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Background of Customary Trade in the Kuskokwim Area

Prepared for the January 2013 Anchorage Alaska Board of Fisheries Meeting

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Alaska Department of Fish and Game**

December 2012

Alaska Department of Fish and Game



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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

all commonly-accepted abbreviations
e.g., Mr., Mrs., AM, PM, etc.

all commonly-accepted professional titles e.g., Dr., Ph.D., R.N., etc.

Alaska Administrative Code AAC
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
mid-eye-to-fork	MEF
mid-eye-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, � 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 ₀
percent	%
probability	P
probability of a type I error (rejection of the null hypothesis when true)	�
probability of a type II error (acceptance of the null hypothesis when false)	�
second (angular)	"
standard deviation	SD
standard error	SE
variance	
population	Var
sample	var

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**BACKGROUND OF CUSTOMARY TRADE IN THE KUSKOKWIM
AREA;**

**PREPARED FOR THE JANUARY 2013 ANCHORAGE ALASKA BOARD OF FISHERIES
MEETING**

By Hiroko Ikuta and Lisa J. Slayton

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December 2012

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ABSTRACT

This report provides background information about customary trade of subsistence-taken finfish in the Kuskokwim Area for consideration by the Alaska Board of Fisheries (board) as it discusses Proposal 109, which addresses the subsistence salmon fisheries in the Kuskokwim Area. Customary trade was practiced in Alaska long before statehood in 1959. Both federal rules and state regulations recognize customary trade of subsistence-caught fish for cash in some areas. However, it is unlawful to buy or sell subsistence-caught fish, their parts, or their eggs in the Kuskokwim Area.

Key words: Subsistence, customary trade, exchange, customary and traditional uses, Kuskokwim River drainage, Kuskokwim Area, king salmon, chum salmon, sockeye salmon, coho salmon, Board of Fisheries.

INTRODUCTION

This report has been prepared for the Alaska Board of Fisheries (board) for reference when considering Proposal 109 with implications for customary trade during its January 2013 meeting. Consideration of this proposal will be the first time the board will evaluate whether customary trade of finfish is a customary and traditional (C&T) subsistence use in the Kuskokwim Area (Figure 1).

The subsistence salmon fisheries in the Kuskokwim Area are some of the largest in Alaska in terms of the number of residents who participate and the number of salmon harvested (Table 1). Since 1994, when the department began acquiring reasonably complete statewide coverage of subsistence harvest data, 54% of king salmon have been taken in the Kuskokwim Area, mostly in the Kuskokwim River drainage. Division of Subsistence studies in the region indicate that fish contribute as much as 85% of the total pounds of fish and wildlife harvested in a community, and salmon contribute as much as 53% of the total annual harvest of wild foods harvested for subsistence (Simon et al. 2007:1). Residents of the Kuskokwim Area harvest five species of Pacific salmon for subsistence purposes: king *Oncorhynchus tshawytscha*, chum *O. keta*, coho *O. kisutch*, pink *O. gorbuscha*, and sockeye *O. nerka* salmon.

Customary trade, which is defined in state law as limited noncommercial exchanges of subsistence resources for minimal amounts of cash, has been practiced in Alaska since long before statehood (Fienup-Riordan 1986; Krieg et al. 2007; Magdanz et al. 2007; Moncrieff 2007; Pappas 2012; Wolfe and Magdanz 1993; Wolfe et al. 2000). In Alaska, subsistence foods and other wild resources have been exchanged and distributed through sharing, barter, and customary trade between households and communities. These forms of distribution can be understood as occupying a single continuum of subsistence activities, rather than as discreet and fundamentally separate activities. In fact, a number of scholars have described 400 years of trading relations among Alaskans and between Alaskans and Russians across the Bering Strait (Bockstoce 2009; Burch 1988, 1998, 2006; Fitzhugh and Chaussonnet 1994; Oswald 1967; Spencer 1959; just to name a few). Wolfe et al. (2000) includes a bibliography of 121 studies of the distribution and exchange of wild resources in Alaska.

Customary trade of subsistence-taken finfish in the Kuskokwim Area has not been authorized by the board. Alaska state law recognizes customary trade as a subsistence use (AS 16.05.940 (33)) and provides a definition at AS 16.05.940 (8). Under 5 AAC 01.010 (d), *Methods, means, and*

general provisions, however, it is unlawful to buy or sell subsistence-taken fish, their parts, or their eggs, unless specifically allowed by the board.

LEGAL STATUS OF CUSTOMARY TRADE IN THE KUSKOKWIM AREA

The legal status of customary trade in Alaska began taking its present form with passage of the Marine Mammals Protection Act in 1972 (16 USC 1361), the Alaska subsistence law in 1978 (Ch. 151 SLA 1978), and the Alaska National Interest Lands Conservation Act (ANILCA) in 1981 (PL 96-486, 94 Stat. 2371), each of which included provisions that allowed limited noncommercial exchanges of subsistence foods, byproducts, and crafts for cash (Appendix A). Currently, under AS 16.05.940(33), the definition of subsistence uses includes “customary trade” (Appendix B). Under AS 16.05.940(8), customary trade is defined as “the limited noncommercial exchange, for minimal amounts of cash, as restricted by the appropriate board, of fish or game resources.” Under 5 AAC 01.010(j), the state regulates “persons licensed under AS 43.75.011 to engage in a fisheries business may not receive for commercial purposes or barter or solicit to barter for subsistence taken salmon or their parts.”

The board has recognized customary trade in two areas of the state: for subsistence harvests of herring roe on kelp in Southeast Alaska under 5 AAC 01.717, and for subsistence-taken finfish in the Norton Sound-Port Clarence Area under 5 AAC 01.188. The remainder of the state and the Kuskokwim Area currently have no provisions for this subsistence use under state regulations.

While standing on state and private lands (including state-owned submerged lands and shore lands), people must comply with state laws and regulations and may not sell subsistence-caught fish, except for the two exceptions specified above. Federal subsistence regulations, including customary trade regulations, pertain only to fishing on and use of fish caught on federal public lands, and those waters where federal subsistence jurisdiction is claimed. The sale of subsistence fish caught on all lands and waters (federal, state, or private) is limited by state regulations, except to the extent superseded by federal law on federal lands. The State of Alaska maintains jurisdiction of food safety and food processing regulations.

HISTORICAL BACKGROUND OF WILD FOOD EXCHANGES

Bering Strait

In the Western Region of Alaska, subsistence foods and other wild resources have long been exchanged through barter, for cash (currency), and, most commonly, through sharing between households and communities. These examples pertain to what is classified as “barter” by contemporary state and federal law since they do not involve cash or another medium of exchange, such as trade beads. However, cash was introduced into the trade network of exchange, and as Wheeler (1998) points out, cash became another commodity that facilitates local, noncommercial distribution of subsistence foods.

Since 1649, when the Anadyrsk post in eastern Siberia, was established, Russian and European goods steadily began to appear on the Alaskan side of the Bering Strait (Oswalt 1967:132, citing Rainey 1947:267–268). In the early years, the goods coming from Russia included “glass beads, iron, metal buttons, articles of adornment, needles, pots, kettles, knives, spears, bells, scissors,

and axes; tobacco, a minor item in the early years, had become the single most important one by 1810” (Burch 1988:235). In the late 18th century, Russian trade goods and Siberian reindeer skins were traded to Alaskans for a variety of goods, including furs, maritime products, jade, and wood. During the first half of the 19th century, trade between the Russian Far East and Alaska reached a peak (Burch 1988:234). Burch (1988:236) summarizes the long-practiced national and international trading in the Bering Sea coastal region:

Russian Trade Goods:

The Russian conquest of Siberia (15th–18th centuries A.D.) was driven by profits from the fur trade.^[1] Russian goods including **tobacco, brick tea, beads, firearms, iron implements, kettles, needles, clothing, and flour** were expected to obtain valuable furs: sable and fox from Siberia, and sea otter, fur seal, fox, beaver, lynx, marten, and others from Alaska. (Burch 1988:236, emphasis original)

Native Trade Across Bering Strait:

Ancient trade connections across Bering Strait were expanded over time as new products became available. In increasing amounts after the late 18th century, Russian trade goods and Siberian reindeer skins were being traded to Alaskans for a variety of goods including furs, maritime products, jade, and wood (Burch 1988:236).

American Whalers:

From the 1850s to the early 1900s, American whaling vessels traded annually with the Chukchi and North Alaskan Eskimo, obtaining baleen and walrus ivory for **alcohol, firearms, ammunition, steel knives and axes, porcelain, needles, tobacco, clothing, and flour**. These goods were carried west and east by Chukchi and Alaskan native traders. (Burch 1988:236, emphasis original)

This longstanding exchange network across the Bering Sea provides an important historical and socioeconomic context for the board to consider in its deliberations on Proposal 109. Cash may, to some extent, replace a portion of the barter network of exchange that facilitates local, noncommercial distribution of subsistence foods.

Kuskokwim Area

In the Kuskokwim Area, one of the first documented exchanges of wild foods for cash occurred as early as 1898 during a U.S. Geological Survey of the Kuskokwim River led by geologist J. Edward Spurr. He relates at least 2 separate incidents in which “currency and tobacco” were exchanged with middle Kuskokwim Alaska Natives for “dog salmon and some small whitefish” and “tobacco and coins” were exchanged for “a grey wolf, a marten, and some fresh dog salmon” (Spurr 2010:73–74).

a) Early 20th Century

Several documented examples involving the exchange of cash for wild foods along the Kuskokwim River also exist from the early 1900s. The introduction and efficiency of the fish wheel coupled with a high demand for dog food by the large influx of European traders, gold miners, and mail carriers for their dog teams created an opportunity for Alaska Natives along the

¹ Under AS 16.05.940.(7), Alaska law exempts customary trade in fur from the “minimum amounts of cash” provision by stating “the terms of this paragraph [definition of ‘customary trade’] do not restrict money sales of furs and furbearers.”

Kuskokwim to earn money by selling fish (Fienup-Riordan et al. 2000; Schroeder et al. 1987; Oswalt 1990; emphasis added). Fish wheels produced a surplus of fish beyond what was needed by an individual family. This surplus was then sold to various individuals, mostly in the form of bailed dried fish when the opportunity arose. Oswalt (1990:104) states, “The extremely large dog teams owned by contract mail carriers required a dependable supply of dried salmon, and this had a significant impact on [Kuskokwim River] villagers who earned money by providing food for the teams” (Oswalt 1990:104; emphasis added).

In addition to individual exchanges, Alaska Natives on the Kuskokwim River sold surplus fish and furs to store owners for trade goods and cash. According to Oswalt (1990:117), a common practice was for traders on the Kuskokwim River [and elsewhere in Alaska] to give out tokens or “bingles” to customers who did not take out their full value in trade items. These trade tokens were widely used in Alaska as a form of currency, since there was an acute shortage of coins and paper currency (Gould et al. 1965). These trade tokens could then be used again at the store to purchase other items, or they could be used as a medium of exchange between individual parties. According to Richard Hanscom of Alaska Rare Coins in Fairbanks, “It [a trade token] is a money substitute used in place of cash or legal tender where there is just a shortage of legal tender.” “Just like cash, they [trade tokens] were all a medium or form of exchange.” Although tokens went out of use in Alaska shortly after World War II, when more coins and currency became available, an article several years ago in *Coin World Newspaper* relates the use of them on St. Lawrence Island as late as the 1960s (Personal communication, R. Hanscom with Lisa J. Slayton, ADF&G Division of Subsistence, September 14, 2012).

While the distinction between historical customary trade activities, which served to distribute subsistence foods and other goods locally, and those of a more commercial nature can sometimes be difficult to discern due to the incomplete nature of the historical record, the increasing role of cash in the early 20th century is an important consideration when deliberating on whether there is a longstanding C&T pattern of exchange of finfish and other subsistence resources for minimal amounts of cash in the Kuskokwim Area. A historical pattern of local subsistence users obtaining imported trade goods and other items of local subsistence production through the use of cash, leading to the incorporation of cash into customary and traditional subsistence economies, has been documented elsewhere in Alaska (e.g., Wheeler 1998) and will be briefly discussed in more detail below.

b) Mid-20th Century

Much as it had been practiced since the late 1890s and early 1900s, local exchange of subsistence resources for small amounts of cash persisted in Kuskokwim River communities into the mid-20th century. Oswalt states, “Occasionally, a man [in Napaskiak] will hire another to haul wood for him, and if someone has a surplus of fish, he may sell them. In 1955 one man caught a large number of big whitefish just before freeze-up and sold them, during the winter, to unrelated persons at 50 cents each and to relatives for 25 cents” (Oswalt 1963:72). The Northern Commercial Company in McGrath offered salmon strips for sale at 35 cents a pound in the early 1950s (Kitchener 1954:181). After statehood in 1959, Alaska followed other states in adopting laws stemming from the Lacey Act of 1900 (16 USC 3372) which regulated the trade in fish and game. In protecting species with commercial markets, such as salmon and herring, the law in Alaska also banned person-to-person cash exchanges of many species for which no commercial markets existed. Nevertheless, limited trade of subsistence-taken fish and wildlife for cash persisted in Alaska. For some Alaskan residents, the exchange of wild foods for cash was often

the only way to obtain certain highly valued traditional foods found in limited areas or processed in certain ways (Magdanz 2007:2).

c) 21st Century

Recent ethnographic research on the Kuskokwim River subsistence salmon fisheries demonstrated that small noncommercial person-to-person sales of subsistence-taken fish continue to occur regularly in the Kuskokwim area. In 2009, staff at the Alaska Department of Fish and Game (department) Division of Subsistence conducted ethnographic field research in Tuntutuliak, Kwethluk, Kalskag, Sleetmute, and Nikolai (Ikuta et al. in prep). The key respondents for the project provided more recent examples of cash sales in the region.

According to key respondents in Tuntutuliak, sometimes the more labor-intensive fish products, such as fermented salmon heads (locally called “stink heads”) and strips, will be made for sale. One man learned to make “stink heads” by watching his parents when he was growing up at the old fish camp sites:

I’ve been doing it since I learned it. I’ve been doing it every summer. When 4th of July activities come around, I take some out and I’ve been selling one head for \$1.00 a head. People come around when they want some fish heads for dinner. Good bestsellers last year. (Tunt-20)

In Kwethluk, no respondent reported having exchanged salmon for cash themselves, but two alluded to the sale of subsistence salmon via the bulletin board at the local store. One respondent explained, “There are some families that do sell their fish. At the stores I see people advertising that they’re selling fish for extra income. Mostly families that are not working” (KWT-2).

As the ethnographic information above suggests, noncommercial exchanges of subsistence resources for cash in the Kuskokwim Area today are minimal in nature. Often, the exchange occurs between subsistence users, rather than through an agent or store for resale. In addition, harvest and sale are both practiced locally. In anthropological literature, exchange of subsistence products for small amounts of cash, called “customary trade” in Alaska law, is considered to be part of the “balanced reciprocity” characteristic of subsistence economies. The following section contextualizes these small scale cash sales as described above.

Anthropological Theories of Customary Trade

Different forms of exchange in many indigenous societies often relate to different time frames and exchange partners. Mauss (Mauss 1990) and Sahlins (Sahlins 1972) both describe reciprocity in terms of the timing that dictates the contours of the exchange. Generalized, delayed, and balanced reciprocity all refer to the timed expectation of a return, including the absence of any expectation. In generalized reciprocity, which can be understood as “sharing” in an Alaska context, there is no expectation of an immediate return. In “balanced” reciprocity, the exchange is more direct, either for other goods (“barter”) or limited cash (“customary trade”), and may involve bargaining informed by local traditions of value. If the balanced exchange does not occur immediately (such as some summer salmon for a portion of a fall moose), the exchange is “delayed.” With whom one trades is also an important factor. Community residents operate through complex and varying social systems that require the fulfillment of certain obligations to others, depending on kinship or other social relations. Generalized reciprocity (sharing) characterizes exchanges between close kin and friends, while balanced reciprocity may

structure exchanges with more distant relatives or acquaintances, strangers and newcomers, or with trading partners, sometimes in other communities or regions.

Customary trade is a historical practice in Alaska that most closely resembles bartering practices, with the introduction of cash or monetary exchange. Fienup-Riordan argues that understanding customary trade through the logics of the capitalist market economy (to maximize profit) is to ignore its actual role in subsistence economies, which operate under other logics of accumulation for sharing and redistribution: namely, distributing goods to support local communities (1986:188). Based on field research in 4 Yukon communities, Wheeler (1998) further describes ways in which cash in a mixed cash-subsistence economy has been adopted to enhance, rather than diminish, the importance of wild foods. She argues that rather than given exclusive or special status as a singular resource, cash is used as one among many resources, such as fish, game, and imported technology: “These resources do not represent separate spheres, segments, or economies; and to separate subsistence and cash is to create a false dichotomy” (Wheeler 1998:261). Wheeler observed that, like other resources, the value of cash is relative, and that its value varies by availability that is often controlled by season (Wheeler 1998:263). She further noted that strategies to use cash mirror the use of other resources: “...when it is available, use it to the maximum extent possible, and when it is not available, make do with other resources” (Wheeler 1998:268). Although Wheeler’s research was conducted in Yukon River communities, her argument applies to many other Alaskan communities that depend on subsistence activities, including the ones in the Kuskokwim Region.

BOARD OF FISHERIES 2007: DISCUSSION OF PROPOSAL 148

The amount of cash trade that could constitute “customary trade” has been an issue for at least 25 years. In a 1981 memo to Alaska Governor Jay Hammond on new subsistence provisions in the Alaska National Interest Lands Conservation Act (ANILCA Title VIII), Alaska Department of Law attorneys suggested that Yukon River commercial fishing “may be consistent with the federally mandated priority for customary trade” (Condon 1981:33). However, the board subsequently considered the Yukon River commercial summer chum salmon roe fishery and determined that it was a commercial activity and not consistent with customary trade as a subsistence use. At the board meeting in January 2007, assistant attorney general Lance Nelson offered a specific interpretation of the 1992 state statute. Nelson told board members:

It is important that it [customary trade] be considered non-commercial. The statute says non-commercial. Even more important than that is the fact that, since subsistence uses are limited to Alaska residents, any commercial activity related to subsistence would be prohibited by the United States Constitution’s commerce clause, because it is going to be illegal under the commercial clause for the state to provide a commercial opportunity and limit it to residents of this state. That’s called “facial discrimination” of interstate commerce. So it is doubly important that any level you might consider allowing be non-commercial....

I happened to be involved in drafting this [state] legislation in 1992, and was present in the discussion of the legislative committees and the legislature itself.... It was not intended to supplant commercial fishing. The intent of it was a means to provide for full distribution, full opportunity for distribution of subsistence products among subsistence users. That’s the basic intent, and motivation for allowing customary trade.

Nelson advised the board that customary trade in state regulation should stay below levels seen in commercial fisheries in the area (Table 2), and below levels that might be viewed as “commerce.” Further analysis of commercial fish tickets from the 2012 fishing season indicates that 60 permit holders (13%) of a total of 477 permit holders who fished received less than \$500 each (Personal communication, D. Bergstrom, ADF&G Division of Commercial Fisheries, December 7, 2012).

BOARD OF FISHERIES 2013: PROPOSAL 109

Proposal 109 suggests allowing for sale of subsistence-taken finfish in the Kuskokwim River Area under the following conditions (Alaska Board of Fisheries 2012:113):

- (a) A person who conducts a customary trade in subsistence-taken finfish under this section must:
 - 1) Obtain a customary trade record keeping form from the department before the person conducts the customary trade, and accurately record the cash sale on the form within the 24 hours after the sale occurs; the form requires the reporting of
 - A) the date of each sale;
 - B) the buyers name and address;
 - C) the species and amount of finfish sold;
 - D) the location where the finfish were harvested;
 - E) the dollar amount of each sale;
 - F) the form of processing used; and
 - G) any other information the department requires for management or enforcement purposes;
 - 2) return the customary trade record keeping form to the department as prescribed by the department on the form;
 - 3) display the customary trade record keeping form upon request by a local representative of the department or a peace officer of the state.
- (b) A person may not sell subsistence-taken finfish under this section for more than \$500 total per household in a calendar year.
- (c) A person who receives subsistence –taken finfish in exchange for cash in a customary trade may not resell the finfish.
- (d) A sale or purchase of finfish authorized under this section, including the delivery of fish to a purchaser, may occur only in the Kuskokwim Area.

BOARD OF FISHERIES 2013: KEY CONSIDERATIONS

The board has already determined that the use of fish for subsistence in the Kuskokwim Area is customary and traditional (see appendices C and D). For this proposal, the board will further determine whether trade for cash was part of that C&T pattern. Under 5 AAC 99.010, regulations provide eight criteria to guide the board’s review. Distribution of subsistence resources

(“including customary trade, barter, and gift-giving”) is the seventh customary and traditional criterion. Other criteria that may be particularly relevant include:

- a long-term consistent pattern of noncommercial use for at least one generation (Criterion 1),
 - characterized by economy of effort and cost (Criterion 3), and
 - employing traditional means of handling, processing, and storage (Criterion 5).
- After reviewing the best available information, the board may find customary trade exists for all fish species, some fish species, or no fish species in the Kuskokwim Area.
 - If the board finds customary trade of fish exists, the board may:
 - Regulate customary trade differently for some species than for other species. For example, harvest limits and reporting requirements may be necessary for species with commercial markets, such as salmon, but not necessary for other species, such as smelt, whitefish, or lamprey.
 - Specify an annual cash limit for these transactions that is consistent with C&T levels within a noncommercial range;
 - Specify an annual proportion of the subsistence-taken fish that may be exchanged for cash;
 - Specify a time period during which the cash exchange total applies; and/or
 - Place limits on a per-person or per-household basis; or other restrictions, and limit where the transaction may occur, as proposed and as is the case for Norton Sound.
 - The proposal does not address food processing and sanitation considerations associated with fresh or processed fish offered for sale, which are under the purview of the Alaska Department of Environmental Conservation; nor does it address sale to or purchase by fisheries businesses regulated by state laws and regulations.

Options

- Make a finding on customary trade of fish in the Kuskokwim Area.
- If there is a positive finding, adopt Proposal 109 as written.
- If there is a positive finding, amend Proposal 109 to:
 - Apply to certain fish species;
 - Apply to fish processed in certain ways;
 - Provide household or individual permit and reporting requirements; and/or
 - Establish specific dollar limits on customary trade or other restrictions; or

- If there is a negative finding, take no action on Proposal 109.

CONCLUSION

Limited research has shown that exchange of finfish for minimal amounts of cash continues to be part of an important and long-standing subsistence tradition in some areas of the state. In these areas, trade for cash is a way for families to distribute subsistence-taken fish and wildlife harvests to people outside of their usual sharing and bartering networks. Trade for cash also provides traditional foods to individuals and families who are unable to harvest because of personal circumstances (e.g., hospitalization) or regulatory changes to legal subsistence gear specifications, for example. Many of the exchanged traditional foods, such as dried whitefish, stink heads, and seal oil, for example, are not available through commercial markets. In most cases, this trade does not appear to be conducted for profit, nor is it conducted in isolation from other subsistence activities.



Figure 1.—Kuskokwim Area.

Table 1.—Historical subsistence harvest estimates for all species of salmon in the Kuskokwim Area, 1990–2011.

Year	King	Chum	Sockeye	Coho	Pink	Total
1990	114,219	157,335	48,752	63,084		383,390
1991	79,445	89,008	50,383	44,222		263,058
1992	87,657	120,108	46,465	57,557		311,786
1993	91,973	64,551	53,631	31,971		242,126
1994	110,922	89,553	46,127	40,815		287,417
1995	105,787	71,789	31,736	39,587		248,898
1996	100,354	102,066	41,530	45,304		289,255
1997	83,023	38,073	39,828	31,325		192,248
1998	85,787	72,780	38,177	27,391		224,134
1999	79,752	51,200	50,988	30,184		212,124
2000	75,307	72,833	53,504	49,397		251,040
2001	82,106	57,060	55,290	33,474		227,931
2002	84,513	95,023	34,307	44,603		258,446
2003	70,673	46,716	33,817	36,985		188,191
2004	103,183	68,068	43,425	53,186		267,862
2005	89,545	59,227	44,565	35,766	1,566	230,668
2006	96,866	95,901	49,295	43,744	2,647	288,453
2007	101,538	76,145	50,025	37,361	1,343	266,412
2008	103,076	71,222	63,805	49,753	1,349	289,205
2009	81,847	45,087	37,781	31,611	543	196,869
2010	69,239	47,880	41,069	34,157	667	193,012
2011	61,859	51,176	43,006	31,360	742	188,142
10-year average (1990–1999)	93,892	85,646	44,762	41,144	-	265,444
5-year average (2005–2009)	94,575	69,516	49,094	39,647	1,490	254,321
10-year average (2000–2009)	88,865	68,728	46,581	41,588	-	245,763
Historical average (1990–2011)	89,030	74,673	45,341	40,583	-	249,628

Source T. Hamazaki, Biometrician III, ADF&G Division of Commercial Fisheries, Anchorage, personal communication on September 24, 2012 for king salmon, chum salmon, sockeye salmon, and coho salmon; and November 15, 2012 for pink salmon.

Note Blank cells indicate no pink salmon harvests collected; pink salmon harvests were not collected until 2005.

Table 2.—Estimated exvessel value of the commercial salmon harvest, Kuskokwim Area, 1987–2012.

Year	District 1		District 2		District 4		District 5		Total Value	Total Permits	Avg. Value Per Permit
	Value of Catch	Permits Fished ^a	Value of Catch	Permits Fished ^a	Value of Catch	Permits Fished ^a	Value of Catch	Permits Fished ^a			
1987	\$4,893,016	705	\$139,049	29	\$858,818	310	\$572,293	116	\$6,463,176	800	\$8,079
1988	\$10,060,427	745	\$246,069	29	\$1,381,661	289	\$1,038,041	125	\$12,726,198	813	\$15,653
1989	\$3,883,321	743	\$131,168	30	\$746,071	227	\$378,962	88	\$5,139,522	824	\$6,237
1990	\$3,385,636	742	\$121,329	22	\$1,013,472	390	\$361,203	82	\$4,881,640	823	\$5,932
1991	\$2,971,767	749	\$111,651	23	\$592,436	346	\$273,795	72	\$3,949,649	819	\$4,823
1992	\$3,764,804	741	\$147,992	22	\$993,664	349	\$439,331	111	\$5,345,791	814	\$6,567
1993	\$2,533,895	737	\$90,906	20	\$898,255	408	\$440,955	114	\$3,964,011	804	\$4,930
1994	\$3,559,114	706	\$129,555	17	\$837,157	307	\$591,903	116	\$5,117,729	793	\$6,454
1995	\$2,776,677	712	\$107,913	21	\$1,047,188	382	\$287,599	87	\$4,219,377	798	\$5,287
1996	\$2,108,418	620	\$11,015	8	\$534,726	218	\$222,388	54	\$2,876,547	714	\$4,029
1997	\$430,614	604	\$2,944	4	\$497,071	289	\$121,973	53	\$1,052,602	702	\$1,499
1998	\$982,791	615	\$617	3	\$467,843	203	\$184,060	50	\$1,635,311	707	\$2,313
1999	\$170,278	509	\$0	0	\$279,092	218	\$102,803	73	\$552,173	604	\$914
2000	\$509,594	532	\$3,039	4	\$466,560	230	\$212,336	46	\$1,191,529	623	\$1,913
2001	\$429,534	412	\$0	0	\$228,615	159	\$98,458	32	\$756,607	514	\$1,472
2002	\$127,208	318	\$0	0	\$167,748	114	\$28,703	30	\$323,659	407	\$795
2003	\$453,187	359	\$0	0	\$304,553	114	\$135,287	34	\$893,027	438	\$2,039
2004	\$943,767	390	\$0	0	\$405,344	116	\$135,246	29	\$1,484,357	467	\$3,178
2005	\$448,853	403	\$0	0	\$571,965	145	\$134,295	29	\$1,155,113	484	\$2,387
2006	\$451,390	373	\$0	0	\$551,182	132	\$141,235	24	\$1,143,807	453	\$2,525
2007	\$380,842	366	\$0	0	\$660,865	125	\$223,329	28	\$1,265,036	456	\$2,774
2008	\$538,310	374	\$0	0	\$750,731	146	\$198,070	25	\$1,487,111	462	\$3,219
2009	\$502,848	342	\$0	0	\$747,325	179	\$192,031	39	\$1,442,204	434	\$3,323
2010	\$765,606	433	\$0	0	\$1,655,321	241	\$473,661	48	\$2,894,749	530	\$5,462
2011	\$764,358	413	\$0	0	\$1,176,435	219	\$346,022	48	\$2,287,202	510	\$4,485
2012	\$597,998	379	\$0	0	\$824,435	179	\$617,766	58	\$2,040,199	477	\$4,277
10 Yr Avg.	\$537,637	377	\$0	0	\$699,147	153	\$200,788	33	\$1,437,627	464	\$3,019

Source T. Elison, Fisheries Biologist III, ADF&G Division of Commercial Fisheries, Anchorage, personal communication November 21, 2012.

^a Number of permits that made at least one delivery.

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**APPENDIX A: SELECTED FEDERAL STATUTES AND
REGULATIONS**

SELECTIONS FROM THE MARINE MAMMAL PROTECTION ACT (MMPA)

Title 16: Conservation

Chapter 51: Marine Mammal Protection

Subchapter II: Conservation and Protection of Marine Mammals

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

(b) Exemptions for Alaskan natives

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

(1) is for subsistence purposes; or

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

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

SELECTIONS FROM THE ALASKA NATIONAL INTEREST LANDS CONSERVATION ACT (ANILCA)

Title 16: Conservation

Chapter 51: Alaska National Interest Lands Conservation

Subchapter VIII: Subsistence

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

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

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

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

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

SELECTIONS FROM SUBSISTENCE MANAGEMENT REGULATIONS FOR PUBLIC LANDS IN ALASKA

Title 50: Wildlife and Fisheries

Part 18—Marine Mammals

§ 18.23 Native Exemptions

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

(1) For subsistence purposes, or

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

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

(b) *Restrictions.*

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

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

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

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

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

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

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

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

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

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

Title 50: Wildlife and Fisheries

Part 100—Subsistence Management Regulations For Public Lands In Alaska

§ 100.4 Definitions...

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

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

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

§ 100.27 Subsistence taking of fish.

(a) Applicability.

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

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

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

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

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

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

(ii) Upper Copper River District—The total cash value of salmon per household taken within the Upper Copper River District and exchanged in customary trade between rural residents and individuals other than rural residents may not exceed \$500.00 annually. No more than 50% of the annual household limit may be sold under paragraphs 100.27(c)(11) and (12)

when taken together. These customary trade sales must be immediately recorded on a customary trade recordkeeping form. The recording requirement and the responsibility to ensure the household limit is not exceeded rest with the seller.

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

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

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

**APPENDIX B: SELECTED STATE STATUTES AND
REGULATIONS**

SELECTED STATE STATUTES

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

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

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

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

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

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

(C) may adopt regulations to differentiate among uses;

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

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

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

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

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

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

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

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

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

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

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

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

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

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

(1) the social and economic structure;

(2) the stability of the economy;

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

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

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

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

(7) the seasonal cycle of economic activity;

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

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

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

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

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

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

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

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

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

Sec. 16.05.920. Prohibited conduct generally.

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

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

Sec. 16.05.940. Definitions.

In AS 16.05 - AS 16.40...

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

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

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

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

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

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

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

SELECTED STATE REGULATIONS

5 AAC 01.010. Methods, means, and general provisions. (a) Unless otherwise provided in this chapter, the following are legal types of gear for subsistence fishing:

(1) gear specified in 5 AAC 39.105;

(2) jigging gear, which consists of a line or lines with lures or baited hooks that are operated during periods of ice cover from holes cut in the ice, or from shore ice referred to in 5 AAC 01.220(1), and which are drawn through the water by hand;

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

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

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

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

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

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

(1) Repealed 4/2/88.

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

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

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

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

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

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

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

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

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

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

(l) Repealed 5/15/93.

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

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

Authority: AS 16.05.251 AS 16.05.258

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

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

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

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

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

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

Authority: AS 16.05.251, AS 16.05.258

5 AAC 01.188. Customary trade of subsistence-taken finfish. (a) In the Norton Sound-Port Clarence Area, the customary trade of subsistence-taken finfish is permitted as specified in this section. A person who conducts a customary trade in subsistence-taken finfish under this section must

(1) obtain a customary trade record keeping form from the department before the person conducts the customary trade, and accurately record the cash sale on the form within the 24 hours after the sale occurs; the form requires the reporting of

(A) the date of each sale;

(B) the buyer's name and address;

(C) the species and amount of finfish sold;

(D) the location where the finfish were harvested;

(E) the dollar amount of each sale;

(F) the form of processing used; and

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

(2) return the customary trade record keeping form to the department as prescribed by the department on the form;

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

(b) A person may not sell subsistence-taken finfish under this section for more than \$200 total per household in a calendar year.

(c) A person who receives subsistence-taken finfish in exchange for cash in a customary trade may not resell the fish.

(d) A sale or purchase of finfish authorized under this section, including the delivery of fish to a purchase, may occur only in the Norton Sound-Port Clarence Area. (Eff. 7/1/2007, Register 182)

**APPENDIX C: CUSTOMARY AND TRADITIONAL USE EIGHT
CRITERIA WORKSHEET, THE KUSKOKWIM RIVER
DRAINAGE**

Prepared by the ADF&G Division of Subsistence

January 2001

RC412

CUSTOMARY AND TRADITIONAL USE EIGHT CRITERIA WORKSHEET

Prepared by the Division of Subsistence
Alaska Department of Fish and Game
January 2001

KUSKOKWIM RIVER DRAINAGE:

CHINOOK SALMON
CHUM SALMON
SOCKEYE SALMON
COHO SALMON
PINK SALMON

In 1987 and again in 1993 the Board of Fisheries heard a report from the Division of Subsistence and made a finding that there are customary and traditional uses of Kuskokwim Area salmon. In 1993, the board also identified the amounts necessary for subsistence for all salmon to be 192,000 – 242,000.

- 1. A long term (1 generation or more), consistent pattern of taking, use, and reliance on the fish stock or game population that has been established over a reasonable period of time, excluding interruption by circumstances beyond the user's control, such as unavailability of the fish or game caused by migratory patterns.**

The use of salmon for subsistence by people living in the Kuskokwim Area predates recorded history. Records and journals written by early explorers, traders, and missionaries who came into contact with local residents in the 1800s and early 1900s describes the use of salmon and indicates that salmon were an important subsistence resource for many of the area inhabitants (Zagoskin 1847; Nelson 1899, Spurr 1950, Oswalt 1963, Hinkleman & Vitt 1985, Bendell 1987). Reports prepared by federal fisheries management staff occasionally described the subsistence fishery during the period from the 1920s to statehood (Bower 1923, Pennoyer, Middleton and Morris 1965, U.S. Department of Interior 1931, 1939 and 1940). The Department of Fish and Game has collected subsistence salmon harvest information for most Kuskokwim Area communities since 1960 (Walker and Brown 198, Alaska Department of Fish and Game 1989 – 2000). Descriptions of the harvest and use of salmon in the 1980s are provided in Charnley 1984, Stickney 1984, Wolfe et al. 1984, Stokes 1985, Kari 1985, Andrews and Coffing 1986, Andrews and Peterson 1983 and Coffing 1991.

1

2. A use pattern recurring in specific seasons of the year.

Customarily, salmon were harvested from the time they first arrived in spring until freeze-up in fall. Harvest timing is directly related to run timing of the salmon, which varies along the length of the Kuskokwim. Peak times for harvesting chinook salmon are June 5 through July 5, however, in some years it is mid-July before chinook salmon reach some subsistence fishing areas used by Nikolai residents (Stokes 1985). Sockeye and chum salmon are harvested primarily from June 10 through July 25 and most coho salmon are taken from August 1 through September 15. Some level of coho fishing effort harvests continues well through October in several communities located along Kuskokwim Bay, as well those communities located along the Kuskokwim River drainage. Except for closures related to commercial salmon fishing periods, subsistence salmon fishing in the Kuskokwim Area is open continually.

3. A use pattern consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost.

Salmon were customarily harvested with traps, weirs, spears, seines, dipnets, as well as set and drift gill nets made of seal skin or willow bark. Near the turn of the century, fishwheels were introduced by miners and readily adopted by local fishermen along the middle and upper Kuskokwim River drainage. Today, set and drift gillnets are the most common type of gear used to harvest salmon throughout most of the Kuskokwim Area. Fishwheels continue to be used by some families in the middle and upper Kuskokwim drainage. Spears are used in portions of the Kuskokwim Area including the Kanektok River drainage. Some families who do not have boats or nets rely on rod and reel gear for catching salmon for their family. When residents of Nikolai were notified in 1967 that their customary use of fish traps to take salmon was illegal, people adopted the use of rod and reel gear for harvesting chinook salmon along the Salmon Fork and the Little Tonozona rivers. Rod and reel gear is the most efficient gear in this area for taking chinook salmon.

4. The area in which the noncommercial long term and consistent pattern of taking, use, and reliance upon the fish stock or game population has been established.

Subsistence salmon fishing areas are usually reasonably accessible from a family's community or salmon fishing camp. As local people have done for generations, many families return to summer fishing camps along the river where they base their salmon fishing and processing activities. Many of these camps have been used for generations, however, relocation of fishing camps due to erosion or changes in the river channel are common (Coffing 1991). Some fishcamps are located relatively close to a family's permanent residence while others are located many miles away. Residents of some communities located away from good fishing waters move to fishing camps along the Kuskokwim River or its tributaries during the summer fishing season. For example, residents of three communities located along the Johnson River, west of Bethel, move to fishing sites located along the Kuskokwim River. Residents of Nikolai move to remote fishing sites 190 miles from their community to take chinook salmon near the confluence of the North and South forks of the Kuskokwim River, along the Salmon River, and along the Little Tonozona River. Salmon are also harvested near where people are camped while involved in other subsistence activities such as berry picking and moose hunting.

5. The means of handling, preparing, preserving, and storing fish or game which has been traditionally used by past generations, but not excluding recent technological advances where appropriate.

Most of the chinook, sockeye, and chum salmon are processed by drying and smoking. Many households own or share a smokehouse and other necessary processing equipment and facilities. Coho salmon are also dried, however, because of unfavorable drying weather during August and September when coho are available, drying and smoking is difficult. Freezing is another common way of preserving salmon. Household freezing capacity is usually limited, therefore, this method is used primarily for coho salmon. Chinook, sockeye, and coho are also preserved by salting and canning. During the fishing season, fresh salmon are a common and frequent food at many meals. Dried salmon is eaten daily throughout most of the year and is a preferred source of lightweight high-energy food which is taken along on most hunting, trapping, and fishing trips.

6. A use pattern which includes the handing down of knowledge of fishing or hunting skills, values, and lore from generation to generation.

Knowledge and skills associated with subsistence salmon fishing are taught by involving young or less experienced individuals in all aspects of salmon fishing, equipment repair and maintenance, and processing. Elder family members often oversee salmon production activities and direct younger family members who cooperatively share in production tasks. Children are often involved in the activities and learn the skills necessary for becoming successful fishers and processors by assisting experienced adults. Men are the primary harvesters while females are the primary processors.

7. A pattern of taking, use, and reliance where the harvest effort or products of that harvest are distributed or shared, including customary trade, barter, and gift-giving.

Households, family groups consisting of related individuals, and complex networks of extended families share fishing camps as well as harvesting and processing responsibilities. Family members unable to actively participate in harvest or production activities provide assistance in the form of fishing gear, gasoline, processing equipment, or other necessary items. Distribution of salmon generally occurs along the same kinship lines which serve to affiliate salmon production groups. Salmon are also shared with friends, elders, and relatives living in other communities.

8. A pattern that includes taking, use, and reliance for subsistence purposes upon a wide diversity of the fish and game resources and that provides substantial economic, cultural, social, and nutritional elements of the subsistence way of life.

Households harvesting salmon for subsistence tend to harvest a wide variety of resources. Freshwater fish, waterfowl, small game, furbearers, and plants are also harvested by most communities. For many Kuskokwim Area communities, salmon represent more than half of the total amount (edible weight) of subsistence resources harvested. In some communities, 70 percent of the households are actively involved in harvesting and processing subsistence salmon.

Examples of per capita harvests of salmon in the Kuskokwim Area are: 613 pounds in Chuathbaluk (1982), 446 in Kwethluk (1988), 342 in Quinhagak (1982), 288 in Nunapitchuk (1983), 211 in Sleetmute (1982), 113 in Tununak (1986).

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KUSKOKWIM AREA SUBSISTENCE SALMON HARVESTS 1990 - 1999.

	District 1 (Lower River)			District 2 (Middle River)			Upper River (All Above District 2)		
	Minimum	Average	High	Minimum	Average	High	Minimum	Average	High
Chinook	52,795	69,207	78,956	7,181	9,357	12,754	3,082	4,197	4,750
Sockeye	21,671	30,733	42,883	2,183	3,315	5,089	3,121	5,156	7,445
Coho	18,979	26,725	43,362	2,010	2,926	4,448	2,976	5,153	7,112
Chum	32,790	58,001	93,743	3,916	10,304	19,132	2,297	6,837	13,633
ALL SPECIES	153,722	184,667	233,946	16,097	25,902	34,691	15,202	21,343	30,583

	District 2 and Upper River			District 4 (Quinhagak)			District 5 (Goodnews/Platinum)		
	Minimum	Average	High	Minimum	Average	High	Minimum	Average	High
Chinook	10,263	13,554	17,480	2,746	3,698	6,013	374	666	917
Sockeye	5,572	8,471	12,534	400	1,173	1,951	253	750	1,282
Coho	4,986	8,079	10,295	1,264	2,427	4,174	305	853	1,828
Chum	7,001	17,142	32,765	600	1,459	3,234	133	325	1,006
ALL SPECIES	31,299	47,245	65,274	5,853	8,757	15,372	1,404	2,594	4,176

	KUSKOKWIM RIVER			REMAINDER OF KUSKOKWIM AREA			TOTAL KUSKOKWIM AREA		
	Minimum	Average	High	Minimum	Average	High	Minimum	Average	High
Chinook	64,795	82,762	96,436	3,535	4,511	6,699	68,686	87,272	100,159
Sockeye	27,791	39,204	52,984	823	2,073	3,420	28,622	41,276	56,404
Coho	24,864	34,803	50,370	1,682	3,416	5,922	27,239	38,220	55,620
Chum	39,970	75,143	126,508	1,006	3,004	4,961	40,976	78,147	131,469
ALL SPECIES	188,476	231,912	293,554	7,588	13,003	20,988	198,466	244,915	314,522

**APPENDIX D: CUSTOMARY AND TRADITIONAL USE EIGHT
CRITERIA WORKSHEET, THE REMAINDER OF THE
KUSKOKWIM AREA**

Prepared by the ADF&G Division of subsistence

January 2001

CUSTOMARY AND TRADITIONAL USE EIGHT CRITERIA WORKSHEET

Prepared by the Division of Subsistence
Alaska Department of Fish and Game
January 2001

KUSKOKWIM AREA EXCLUDING THE KUSKOKWIM RIVER DRAINAGE: ALL SALMON (REMAINDER OF KUSKOKWIM AREA)

In 1987 and again in 1993 the Board of Fisheries heard a report from the Division of Subsistence and made a finding that there are customary and traditional uses of Kuskokwim Area salmon. In 1993, the board also identified the amounts necessary for subsistence for all salmon to be 192,000 – 242,000.

1. **A long term (1 generation or more), consistent pattern of taking, use, and reliance on the fish stock or game population that has been established over a reasonable period of time, excluding interruption by circumstances beyond the user's control, such as unavailability of the fish or game caused by migratory patterns.**

The use of salmon for subsistence by people living in the Kuskokwim Area predates recorded history. Records and journals written by early explorers, traders, and missionaries who came into contact with local residents in the 1800s and early 1900s describes the use of salmon and indicates that salmon were an important subsistence resource for many of the area inhabitants (Zagoskin 1847; Nelson 1899, Spurr 1950, Oswalt 1963, Hinkleman & Vitt 1985, Bendell 1987). Reports prepared by federal fisheries management staff occasionally described the subsistence fishery during the period from the 1920s to statehood (Bower 1923, Pennoyer, Middleton and Morris 1965, U.S. Department of Interior 1931, 1939 and 1940). The Department of Fish and Game has collected subsistence salmon harvest information for most Kuskokwim Area communities since 1960 (Walker and Brown 198, Alaska Department of Fish and Game 1989 – 2000). Descriptions of the harvest and use of salmon in the 1980s are provided in Chamley 1984, Stickney 1984, Wolfe et al. 1984, Stokes 1985, Kari 1985, Andrews and Coffing 1986, Andrews and Peterson 1983 and Coffing 1991.

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2. A use pattern recurring in specific seasons of the year.

Customarily, salmon were harvested from the time they first arrived in spring until freeze-up in fall. Harvest timing is directly related to run timing of the salmon, which varies along the length of the Kuskokwim. Peak times for harvesting chinook salmon are June 5 through July 5, however, in some years it is mid-July before chinook salmon reach some subsistence fishing areas used by Nikolai residents (Stokes 1985). Sockeye and chum salmon are harvested primarily from June 10 through July 25 and most coho salmon are taken from August 1 through September 15. Some level of coho fishing effort harvests continues well through October in several communities located along Kuskokwim Bay, as well those communities located along the Kuskokwim River drainage. Except for closures related to commercial salmon fishing periods, subsistence salmon fishing in the Kuskokwim Area is open continually.

3. A use pattern consisting of methods and means of harvest which are characterized by efficiency and economy of effort and cost.

Salmon were customarily harvested with traps, weirs, spears, seines, dipnets, as well as set and drift gill nets made of seal skin or willow bark. Near the turn of the century, fishwheels were introduced by miners and readily adopted by local fishermen along the middle and upper Kuskokwim River drainage. Today, set and drift gillnets are the most common type of gear used to harvest salmon throughout most of the Kuskokwim Area. Fishwheels continue to be used by some families in the middle and upper Kuskokwim drainage. Spears are used in portions of the Kuskokwim Area including the Kanekok River drainage. Some families who do not have boats or nets rely on rod and reel gear for catching salmon for their family. When residents of Nikolai were notified in 1967 that their customary use of fish traps to take salmon was illegal, people adopted the use of rod and reel gear for harvesting chinook salmon along the Salmon Fork and the Little Tonozona rivers. Rod and reel gear is the most efficient gear in this area for taking chinook salmon.

4. The area in which the noncommercial long term and consistent pattern of taking, use, and reliance upon the fish stock or game population has been established.

Subsistence salmon fishing areas are usually reasonably accessible from a family's community or salmon fishing camp. As local people have done for generations, many families return to summer fishing camps along the river where they base their salmon fishing and processing activities. Many of these camps have been used for generations, however, relocation of fishing camps due to erosion or changes in the river channel are common (Coffing 1991). Some fishcamps are located relatively close to a family's permanent residence while others are located many miles away. Residents of some communities located away from good fishing waters move to fishing camps along the Kuskokwim River or its tributaries during the summer fishing season. For example, residents of three communities located along the Johnson River, west of Bethel, move to fishing sites located along the Kuskokwim River. Residents of Nikolai move to remote fishing sites 130 miles from their community to take chinook salmon near the confluence of the North and South forks of the Kuskokwim River, along the Salmon River, and along the Little Tonozona River. Salmon are also harvested near where people are camped while involved in other subsistence activities such as berry picking and moose hunting.

5. The means of handling, preparing, preserving, and storing fish or game which has been traditionally used by past generations, but not excluding recent technological advances where appropriate.

Most of the chinook, sockeye, and chum salmon are processed by drying and smoking. Many households own or share a smokehouse and other necessary processing equipment and facilities. Coho salmon are also dried, however, because of unfavorable drying weather during August and September when coho are available, drying and smoking is difficult. Freezing is another common way of preserving salmon. Household freezing capacity is usually limited, therefore, this method is used primarily for coho salmon. Chinook, sockeye, and coho are also preserved by salting and canning. During the fishing season, fresh salmon are a common and frequent food at many meals. Dried salmon is eaten daily throughout most of the year and is a preferred source of lightweight high-energy food which is taken along on most hunting, trapping, and fishing trips.

6. A use pattern which includes the handing down of knowledge of fishing or hunting skills, values, and lore from generation to generation.

Knowledge and skills associated with subsistence salmon fishing are taught by involving young or less experienced individuals in all aspects of salmon fishing, equipment repair and maintenance, and processing. Elder family members often oversee salmon production activities and direct younger family members who cooperatively share in production tasks. Children are often involved in the activities and learn the skills necessary for becoming successful fishers and processors by assisting experienced adults. Men are the primary harvesters while females are the primary processors.

7. A pattern of taking, use, and reliance where the harvest effort or products of that harvest are distributed or shared, including customary trade, barter, and gift-giving.

Households, family groups consisting of related individuals, and complex networks of extended families share fishing camps as well as harvesting and processing responsibilities. Family members unable to actively participate in harvest or production activities provide assistance in the form of fishing gear, gasoline, processing equipment, or other necessary items. Distribution of salmon generally occurs along the same kinship lines which serve to affiliate salmon production groups. Salmon are also shared with friends, elders, and relatives living in other communities.

8. A pattern that includes taking, use, and reliance for subsistence purposes upon a wide diversity of the fish and game resources and that provides substantial economic, cultural, social, and nutritional elements of the subsistence way of life.

Households harvesting salmon for subsistence tend to harvest a wide variety of resources. Freshwater fish, waterfowl, small game, furbearers, and plants are also harvested by most communities. For many Kuskokwim Area communities, salmon represent more than half of the total amount (edible weight) of subsistence resources harvested. In some communities, 70 percent of the households are actively involved in harvesting and processing subsistence salmon.

Examples of per capita harvests of salmon in the Kuskokwim Area are: 613 pounds in Chuathbaluk (1982), 446 in Kwethiuk (1986), 342 in Quinhagak (1982), 288 in Nunapitchuk (1983), 211 in Sleetmute (1982), 113 in Tununak (1986).

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KUSKOKWIM AREA SUBSISTENCE SALMON HARVESTS 1990 - 1999.

	District 1 (Lower River)		District 2 (Middle River)		Upper River (All Above District 2)	
	Minimum	Average	High	Minimum	Average	High
Chinook	52,795	69,207	78,956	7,181	9,357	12,754
Sockeye	21,671	30,733	42,883	2,183	3,315	5,089
Coho	18,979	26,725	43,362	2,010	2,926	4,448
Chum	32,790	58,001	93,743	3,916	10,304	19,132
ALL SPECIES	153,722	184,667	233,946	16,097	25,902	34,691

	District 2 and Upper River		District 4 (Quinhagak)		District 5 (Goodnews/Platinum)	
	Minimum	Average	High	Minimum	Average	High
Chinook	10,263	13,554	17,480	2,746	3,698	6,013
Sockeye	5,572	8,471	12,534	400	1,173	1,951
Coho	4,986	8,079	10,295	1,264	2,427	4,174
Chum	7,001	17,142	32,765	600	1,459	3,234
ALL SPECIES	31,299	47,245	65,274	5,853	8,757	15,372

	KUSKOKWIM RIVER		REMAINDER OF KUSKOKWIM AREA		TOTAL KUSKOKWIM AREA	
	Minimum	Average	High	Minimum	Average	High
Chinook	64,795	82,762	96,436	68,686	87,272	100,159
Sockeye	27,791	39,204	52,984	28,622	41,276	56,404
Coho	24,864	34,803	50,370	27,239	38,220	55,620
Chum	39,970	75,143	126,508	40,976	78,147	131,469
ALL SPECIES	188,476	231,912	293,554	198,466	244,915	314,522

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KUSKOKWIM AREA

5 AAC 01.286 CUSTOMARY AND TRADITIONAL SUBSISTENCE USES OF FISH STOCKS. (a) The Alaska Board of Fisheries (board) finds that the following fish stocks are customarily and traditionally taken or used for subsistence:

- (1) Salmon, halibut, Pacific cod and all other finfish except as specified in (2) of this section, in the Kuskokwim Area; and
- (2) herring and herring roe, along the coast between the westernmost tip of the Nasknoat Peninsula; and the terminus of the Ishowik River, and along the coast of Nunivak Island.

The department recommends repealing the above language and adopting the substitute language below:

Range based on low harvest and median harvest of last ten years:



5 AAC 01.286 CUSTOMARY AND TRADITIONAL SUBSISTENCE USES OF FISH STOCKS AMOUNTS NECESSARY FOR SUBSISTENCE USES. (a) The Alaska Board of Fisheries (board) finds that the following fish stocks are customarily and traditionally taken or used for subsistence:

- (1) Halibut, Pacific cod and all other finfish except as specified in (2) of this section, in the Kuskokwim Area; and
- (2) Chinook salmon, chum salmon, sockeye salmon, coho salmon, and pink salmon in the Kuskokwim River drainage
- (3) Salmon in the remainder of the Kuskokwim Area
- (4) herring and herring roe, along the coast between the westernmost tip of the Nasknoat Peninsula; and the terminus of the Ishowik River, and along the coast of Nunivak Island.

(b) The Board finds that the following amounts are reasonably necessary for subsistence uses

- (1) 64,500-83,000 chinook salmon in the Kuskowkim River drainage
- (2) 39,500-75,500 chum salmon in Kuskowkim River drainage
- (3) 27,500-39,500 sockeye salmon in the Kuskowkim River drainage
- (4) 24,500- 35,000 coho salmon in the Kuskowkim River drainage
- (5) 7,500- 13,500 salmon in the remainder of the Kuskokwim Area