	Pounds	1	-	-	1	-	-	-
Berries	1	Gallons	1	-	-	1	-	-	-
Cash	60	Dollars	1	-	-	1	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 15. 5 Pounds Chinook Salmon Strips Barters / Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	30	Pounds	1	-	-	-	1	-	-
Moose	5	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	1	Gallons	1	-	1	-	-	-	-
Berries	5	Gallons	1	1	-	-	-	-	-
Cash	100	Dollars	1	-	-	-	1	-	-
Gasoline	-	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 16. 20 Pounds Chinook Salmon Strips Barters / Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	10	Pounds	1	-	1	-	-	-	-
Moose	8	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	7	Pounds	1	-	-	1	-	-	-
Berries	2	Pounds	1	-	-	1	-	-	-
Cash	Unknown	Dollars	1	-	-	-	1	-	-
Gasoline	5	Gallons	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 17. 12 Pints Chinook Salmon Strips-Jarred Barters / Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	75	Pounds	1	-	-	1	-	-	-
Moose	130	Pounds	1	-	-	1	-	-	-
Unknown Seal Oil	1	Quarts	1	-	-	1	-	-	-
Limpets	15	Pounds	1	-	1	-	-	-	-
Berries	5	Gallons	1	-	-	1	-	-	-
Cash	240	Dollars	1	-	-	1	-	-	-
Gasoline	50	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 18. 12 Pints Chinook Salmon Strips-Jarred Barters / Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Spawnouts	5	Individual	1	-	1	-	-	-	-
Caribou	40	Pounds	1	-	1	-	-	-	-
Moose	130	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	1	Quarts	1	-	1	-	-	-	-
Crabs	1	Gallons	1	-	1	-	-	-	-
Berries	1	Gallons	1	-	1	-	-	-	-
Cash	225	Dollars	1	-	1	-	-	-	-
Gasoline	-	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

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Table 23.–Page 4 of 4.

Scenario 19. 1 Pint Pickled Chinook Salmon Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	150	Pounds	1	-	1	-	-	-	-
Moose	270	Pounds	1	-	1	-	-	-	-
Unknown Seal Oil	1	Quarts	1	-	1	-	-	-	-
Berries	5	Gallons	1	-	1	-	-	-	-
Cash	10	Dollars	1	-	-	1	-	-	-
Gasoline	5	Gallons	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 20. 50 Fresh-Unprocessed Sockeye Salmon Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	40	Pounds	1	-	-	-	1	-	-
Moose	130	Gallons	1	-	-	-	1	-	-
Unknown Seal Oil	2	Quarts	1	-	-	-	1	-	-
Berries	5	Gallons	1	-	1	-	-	-	-
Cash	88	Dollars	1	-	1	-	-	-	-
Gasoline	10	Gallons	1	-	-	-	1	-	-
Groceries	50	Pounds	1	-	-	1	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 21. 25 Pounds Frozen-Unprocessed Sockeye Salmon Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	75	Pounds	1	1	-	-	-	-	-
Moose	25	Pounds	1	1	-	-	-	-	-
Unknown Seal Oil	2	Quarts	1	-	-	1	-	-	-
Berries	5	Gallons	1	-	1	-	-	-	-
Cash	50	Dollars	1	-	-	1	-	-	-
Gasoline	10	Gallons	1	1	-	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 22. 1/2 Pound Dried-Smoked Sockeye Salmon Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	0.5	Pounds	1	-	-	1	-	-	-
Moose	0.5	Pounds	1	-	-	1	-	-	-
Berries	1	Quarts	1	-	-	1	-	-	-
Cash	10	Dollars	1	-	-	1	-	-	-
Gasoline	1	Gallons	1	-	1	-	-	-	-
Other General Services	0.5	Hours	1	-	1	-	-	-	-

* Households is the number of households giving this response in the Community Example.

Scenario 23. 1 Gallon Dried-Smoked Sockeye Salmon Barters / Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Unknown Seal Oil	0.25	Gallons	1	-	-	1	-	-	-
Berries	0.33	Gallons	1	-	-	1	-	-	-
Cash	40	Dollars	1	-	-	1	-	-	-

* Households is the number of households giving this response in the Community Example.

Source: Alaska Department of Fish and Game, Division of Subsistence Household Surveys, 2005.

Table 24.–Community examples of most frequently traded or bartered fish in Togiak.

Most Traded/Bartered Fish Resource	Processing Method	Unit of Exchange	Households[1]
Coho Salmon	Frozen - Unprocessed	Individual	2
Coho Subtotal			**2**
Chinook Salmon	Fresh - Unprocessed	Individual	1
Chinook Subtotal			**1**
Sockeye Salmon	Frozen - Unprocessed	Individual	1
Sockeye Salmon	Dried	Individual	1
Sockeye Salmon	Dried-Smoked	Gallons	1
Sockeye Subtotal			**3**
Spawning Sockeye	Dried	Individual	2
Spawning Sockeye Subtotal			**2**
Smelt	Dried	Gallons	1
Smelt Subtotal			**1**
Grand Total			**9**

1 Of the 12 households interviewed in Togiak, 3 declined to provide any examples.

Source: ADF&G, Division of Subsistence Household Surveys 2005.

Table 25.–Specific examples of most frequent barters and trades, Togiak.

Scenario 1. 10 Individual Frozen Unprocessed Coho Salmon/ Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Whitefish	7.5	Individual	1	0	1	0	0	0	0
Cash	20	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 2. 20 Individual Frozen Unprocessed Coho Salmon/ Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	40	Pounds	1	0	1	0	0	0	0
Moose	5	Pounds	1	0	1	0	0	0	0
Unknown Seal Oil	1	Quarts	1	0	1	0	0	0	0
Berries	1	Gallons	1	0	1	0	0	0	0
Cash	100	Dollars	1	0	1	0	0	0	0
Gasoline	5	Gallons	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 3. 5 Individual Fresh Unprocessed Chinook Salmon/ Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Unknown Seal Oil	1	Quarts	1	0	0	1	0	0	0
Berries	5	Gallons	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 4. 25 Individual Frozen Unprocessed Sockeye Salmon/ Trades For

Resource	Amount	Units	Households	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Whale (Muktuk)	1	Gallons	1	0	1	0	0	0	0
Cash	125	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

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Table 25.–Page 2 of 3.

Scenario 5. 3 Individual Dried Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	-8	Unknown	1	1	0	0	0	0	0
Moose	-8	Unknown	1	1	0	0	0	0	0
Unknown Seal Oil	2	Quarts	1	0	1	0	0	0	0
Berries	5	Gallons	1	0	0	1	0	0	0
Cash	20	Dollars	1	0	1	0	0	0	0
Gasoline	-8	Gallons	1	1	0	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 6. 10 Gallons Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	40	Pounds	1	0	0	1	0	0	0
Moose	20	Pounds	1	0	0	1	0	0	0
Unknown Seal Oil	2	Quarts	1	0	0	1	0	0	0
Berries	4	Gallons	1	0	0	1	0	0	0
Fiddlehead Ferns	6	Quarts	1	0	1	0	0	0	0
Cash	-8	Dollars	1	0	0	1	0	0	0
Gasoline	10	Gallons	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 7. 3 Individual Dried Spawning Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Unknown Seal Oil	1	Quarts	1	0	0	1	0	0	0
Cash	10	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 25.–Page 3 of 3.

Scenario 8. 10 Individual Dried Spawning Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	1	Gallons	1	0	0	1	0	0	0
Unknown Seal Oil	1	Pints	1	0	1	0	0	0	0
Berries	1	Gallons	1	0	1	0	0	0	0
Cash	40	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 9. 2 Gallons Dried Smelt/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	0	0	0	1	0	0
Moose	Unknown	Unknown	1	0	0	0	1	0	0
Unknown Seal Oil	1	Pints	1	0	1	0	0	0	0
Berries	15	Gallons	1	0	1	0	0	0	0
Gasoline	Unknown	Gallons	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

Source: Alaska Department of Fish and Game, Division of Subsistence, Household Surveys, 2005.

Table 26.–Community examples of most frequently traded or bartered fish in Naknek.

Most traded/Bartered Fish Resource	Processing Method	Unit of Exchange	Households[1]
Sockeye Salmon	Fresh - Unprocessed	Pounds	1
Sockeye Salmon	Dried-Smoked	Unknown	3
Sockeye Salmon	Dried-Smoked	Individual	12
Sockeye Salmon	Dried-Smoked	Pounds	3
Sockeye Salmon	Strips	Pounds	2
Sockeye Salmon	Strips-Jarred	Pints	3
Sockeye Subtotal			**24**
Grand Total			**24**

[1] Of the 28 interviewed Naknek households, 4 declined to provide any examples.

Source: ADF&G, Division of Subsistence Household Surveys 2005.

Table 27.–Specific examples of most frequent barters or trades of fish, Naknek.

Scenario 1. 20 lbs Fresh Unprocessed Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	200	Dollars	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 2. 1 Individual Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	3	0	1	0	2	0	0
Caribou	2.5	Pounds	1	0	0	1	0	0	0
Moose	Unknown	Unknown	3	0	1	0	2	0	0
Moose	3.33	Pounds	1	0	0	1	0	0	0
Moose	5	Pounds	1	0	0	1	0	0	0
Unknown Seal Oil	Unknown	Unknown	4	1	1	1	1	0	0
Unknown Seal Oil	1	Gallons	1	0	0	1	0	0	0
Berries	Unknown	Unknown	3	0	0	1	2	0	0
Berries	1	Gallons	1	0	0	1	0	0	0
Berries	1	Pints	1	0	0	1	0	0	0
Cash	Unknown	Dollars	1	0	0	0	1	0	0
Cash	20	Dollars	5	0	0	1	4	0	0
Cash	25	Dollars	6	0	0	4	2	0	0
Gasoline	Unknown	Gallons	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 3. 1 lb Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	20	Dollars	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 27.–Page 2 of 3.

Scenario 4. 10 lbs Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	0	0	0	1	0	0
Moose	Unknown	Unknown	1	0	0	0	1	0	0
Unknown Seal Oil	Unknown	Unknown	1	0	0	0	1	0	0
Berries	Unknown	Unknown	1	0	0	0	1	0	0
Cash	150	Dollars	1	0	0	0	1	0	0
Gasoline	Unknown	Gallons	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 5. 200 lbs Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Berries	35	Gallons	1	0	0	1	0	0	0
Cash	1450	Dollars	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 6. 2 lbs Dried Sockeye Salmon Strips/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	0	0	0	0	1	0
Moose	Unknown	Unknown	1	0	0	0	0	1	0
Unknown Seal Oil	1	Pints	1	0	0	0	0	1	0
Berries	1	Quarts	1	0	0	1	0	0	0
Cash	10	Dollars	1	0	0	0	1	0	0
Gasoline	Unknown	Gallons	1	0	0	0	0	1	0

* Households is the number of households giving this response in the Community Example.

Scenario 7. 10 lbs Dried Sockeye Salmon Strips/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Unknown Seal Oil	1	Pints	1	0	0	1	0	0	0
Berries	1	Gallons	1	0	0	1	0	0	0
Cash	170	Dollars	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 27.–Page 3 of 3.

Scenario 8. 1 Pint Jarred Sockeye Salmon Strips/ Trades For										
				Barter & Trade Frequency						
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	10	Dollars	1	0	0	1	0	0	0
Cash	12	Dollars	1	0	0	0	1	0	0
Cash	15	Dollars	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

Source: Alaska Department of Fish and Game, Division of Subsistence, Household Survey, 2005.

Table 28.–Community examples of most frequently traded or bartered fish, King Salmon.

Most traded/Bartered Fish Resource	Processing Method	Unit of Exchange	Households[1]
Chinook Salmon	Strips-Jarred	Pints	1
Chinook Salmon	Filleted	Unknown	1
Chinook Subtotal			**2**
Sockeye Salmon	Unknown	Unknown	2
Sockeye Salmon	Fresh - Unprocessed	Unknown	1
Sockeye Salmon	Frozen - Unprocessed	Pounds	1
Sockeye Salmon	Dried-Smoked	Individual	3
Sockeye Salmon	Dried-Smoked	Pounds	1
Sockeye Subtotal			**8**
Halibut	Fresh - Unprocessed	Unknown	1
Halibut Subtotal			**1**
Grand Total			**11**

[1] Of the 20 households interviewed in King Salmon, 9 declined to provide any examples.

Source: ADF&G Division of Subsistence Household Surveys 2005.

Table 29.–Specific examples of most frequent barters and trades of fish, King Salmon.

Scenario 1. 1 Pint Jarred Strips of Chinook Salmon/ Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	10	Dollars	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 2. 50 lbs Frozen Unprocessed Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	0	0	0	0	1	0
Moose	Unknown	Unknown	1	0	0	0	0	1	0
Unknown Seal Oil	Unknown	Unknown	1	0	0	0	0	1	0
Berries	Unknown	Unknown	1	0	0	0	0	1	0
Cash	200	Dollars	1	0	0	0	1	0	0
Gasoline	Unknown	Gallons	1	0	0	0	0	1	0

* Households is the number of households giving this response in the Community Example.

Scenario 3. 1 lb Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	0	0	0	0	1	0
Caribou	15	Pounds	1	0	0	1	0	0	0
Moose	-8	Unknown	1	0	0	0	0	1	0
Moose	15	Pounds	1	0	0	1	0	0	0
Unknown Seal Oil	Unknown	Unknown	1	0	0	0	0	1	0
Unknown Seal Oil	0.33	Quarts	1	0	1	0	0	0	0
Berries	Unknown	Unknown	1	0	0	0	0	1	0
Berries	1.25	Gallons	1	0	0	1	0	0	0
Cash	25	Dollars	2	0	0	2	0	0	0
Gasoline	Unknown	Gallons	1	0	0	0	0	1	0
Ammunition	100	Individual	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 4. 40 lbs Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	300	Dollars	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 29.–Page 2 of 2.

Scenario 5. 100 Individual Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Berries	5	Gallons	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 6. 20 lbs Fresh Unprocessed Sockeye Salmon									
				Barter & Trade Frequency					
Resource	Amount	Units	Households	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	200	Dollars	1	0	0	0	1	0	0

* Households is the number of households giving this response in the Community Example.

Source: Alaska Department of Fish and Game, Division of Subsistence Household Surveys, 2005.

Table 30.–Community examples of most frequently traded or bartered fish in Nondalton.

Most Traded/Bartered Fish Resource	Processing Method	Unit of Exchange	Households[1]
Sockeye Salmon	Unknown	Unknown	1
Sockeye Salmon	Frozen - Unprocessed	Individual	1
Sockeye Salmon	Dried-Smoked	Individual	5
Sockeye Salmon	Dried-Smoked	Pounds	1
Sockeye Salmon	Dried-Smoked	Gallons	3
Sockeye Salmon	Strips	Pounds	1
Sockeye Salmon	Strips-Jarred	Individual	1
Sockeye Salmon	Strips-Jarred	Quarts	2
Sockeye Salmon	Strips-Jarred	Pints	18
Sockeye Salmon	Jarred-Smoked Other	Pints	1
Sockeye Subtotal			**34**
Grand Total			**34**

[1] Of the 37 households interviewed in Nondalton, 3 declined to provide any examples.

Source: ADF&G, Division of Subsistence Household Surveys 2005.

Table 31.–Specific examples of most frequent barters or trades of fish, Nondalton.

Scenario 1. 12 Pints Jarred Sockeye Salmon Strips/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	1	1	0	0	0	0	0
Moose	Unknown	Unknown	1	1	0	0	0	0	0
Unknown Seal Oil	Unknown	Unknown	1	1	0	0	0	0	0
Berries	Unknown	Unknown	1	1	0	0	0	0	0
Cash	150	Dollars	1	1	0	0	0	0	0
Gasoline	Unknown	Gallons	1	1	0	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 2. 2 Individual Frozen Unprocessed Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Services	1	Hours	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 3. 1 Individual Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Berries	2	Gallons	1	0	1	0	0	0	0
Cash	20	Dollars	1	0	1	0	0	0	0
Cash	25	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 4. 1 Gallon Dried Smoked Sockeye Salmon/ Trades For

				Barter & Trade Frequency					
Resource	**Amount**	**Units**	**Households***	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	1	Pounds	1	0	1	0	0	0	0
Caribou	7.5	Pounds	1	0	1	0	0	0	0
Moose	7.5	Pounds	1	0	1	0	0	0	0
Berries	2	Gallons	1	0	1	0	0	0	0
Cash	20	Dollars	1	0	0	1	0	0	0
Cash	25	Dollars	1	0	1	0	0	0	0
Cash	75	Dollars	1	0	0	1	0	0	0
Gasoline	15	Gallons	1	0	1	0	0	0	0

-continued-

Table 31.–Page 2 of 4.

Scenario 5. 2 Pounds Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	2	Pounds	1	0	1	0	0	0	0
Moose	2	Pounds	1	0	1	0	0	0	0
Berries	2	Pounds	1	0	1	0	0	0	0
Cash	50	Dollars	1	1	0	0	0	0	0
Gasoline	1	Gallons	1	1	0	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 6. 20 Individual Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Berries	5	Gallons	1	0	1	0	0	0	0
Cash	200	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 7. 40 Individual Dried Smoked Sockeye Salmon/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Unknown Seal Oil	-8	Unknown	1	1	0	0	0	0	0
Cash	25	Dollars	1	0	1	0	0	0	0
Gasoline	5	Gallons	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 8. 1 lb Sockeye Salmon Strips/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	35	Dollars	1	1	0	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 9. 1 Quart Jarred Sockeye Salmon Strips/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	20	Dollars	1	0	0	1	0	0	0
Cash	30	Dollars	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 31.–Page 3 of 4.

Scenario 10. 1 Pint Jarred Sockeye Salmon Strips/ Trades For

Resource	Amount	Units	Households*	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	Unknown	Unknown	3	3	0	0	0	0	0
Caribou	2	Pounds	1	0	0	1	0	0	0
Caribou	3	Pounds	1	0	1	0	0	0	0
Caribou	7	Pounds	1	0	1	0	0	0	0
Moose	Unknown	Unknown	3	3	0	0	0	0	0
Moose	2	Pounds	1	0	0	1	0	0	0
Unknown Seal Oil	Unknown	Unknown	2	2	0	0	0	0	0
Berries	Unknown	Unknown	2	2	0	0	0	0	0
Berries	2.5	Gallons	1	0	0	1	0	0	0
Berries	5	Gallons	2	1	0	1	0	0	0
Cash	5	Dollars	2	2	0	0	0	0	0
Cash	7.5	Dollars	1	1	0	0	0	0	0
Cash	10	Dollars	1	0	1	0	0	0	0
Cash	15	Dollars	3	1	2	0	0	0	0
Cash	20	Dollars	3	2	0	1	0	0	0
Cash	25	Dollars	1	1	0	0	0	0	0
Cash	40	Dollars	1	1	0	0	0	0	0
Cash	50	Dollars	2	0	2	0	0	0	0
Gasoline	Unknown	Gallons	2	2	0	0	0	0	0
Gasoline	5	Gallons	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 11. 2 Pints Jarred Sockeye Salmon Strips/ Trades For

Resource	Amount	Units	Households*	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Cash	25	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 12. 12 Pints Jarred Sockeye Salmon Strips/ Trades For

Resource	Amount	Units	Households*	Barter & Trade Frequency: Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Chinook Salmon	12	Pints	1	0	0	1	0	0	0
Caribou	3	Pounds	1	0	0	1	0	0	0
Caribou	40	Pounds	1	0	0	1	0	0	0
Moose	3	Pounds	1	0	0	1	0	0	0
Moose	20	Pounds	1	0	0	1	0	0	0
Berries	4	Gallons	1	0	0	1	0	0	0
Berries	5	Gallons	1	0	0	1	0	0	0
Cash	100	Dollars	1	0	0	1	0	0	0
Cash	200	Dollars	1	0	1	0	0	0	0
Gasoline	10	Gallons	1	0	0	1	0	0	0

* Households is the number of households giving this response in the Community Example.

-continued-

Table 31.–Page 4 of 4.

Scenario 13. 40 Individual Jarred Sockeye Salmon Strips/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Caribou	0.5	Pounds	1	0	1	0	0	0	0
Moose	0.5	Pounds	1	0	1	0	0	0	0
Berries	5	Gallons	1	0	1	0	0	0	0
Cash	10	Dollars	1	0	1	0	0	0	0
Gasoline	5	Gallons	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Scenario 14. 1 Pint Jarred Smoked Sockeye Salmon - Other/ Trades For									
				Barter & Trade Frequency					
Resource	Amount	Units	Households*	Never	Rarely	Often	Frequency Unknown	Never Heard of This	Not From Personal Experience
Berries	0.333	Gallons	1	0	0	1	0	0	0
Cash	20	Dollars	1	0	1	0	0	0	0

* Households is the number of households giving this response in the Community Example.

Figure 1.–Map of study area.

1. Subsistence Exchanges

Sharing	Barter	Customary Trade
Shares among workgroups	Exchanges of One Item for Another Item, Not Involving Money	Sales of Furs by Trappers
Generalized reciprocity		Sales of Handicrafts by Makers
Delayed reciprocity		Customary and Traditional Sales of Fish and Wildlife at Noncommercial Levels (Self-limiting, small-scale sales following customary and traditional patterns under conditions defined by a management authority)

2. Nonsubsistence Exchanges

Commercial Sales	Other Commercial	Illegal Sales
Fish Sales by Commercial Permittee	Charter Boat Fishing Services	Sales of Fish or Wildlife Prohibited by Law or Regulation
Fur Sales by Licensed Dealer	Guided Hunting Services	
Sales of Fish or Wildlife by Restaurants		
Sales of Domesticated Wildlife (Reindeer)		

Source: ADF&G 2007; Wolfe et al. 2000

Figure 2.–Types of exchanges in Alaska: subsistence and nonsubsistence.

Anthropological term	Bristol Bay Yup'ik Terms	English Translation	Regulatory Term
Generalized reciprocity (expectation of return)	cikir-	give	sharing
Balanced reciprocity (even trade)	imir-	replace	[none]
	naverte-	trade	barter
	tune-/akilir-	sell/buy (exchange for money)	customary trade
Negative reciprocity (motivated by profit or individual gain at others' expense.)			market sale/purchase
	qunuuq	be stingy	[none; no sharing]
	tegleg-	steal	theft, "poaching"

Note: The first shaded area indicates that while "imir-" involves a balanced exchange of gifts, the initial gift takes place without an expectation of a return. The second shaded area indicates that the term "tune-" or "sell" also overlaps two regulatory categories, in that some transactions involve a customary monetary price while others take place in markets or stores where a profit motive and supply and demand set the price.

Figure 3.–Bristol Bay Central Yup'ik typology of sharing and exchange of subsistence foods.

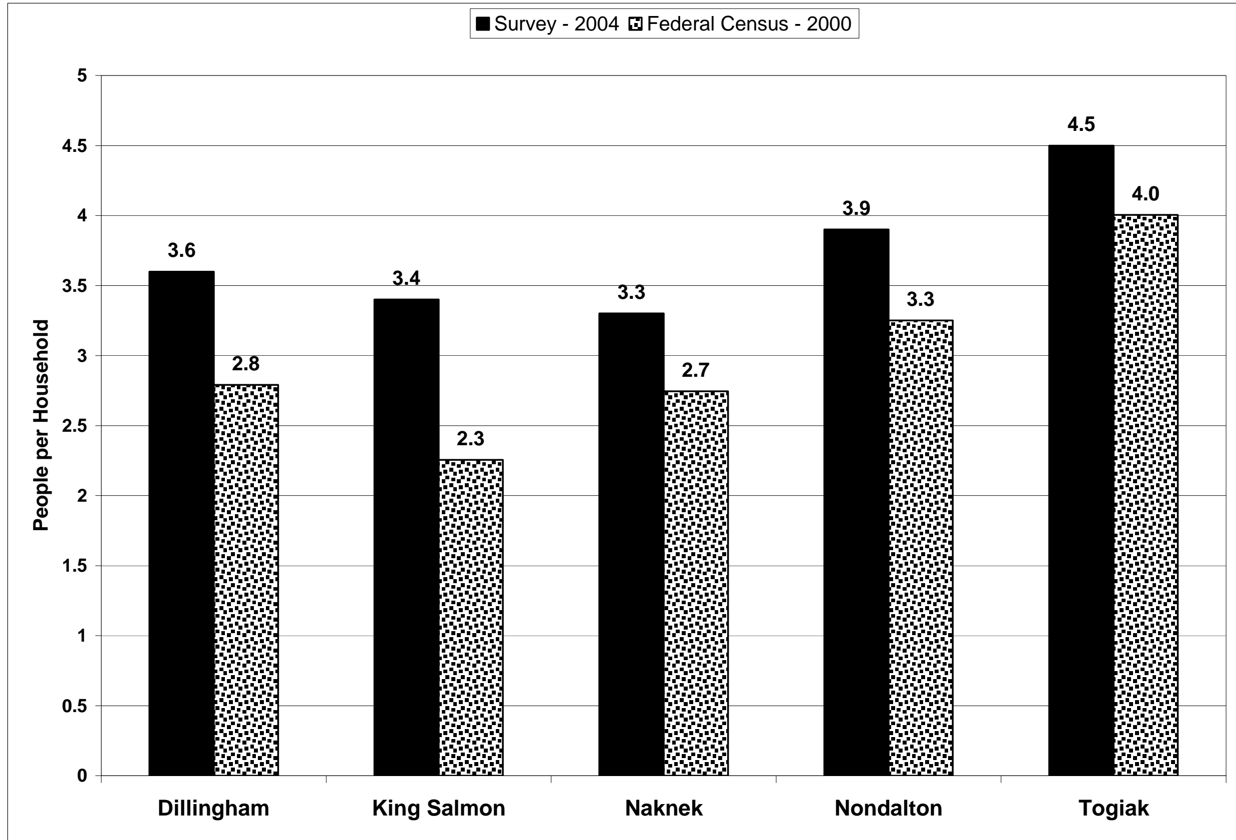

Figure 4.–Average household size, study communities.

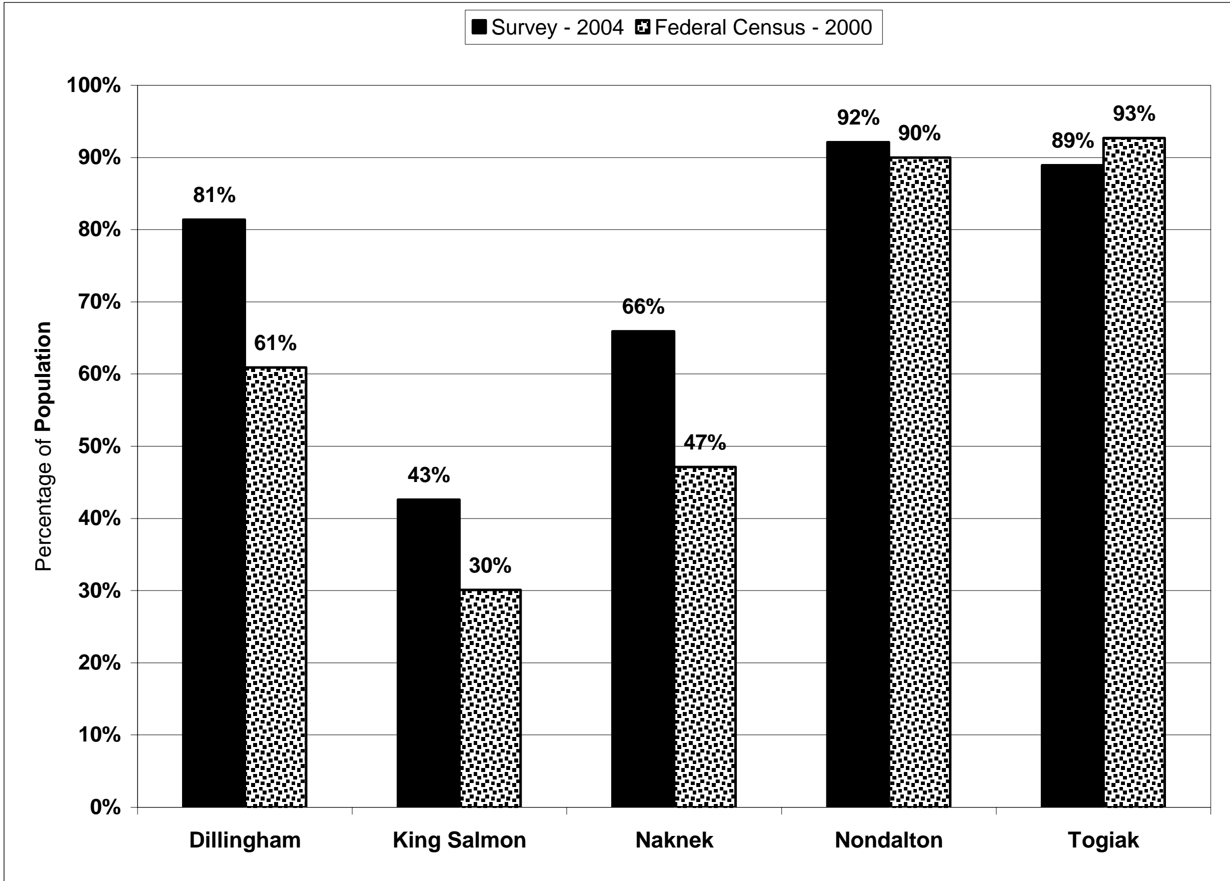

Figure 5.–Percentage of population Alaska Native, study communities.

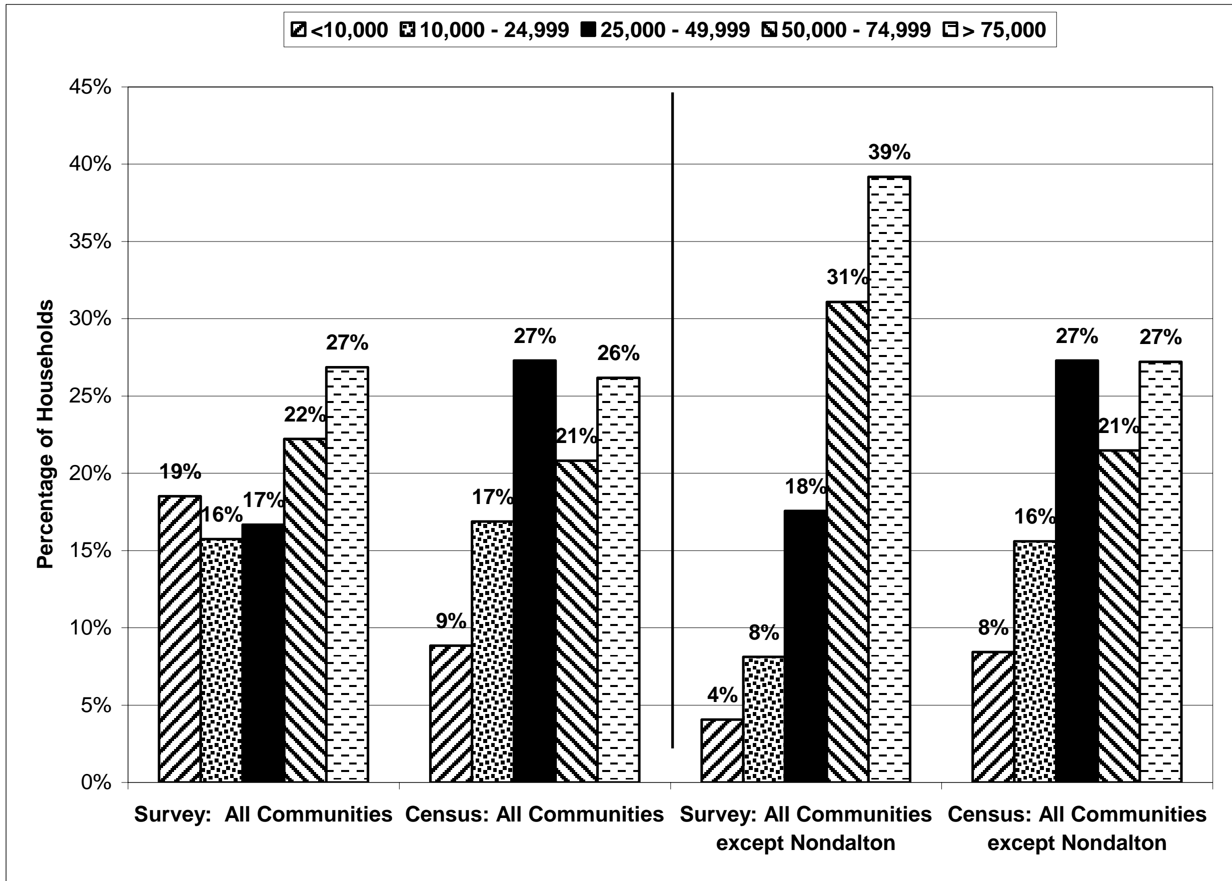

Figure 6.–Comparison of household incomes based on surveys (2004) and federal decennial census (1999).

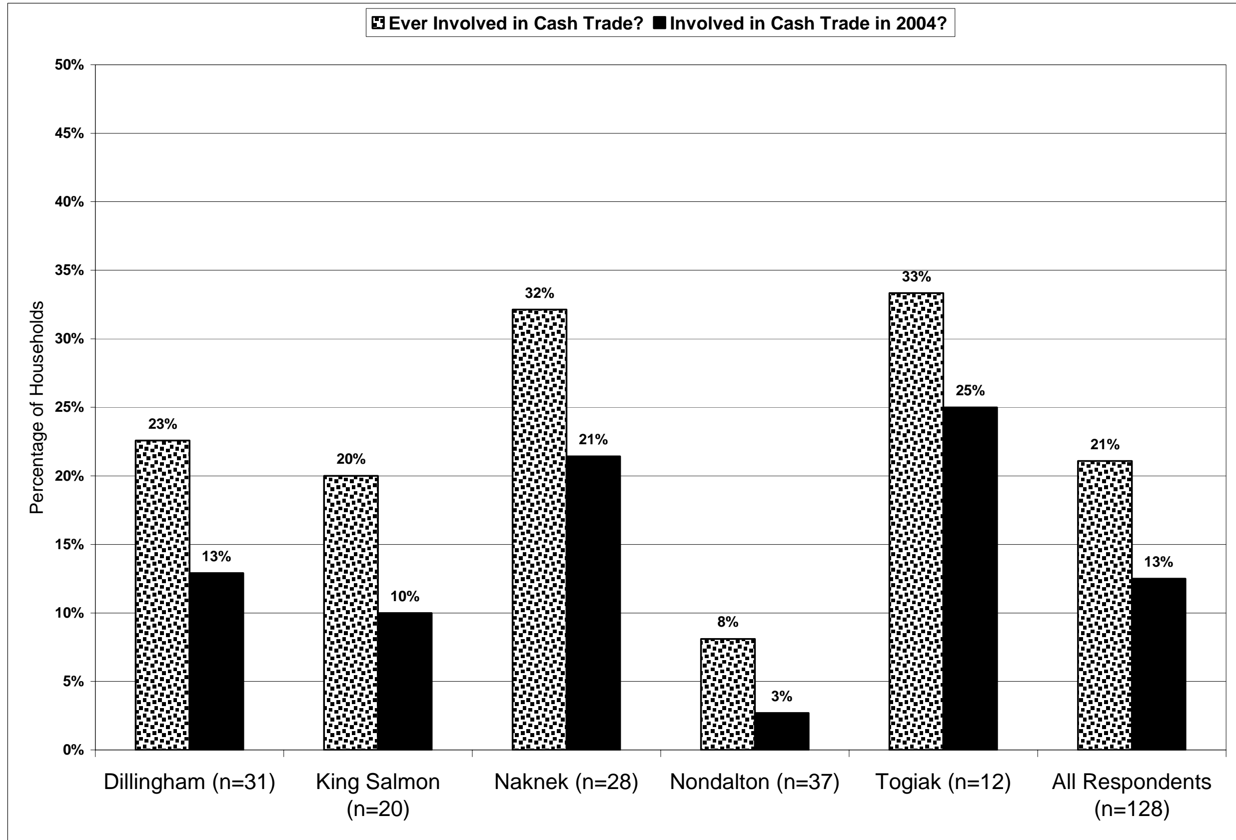

Figure 7.–Percentage of interviewed households involved in cash trade.

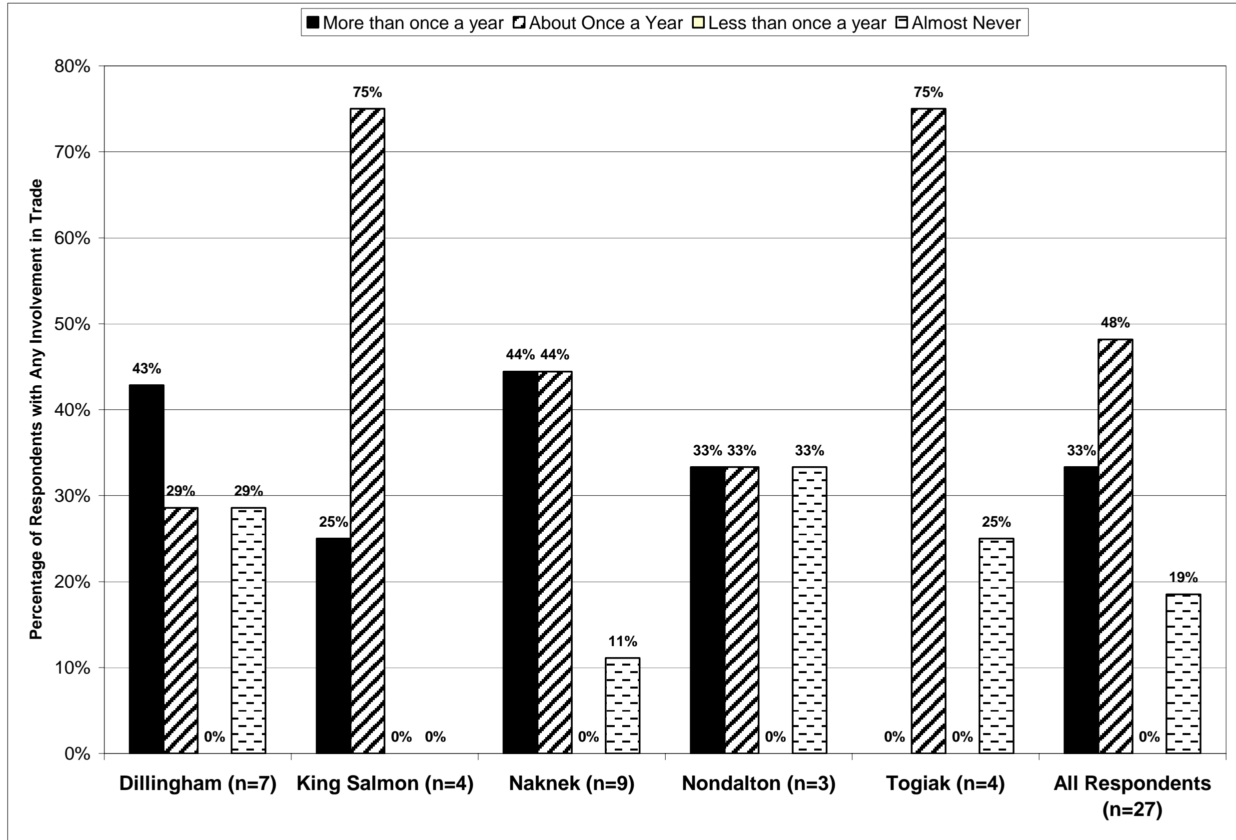

Figure 8.–Frequency of respondents' involvement in cash trade.

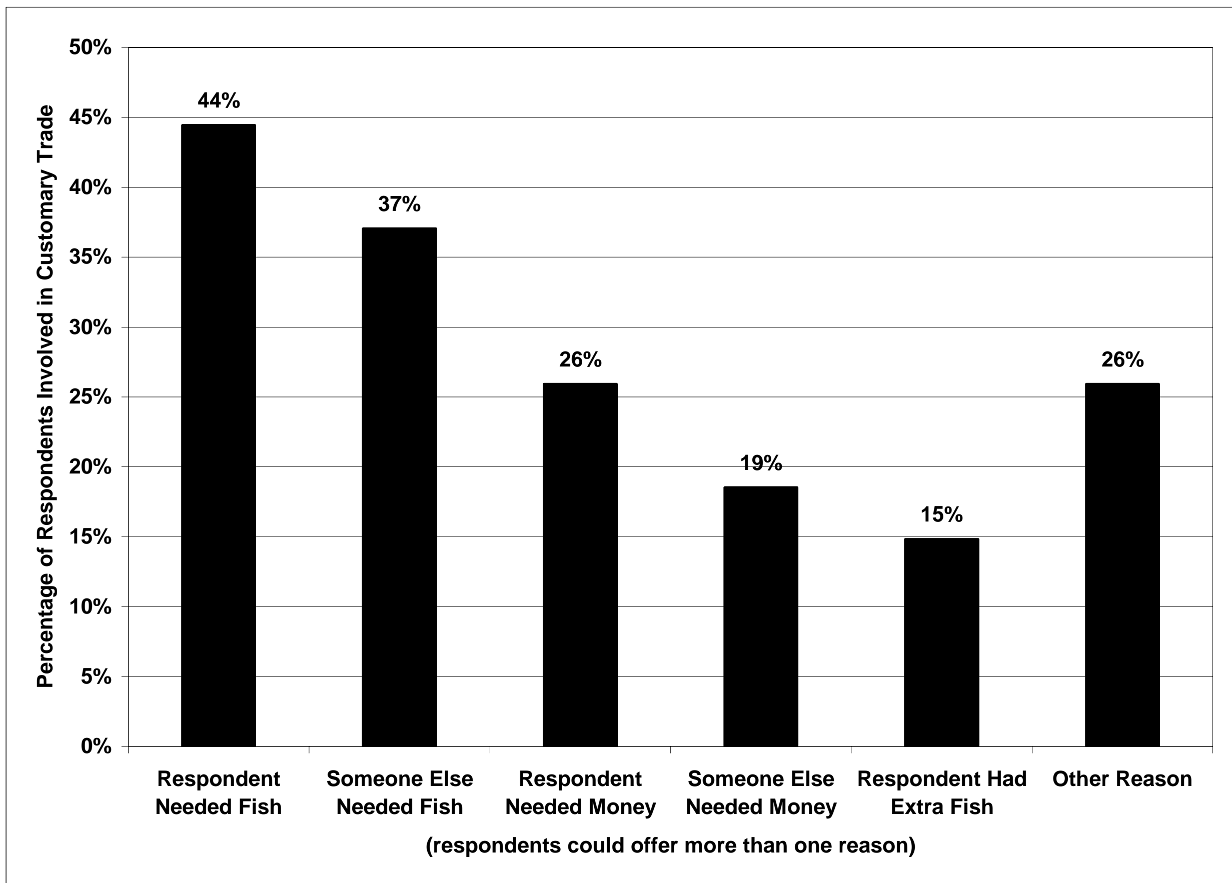

Figure 9.–Reasons respondents participated in cash trade (n=27).

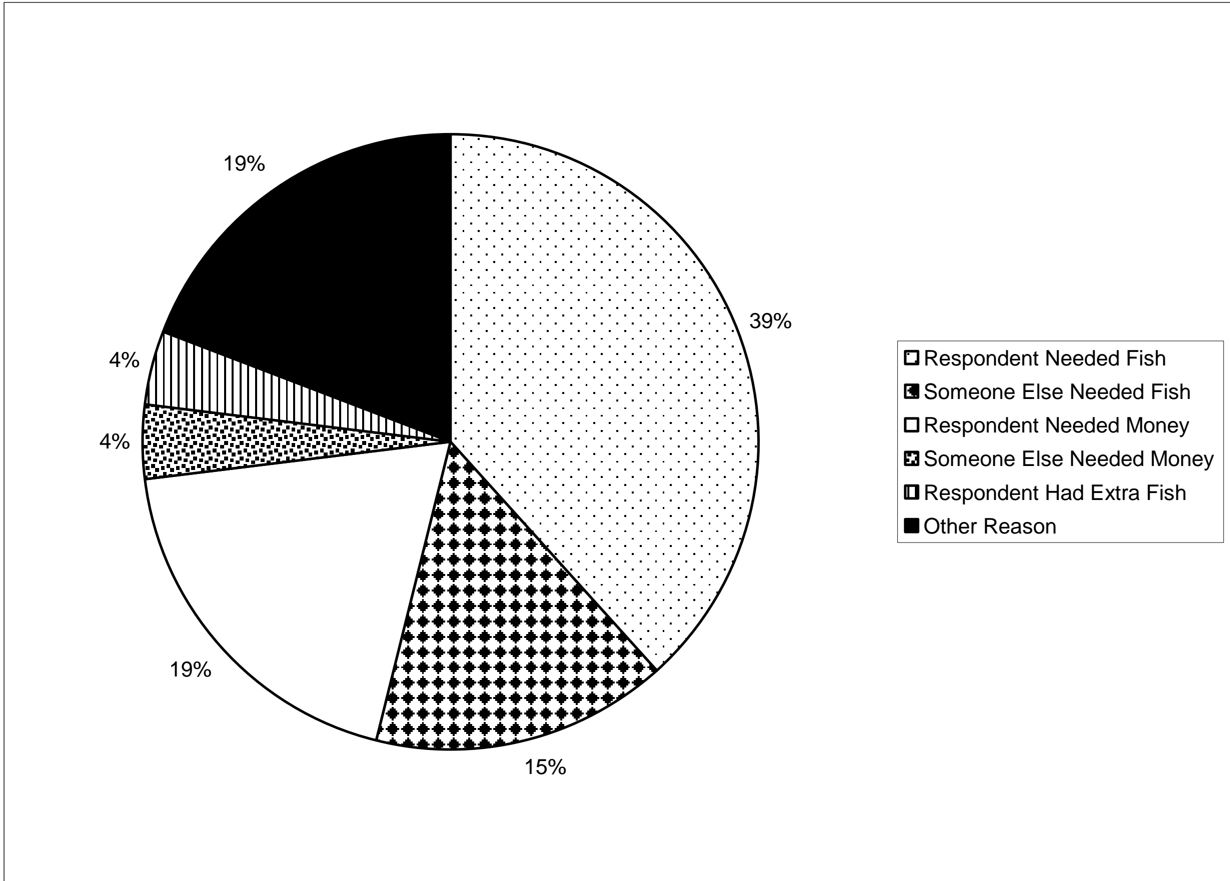

Figure 10.–Most important reason given for engaging in cash trade (n=26).

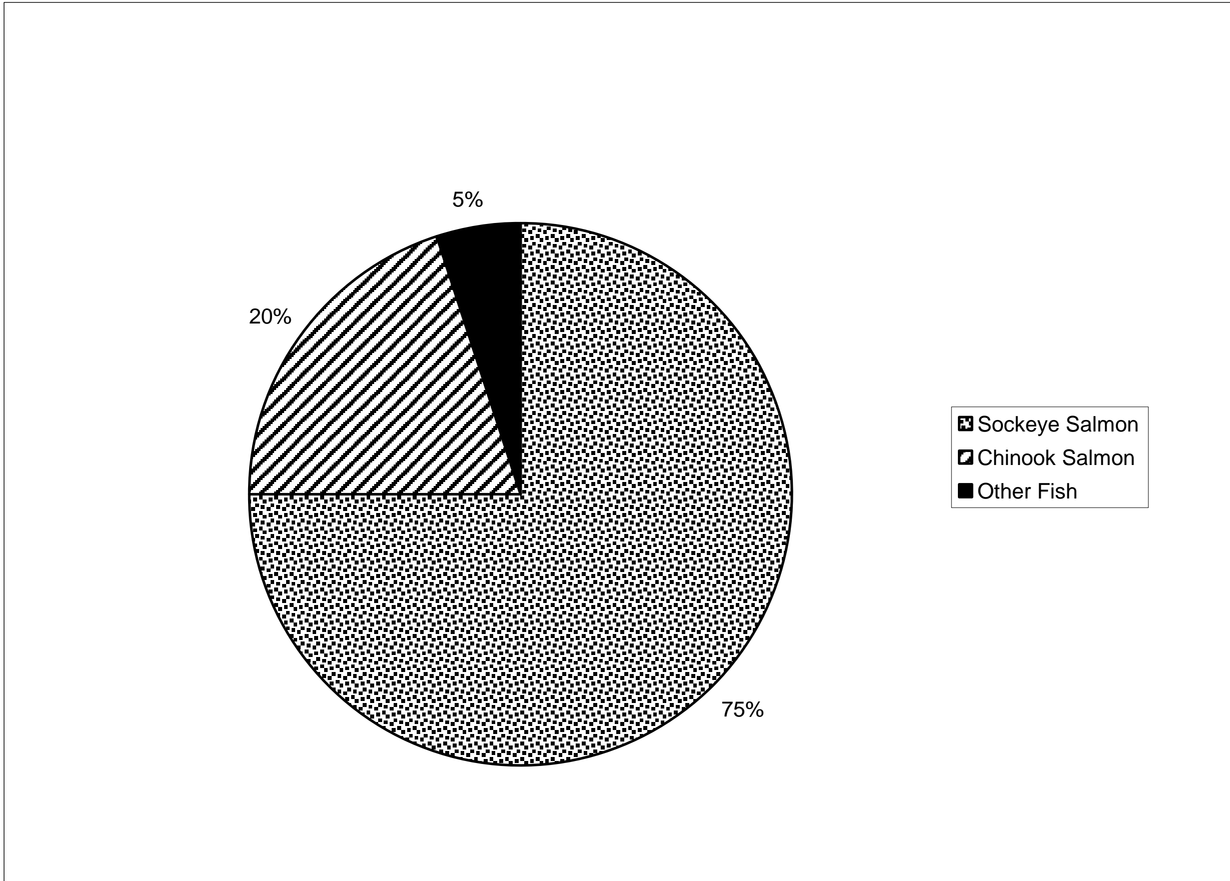

Figure 11.–Fish involved in cash trade, 2004, all respondents (N = 40 cases of cash trade).

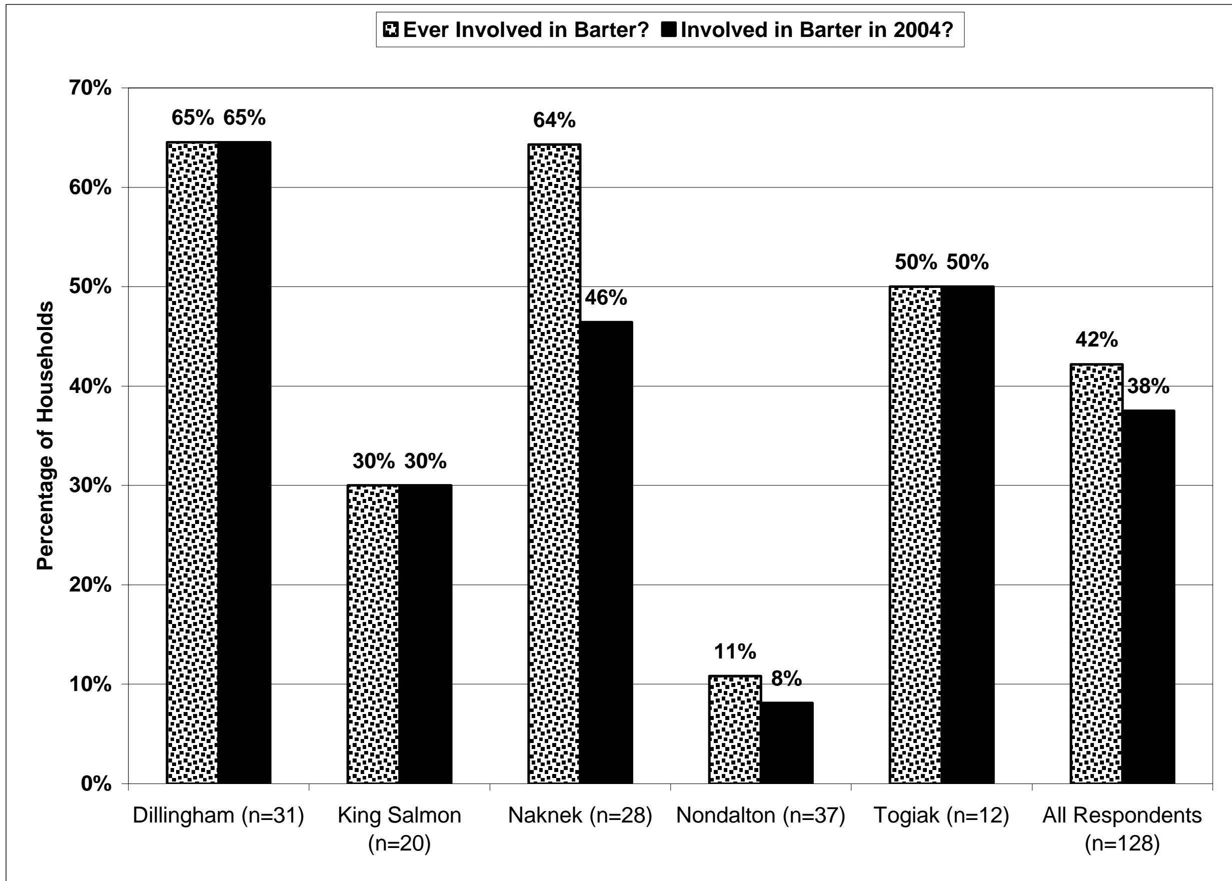

Figure 12.–Percentage of interviewed households involved in barter.

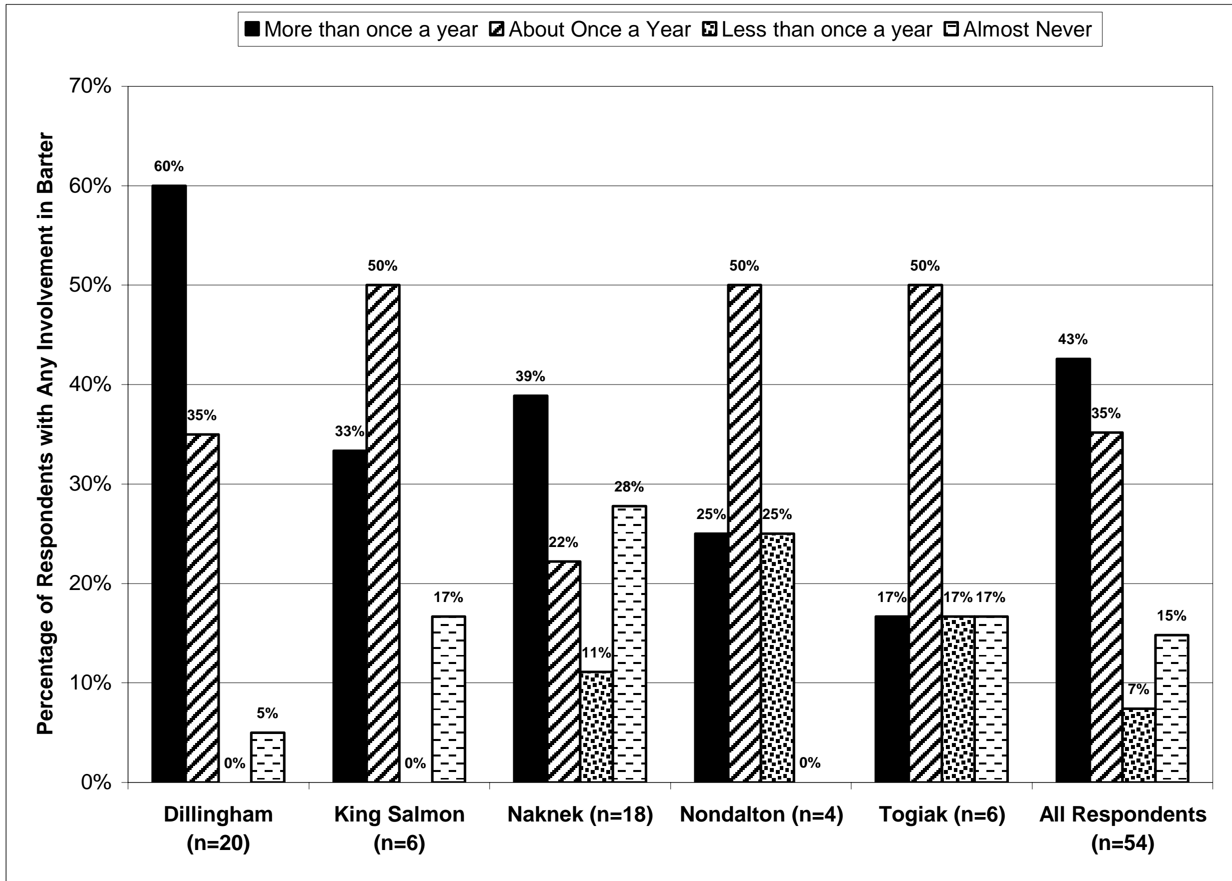

Figure 13.–Frequency of respondents' involvement in barter.

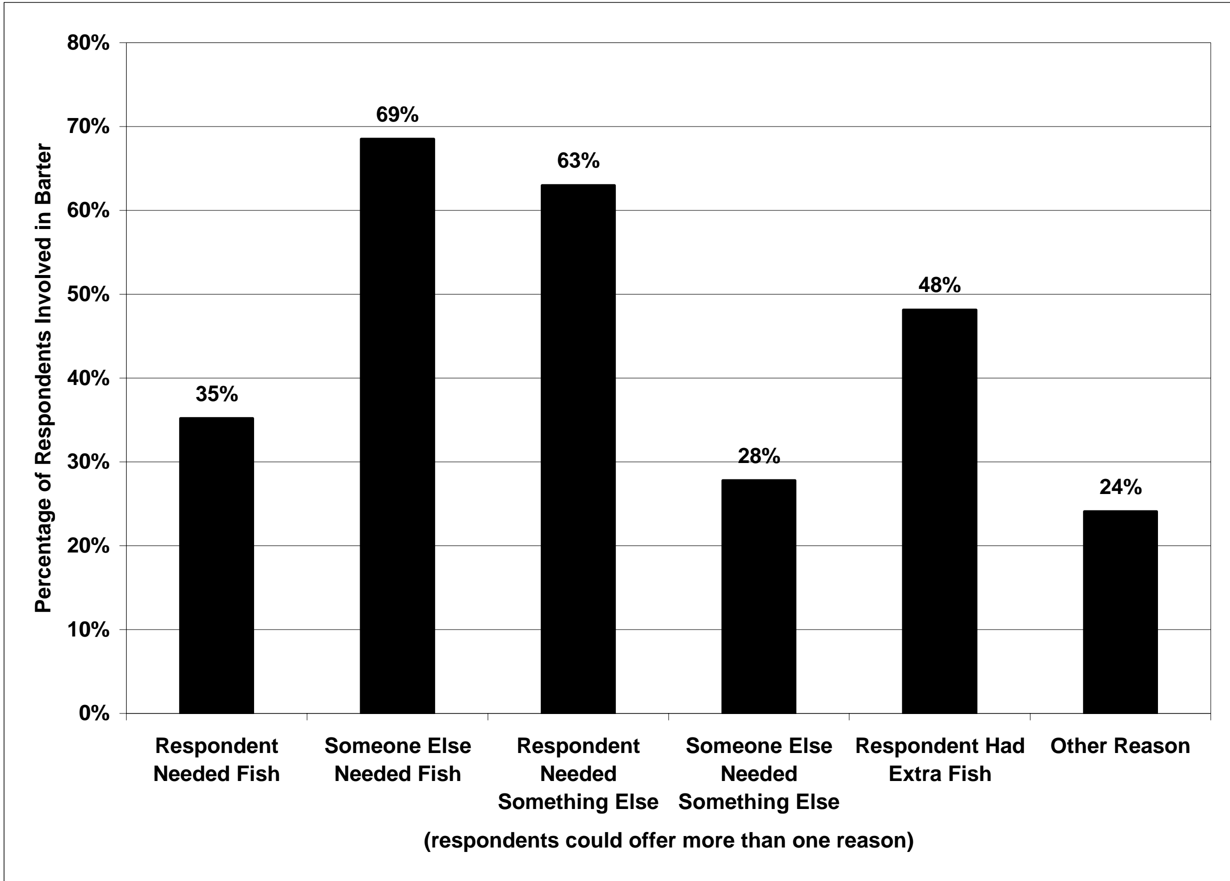

Figure 14.–Reasons respondents participated in barter (n=54).

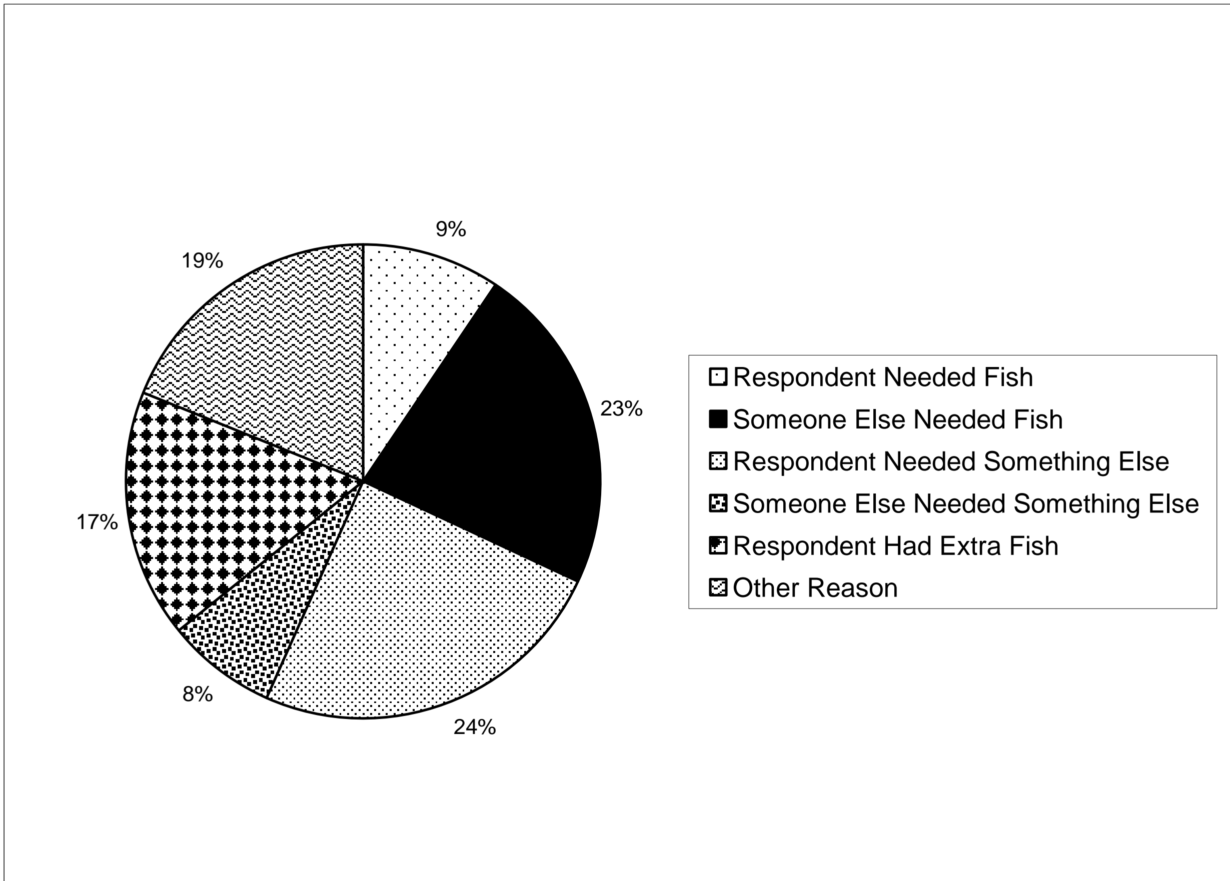

Figure 15.–Most important reason given for engaging in barter (n=53).

APPENDIX A. SURVEY INSTRUMENT

Customary Trade & Barter

Of Subsistence Fish

In the Bristol Bay Area

BRISTOL BAY NATIVE ASSOCIATION
NATURAL RESOURCE DEPARTMENT
PO BOX 310
DILLINGHAM, AK 99576

1-800-478-5257

ALASKA DEPARTMENT OF FISH AND GAME
DIVISION OF SUBSISTENCE
BOX 1030
DILLINGHAM, AK 99576

907-8425925

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 BBNA and ADF&G to better understand subsistence fisheries in Bristol Bay. 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.

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 names. 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.

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, INDICATE WHETHER PEOPLE IN THIS HOUSEHOLD AGE 18 OR OLDER HAD THE FOLLOWING KINDS OF JOBS…

ADULT ONE	FULL TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	SEASONAL EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	PART-TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
ADULT TWO	FULL TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	SEASONAL EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	PART-TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
ADULT THREE	FULL TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	SEASONAL EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	PART-TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
ADULT FOUR	FULL TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	SEASONAL EMPLOYED?	(Indicate yes or no for any portion of the year)	________
	PART-TIME EMPLOYED?	(Indicate yes or no for any portion of the year)	________

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 ________

"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 transaction.

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

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

COMMENTS ON THIS TRADE

"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)*	UNIT? *(fish, lbs, gal, etc)*	IF YOU GAVE AWAY FISH… WHAT KIND OF FISH? *(Species)*	HOW WERE THESE FISH PROCESSED? *(Process)*	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								

Continue from previous page.

EXCHANGE #	THEIR ITEMS *(What you received)*								
			HOW MUCH DID YOU RECEIVE?		IF YOU RECEIVED FISH…			
	ITEM #	WHAT ITEMS DID YOU RECEIVE? *(Items)*	*(Amount)*	UNIT? *(fish, lbs, gal, etc)*	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)*

(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)

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)

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

QUESTIONS 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		
			OFTEN RARELY NEVER		
			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.

"RARELY" means A PERSON is likely 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		

DO YOU HAVE ANY QUESTIONS, COMMENTS, OR CONCERNS?

INTERVIEW SUMMARY:

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

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.

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

APPENDIX B. BRISTOL BAY NATIVE ASSOCIATION RESEARCH POLICY

BRISTOL BAY NATIVE ASSOCIATION
POLICY GUIDELINES FOR RESEARCH IN BRISTOL BAY

The Bristol Bay Native Asssociation (BBNA) is a service agency dedicated to the betterment of the Native People of the Bristol Bay region. These principles are consistent with the policies adopted by the Alaska Federation of Natives in May of 1993 and shall serve as guidelines for scientific research involving BBNA.

Alaska Natives in Bristol Bay share with the scientific community an interest in learning more about the history and culture of our societies. The best scientific and ethical standards are obtained when Alaska Natives are directly involved in research conducted in our communities and in studies where the findings have a direct impact on Native populations.

BBNA recommends to public and private institutions that conduct or support research among Alaska Natives in Bristol Bay that they include a standard category of funding in their projects to ensure Native participation. BBNA recommends to all scientists and researchers who plan to conduct studies among Alaska Natives in Bristol Bay that they comply with the following principles:

- Advise Native people who are to be affected by the study of the purpose, goals and timeframe of the research, the data-gathering techniques, and the positive and negative implications of the research.
- Obtain the informed consent of the appropriate governing body, village or tribal council through a letter of support or the resolution process.
- Hire and train Native people to assist in the study with the intent of building capacity for Native-led research.
- Guarantee confidentiality of surveys and sensitive material.
- Honor the contributions of Native participants by compensating them for their time, intellectual property and involvement.
- Respect the culture and traditions of affected communities.
- Use Native language in communities where English is the second language.
- Provide the affected Native communities with the opportunity to comment on research reports before a final draft is released.
- Include Native viewpoints and acknowledge the contributions of Native resources and people in final publications.
- Inform affected parties and villages in a summary and in non-technical language of the major findings of the study.
- Provide copies of studies to the local library, villages, agencies and other affected organizations.

APPENDIX C. PROJECT DESCRIPTION

PROJECT INFORMATION

Project Name: Sharing, Bartering, and Trade of Subsistence Resources in the Bristol Bay Area

Fisheries Information Service number: FIS 04-454

Investigators:

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Background: The Bristol Bay Native Association (BBNA), and the Alaska Department of Fish and Game (ADF&G) are working together on this project. The project is funded by the Fisheries Information Service, Office of Subsistence Management, US Fish and Wildlife Service. One goal of this project is to document barter and customary trade (for the purposes of this project "barter" means to exchange subsistence caught fish for something other than cash and "customary trade" means the exchange of subsistence caught fish for cash) transactions for a one year time period in four communities. This will be achieved by the use of a survey instrument (form) which will document information for households that barter and trade for fish (either giving or receiving) in four communities including who they trade with and the characteristics of the barter and trade transactions. Another goal is to interview selected key respondents about the history and contemporary patterns of customary trade. Four communities were selected that can provide a representative sample of the Bristol Bay region: Nondalton, Togiak, Dillingham, and the Bristol Bay Borough (Naknek, South Naknek, and King Salmon taken as one community). Tribal Council approval is needed from these communities before work on this project can proceed. Local Research Assistants will be hired in each community to assist the investigators.

Issue: Customary trade (the exchange of subsistence-caught fish for cash) is one of the subsistence uses recognized by ANILCA (and by state law), along with sharing and bartering. The need to characterize and provide for customary trade in regulation was one of the issues recognized in the *Federal Subsistence Fisheries Implementation Plan.* The need to better understand patterns of customary trade in the Bristol Bay area was a concern raised during needs assessment meetings sponsored by the Bristol Bay Native Association in King Salmon and Dillingham/Clarks Point in 2003 and has been discussed by the Bristol Bay Subsistence Regional Advisory Council.

Methods: Households that participate in customary trade in four study communities will be identified. A survey instrument will be designed to determine the species, amounts, processing methods, and sources of fish involved in barter and customary trade in the four study communities by interviewing a sample of community households. Key respondents in each community will also be interviewed about the history of barter and customary trade. Data will be coded for analysis. Findings will be presented in a final report.

APPENDIX D. GLOSSARY OF CENTRAL YUP'IK AND DENA'INA TERMS

Glossary of Central Yup'ik and Dena'ina Athabascan Terms Used in the Text

Note: This glossary lists all Central Yup'ik and Dena'ina Athabascan words that appear in the text, except that Central Yup'ik terms that appear only in Chapter 2 and are listed and defined in Table 5 are not repeated here.

Part A. Central Yup'ik

Aruqun–the distribution of harvested resources as gifts

Akutaq–a mixture of berries, sugar, seal oil, shortening, fish, meat, etc; "Eskimo ice cream"

Allaniuq–welcoming people

Allanitamken–welcoming you with this gift

Cikiun–a gift

Civiche–a salmon spread

Egumcaat ("gumchuk")–smoked salmon bellies

Ikayur- -to help with

Iquiruciiquq–to find oneself "at the end of their rope"

Kass'aq–a non-Alaska Native person

Kelgun–an invitation to eat–a form of sharing

Mayitege–needy and hungry

Maktak–blubber ("muktuk")

Naverte- – to exchange of one resource for another; "barter"

Nengqertuq–souring of drying fish due to warm weather

Palrutaq–to encounter other people negatively or cause conflict or uneasiness unnecessarily

Piiturtuq–lacking necessities

-continued-

Qunutungaq–stingy

Tengesqaaq–green winged teal

Tun'ernarquq–to feel embarrassed because one is imposing on someone

Tumuana–dried spawned-out sockeye salmon

Tunriq–discomfort or embarrassment

Umyuacuk–a negative state of mind against other people

Part B. Dena'ina Athabascan

Dutna–Central Yup'ik-speaking people

K'enq'ena–dentalium; a form of wealth and medium of exchange

Nudelvay–dry filleted fall salmon

Qeshqa–a "rich man" who traditionally directed subsistence activities, including trade

Sources: for Yup'ik: Molly Chythlook, ADF&G and BBNA and Jacobson 1984; for Dena'ina: Kari 1994.