

**Fishery Data Series No. 11-07**

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**Subsistence and Personal Use Salmon Harvests in the  
Alaska Portion of the Yukon River Drainage, 2009**

by

**Deena M. Jallen**

and

**Toshihide Hamazaki**

April 2011

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Alaska Department of Fish and Game

Divisions of Sport Fish and Commercial Fisheries



## Symbols and Abbreviations

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<b>Weights and measures (metric)</b>		<b>General</b>		<b>Mathematics, statistics</b>	
centimeter	cm	Alaska Administrative Code	AAC	<i>all standard mathematical signs, symbols and abbreviations</i>	
deciliter	dL	all commonly accepted abbreviations	e.g., Mr., Mrs., AM, PM, etc.	alternate hypothesis	$H_A$
gram	g	all commonly accepted professional titles	e.g., Dr., Ph.D., R.N., etc.	base of natural logarithm	$e$
hectare	ha	at	@	catch per unit effort	CPUE
kilogram	kg	compass directions:		coefficient of variation	CV
kilometer	km	east	E	common test statistics	(F, t, $\chi^2$ , etc.)
liter	L	north	N	confidence interval	CI
meter	m	south	S	correlation coefficient (multiple)	R
milliliter	mL	west	W	correlation coefficient (simple)	r
millimeter	mm	copyright	©	covariance	cov
		corporate suffixes:		degree (angular)	$^\circ$
<b>Weights and measures (English)</b>		Company	Co.	degrees of freedom	df
cubic feet per second	ft <sup>3</sup> /s	Corporation	Corp.	expected value	$E$
foot	ft	Incorporated	Inc.	greater than	>
gallon	gal	Limited	Ltd.	greater than or equal to	$\geq$
inch	in	District of Columbia	D.C.	harvest per unit effort	HPUE
mile	mi	et alii (and others)	et al.	less than	<
nautical mile	nmi	et cetera (and so forth)	etc.	less than or equal to	$\leq$
ounce	oz	exempli gratia	e.g.	logarithm (natural)	ln
pound	lb	(for example)		logarithm (base 10)	log
quart	qt	Federal Information Code	FIC	logarithm (specify base)	log <sub>2</sub> , etc.
yard	yd	id est (that is)	i.e.	minute (angular)	'
		latitude or longitude	lat. or long.	not significant	NS
<b>Time and temperature</b>		monetary symbols (U.S.)	\$, ¢	null hypothesis	$H_0$
day	d	months (tables and figures): first three letters	Jan, ..., Dec	percent	%
degrees Celsius	°C	registered trademark	®	probability	P
degrees Fahrenheit	°F	trademark	™	probability of a type I error (rejection of the null hypothesis when true)	$\alpha$
degrees kelvin	K	United States (adjective)	U.S.	probability of a type II error (acceptance of the null hypothesis when false)	$\beta$
hour	h	United States of America (noun)	USA	second (angular)	"
minute	min	U.S.C.	United States Code	standard deviation	SD
second	s	U.S. state	use two-letter abbreviations (e.g., AK, WA)	standard error	SE
				variance	
<b>Physics and chemistry</b>				population	Var
all atomic symbols				sample	var
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				

***FISHERY DATA SERIES NO. 11-07***

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ALASKA PORTION OF THE YUKON RIVER DRAINAGE, 2009**

by

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April 2011

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*This document should be cited as:*

*Jallen, D. M., and T. Hamazaki. 2011. Subsistence and personal use salmon harvests in the Alaska portion of the Yukon River drainage, 2009. Alaska Department of Fish and Game, Fishery Data Series No. 11-07, Anchorage.*

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## ABSTRACT

This annual study estimates subsistence and personal use salmon harvest within the Alaska portion of the Yukon River drainage. Most Yukon Area communities have no regulatory requirements to report their subsistence salmon harvest. For these communities, the Alaska Department of Fish and Game used a voluntary survey program. Harvest information was collected through postseason household interviews, follow-up telephone interviews, postal questionnaires, and harvest calendars. Stratified random sampling techniques were used to select Yukon Area households to be interviewed. In 2009 a total of 1,036 households were contacted in 33 communities. Data from surveyed households were expanded to estimate the harvest of unsurveyed households. In more accessible portions of the Yukon Area, fishermen are required to document their harvest on a subsistence or personal use permit. In 2009, 487 subsistence and personal use permits were issued, with 97% returned. Of these returned permits, 245 reported fishing. This report also documents subsistence fish given to households from various test fish projects. The total subsistence and personal use harvest throughout the Yukon Area was estimated to be 33,932 Chinook *Oncorhynchus tshawytscha*, 80,847 summer chum *O. keta*, 66,197 fall chum *O. keta*, and 16,076 coho *O. kisutch* salmon. The primary fishing gear types used were set gillnets (45%), drift gillnets (48%), and fish wheels (6%). Approximately 1,495 households own 4,220 dogs, and 208 households fed an estimated 66,837 salmon to dogs.

Key words: Tanana River, Yukon River, Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, and coho salmon *O. kisutch*, northern pike *Esox lucius*, inconnu *Stenodus leucichthys*, whitefish *Prosopium* spp., harvest, personal use, subsistence, amount necessary for subsistence.

## INTRODUCTION

The Yukon Area includes all waters of Alaska within the Yukon River drainage and all coastal waters of Alaska from Point Romanof southward to the Naskonat Peninsula (Figure 1). The difference between the reporting groups “Yukon River” and “Yukon Area” is that the Yukon Area includes the Coastal District. For management purposes, the Yukon Area is divided into 7 districts and 10 subdistricts. The Lower Yukon Area consists of coastal waters in the Yukon Area and the Yukon River drainage from its mouth to Old Paradise Village (river mile 306) and is composed of Districts 1, 2, and 3. The Upper Yukon Area consists of the Yukon River drainage upstream of Old Paradise Village to the Canadian border (river mile 1,224) and is divided into Districts 4, 5, and 6. The Coastal District includes the remainder of coastal Yukon Area waters not included in District 1.

The Yukon River drainage supports five species of Pacific salmon: Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, coho *O. kisutch*, pink *O. gorbuscha*, and sockeye *O. nerka* salmon. The majority of subsistence and personal use harvests are made up of Chinook, chum and coho salmon. The chum salmon return consists of two temporally and genetically distinct stocks: early (summer chum) and late (fall chum). Subsistence salmon fishing activities in the Yukon Area typically begin in late May and continue through early October. Salmon fishing in May and October is highly dependent upon river ice conditions.

Residents of the communities in the Yukon River drainage are primarily of Yupik Eskimo and Athabaskan Indian descent. Excluding the greater Fairbanks area (approximately 94,000 people), the most recent census indicates the rural resident population in 2009 was approximately 22,400 people (Williams 2010). The recent 5-year (2004–2008) average population of Yukon Area rural residents within the Denali Borough, Southeast Fairbanks, Yukon-Koyukuk, and Wade Hampton Census Areas, excluding the greater Fairbanks area, has remained relatively stable at approximately 22,000 people.

Yukon Area communities have a long tradition of harvesting salmon for subsistence use. Fishing activities are usually based from a fish camp or a home community. Extended family groups, representing two or more households, often work together to harvest, cut, and preserve salmon for

subsistence use. Some households from Yukon River tributary communities, such as Shageluk and Venetie, may operate or share in the operation of fish camps along the mainstem Yukon River (Figure 1). Subsistence salmon harvested for human consumption are commonly dried, smoked, or frozen. There is usually little wastage of fish taken for subsistence purposes, although damp weather may cause some drying fish to spoil and some fish are lost to disease (e.g. *Ichthyophonus*) or predation (e.g. birds and/or bears).

In addition to human consumption, salmon are fed to dogs, which are used for recreation, transportation and as haul animals. Small Chinook (“jacks”), summer chum, fall chum and coho salmon are primarily harvested to feed dogs in the Upper Yukon Area. Most of the subsistence salmon used for dog food are dried summer chum salmon or “cribbed” (frozen in the open air) fall chum and coho salmon. The practice of keeping sled dogs is more common in the Upper Yukon Area than in the Lower Yukon Area. During the active fishing season all areas feed scraps from salmon processing to dogs. Relatively few whole fresh salmon are fed to dogs in the Lower Yukon Area, but due to the larger numbers of dogs in the Upper Yukon Area, harvesting salmon for dogs throughout the summer is more common. A gradual reduction in the need for salmon as dog food began around 1930, when airplanes began replacing sled dogs as the primary mail and supply carrier. This decline accelerated in the 1960s with the introduction of snow machines to Interior Alaska. Beginning in the early 1980s, there was a renewed interest in recreational use and racing of sled dogs, thereby increasing the number of subsistence salmon harvested for dog food. From 1991 to present day there has been a decline in the number of households with dog teams. The decline is due in part to poor chum salmon runs from 1998 to 2002 combined with the steep rise in cost of equipment (boat, motor, nets, fuel) needed to harvest fish for dog food (Andersen and Scott 2010).

Subsistence and personal use fishermen in the Yukon Area primarily use drift gillnets, set gillnets, and fish wheels to harvest salmon. Set gillnets are used throughout the Yukon Area, whereas under state regulations, drift gillnets are only allowed from the mouth of the Yukon River to approximately 18 miles below the community of Galena (River Mile 530) to harvest salmon. Drift gillnets are allowed under federal permits in Subdistricts 4B and 4C for a portion of the summer during regulatory openings. Although fish wheels are a legal gear type for subsistence fishing throughout the drainage, they are essentially used only in the Upper Yukon Area. Water conditions and fishing locations are more suitable for the operation of fish wheels in the Upper Yukon Area, which also contains a better supply of logs and young spruce trees used for the raft, axle, axle stanchion, lead, and basket construction.

Commercial fishing occurs in portions of the Yukon Area and residents may participate in both commercial and subsistence salmon fishing. In some areas, subsistence fishing is separated from commercial fishing by closures before, during, and after commercial periods, while in other areas subsistence fishing and commercial fishing may occur concurrently. Separation of fishing times allows for better enforcement of commercial regulations and management of the fisheries. Currently, salmon or their eggs harvested during subsistence openings cannot be legally bought or sold under the State of Alaska regulations. However, commercially harvested salmon may be retained for subsistence use.

Subsistence salmon fishing in the Yukon Area primarily occurs in nonpermit areas. Along the entire Tanana River and portions of the Yukon River that are accessible from the road system, fishing households must obtain a subsistence or personal use permit and submit records of their harvests (Figure 1). Subsistence permits are used to document harvest data because of the transient nature of these fishermen and the fact that most do not reside in a surveyed community.

A personal use fishery was implemented in 1986 and currently takes place in the Fairbanks Nonsubsistence Area (Figure 2). The management area was established in 1992 (Appendix C) due to the heavy demand urban fishermen potentially could place on the resource. In this nonsubsistence area, fishermen must possess a personal use household permit and a resident sport fish license. State regulations dictate that personal use fishing has a lower priority than subsistence fishing. Similar to subsistence fishing permits, data collected from personal use permits allow managers to track harvest.

Annual documentation of the subsistence salmon harvest (Appendices A1–A4) is necessary to determine if sufficient salmon are returning to the Yukon Area for escapement and subsistence requirements and if enough fishing opportunities are provided to meet subsistence needs (Appendices A5–A8). State regulations dictate that subsistence is the highest priority use of salmon and subsistence is a primary consideration in fishery management actions. Since 1961, the Alaska Department of Fish and Game (ADF&G) has collected information on subsistence salmon harvest and use in the Yukon Area (ADF&G 2002). The primary method of estimating harvest is the annual subsistence salmon harvest survey conducted by ADF&G. Using a combination of survey and permit information, this report documents the estimated subsistence and personal use harvests within the Alaska portion of the Yukon River drainage.

## **OBJECTIVES**

The objectives of the study include the following:

1. Estimate and document the 2009 Yukon Area subsistence and personal use salmon harvest by species and harvest area;
2. Estimate and document the 2009 Yukon Area subsistence salmon “use” by species and harvest area;
3. Identify Yukon Area fishing households and the number of people in each household;
4. Determine the gear types used by Yukon Area subsistence and personal use fishermen;
5. Include numbers of fish provided to communities for subsistence use that originated from Yukon Area test fishery programs;
6. Estimate the number of dogs, number of households with dogs, number of households that feed salmon to dogs, and the number of salmon fed to dogs;
7. Estimate the number of freshwater fish species (nonsalmon) harvested by the fishermen in communities which participate in the Yukon Area subsistence and personal use salmon fisheries.

Additional objectives include documentation of the number of households in surveyed communities, relative percent success in meeting their subsistence salmon needs, number of salmon “lost” and not available for human consumption, and review of comments and concerns conveyed by subsistence users.

## **METHODS**

### **DEFINITION OF SUBSISTENCE AND PERSONAL HARVEST**

Total subsistence and personal harvest in the Alaska portion of the Yukon River drainage includes fish harvested for subsistence and personal use for direct personal or family consumption (Appendix C), fish distributed to individuals from various test fisheries, and “commercial related” fish harvested commercially but not sold and retained for subsistence and personal use. A second category of “commercial related” includes female salmon carcass taken commercially for roe product and returned to the fisherman or given away by the commercial buyer/processor and are not included in subsistence harvest. This roe harvest is documented on the commercial fish tickets as fish sold.

### **HARVEST SURVEY INSTRUMENTS**

Total number of salmon harvested for subsistence and personal use fisheries was estimated using the permit programs, harvest calendars and postcard, and the household survey. District 5 contains survey and permit areas (Figure 2). A combination of data collection methods was used to provide a more complete assessment of harvests in this area. Survey information was primarily used to estimate community harvest in Stevens Village. In unsurveyed District 5 communities (Rampart, Circle, Eagle) unexpanded permit information was used to assess harvest.

#### **Permit Program**

In communities along the entire Tanana River drainage (District 6) and where the Yukon River is accessible by the Alaska Highway road system (District 5), households must obtain subsistence or personal use fishing permits issued at the ADF&G offices in Fairbanks, Delta Junction, and Tok. In addition, permit applications for the current season were mailed to all fishermen who returned their permits from the previous season. For residents of communities outside the Fairbanks area, subsistence permit applications were mailed with a postage paid return envelope and dates a department representative would visit their community. In 2009, permit issuing trips were conducted in the communities of Central, Circle, Delta Junction, Dot Lake, Eagle, Manley Hot Springs, Minto, Nenana, Northway, Rampart, Tanacross, and Tok (Figure 1).

Permit holders were required to keep a record of their daily fish harvest on the permit and return it to ADF&G within 10 days of the expiration date (October 15 for salmon and December 31 for non-salmon permits). Households that did not report their harvest were mailed up to two reminder letters. Households that did not respond to the reminder letters were contacted by telephone.

Harvests of permit communities were estimated by summing harvests of all permit holders who returned their permit, returned a completed reminder letter, or verbally reported their harvest information. These results were not expanded to estimate harvest by permit holders who did not return their permits.

Stevens Village is uniquely situated just outside the boundary of a permit area on the Yukon River. Many residents acquire a permit to fish between the Haul Road Bridge and the boundary downstream of the community, however, most residents fish outside of the permit area. Consequently, Stevens Village harvest is estimated by using both the permit and the household survey. The household survey is used to estimate subsistence harvest, while the permit harvest

number is reported in the permit total. The overlap between subsistence and permit areas can occasionally cause inconsistencies between numbers reported on survey and permit tables. In these instances, readers should be attentive of footnotes accounting for differences.

Permits in the SE permit area of Subdistrict 5-D (Figure 1) near Eagle are issued as SE or SEU to differentiate harvest above (SEU) and below (SE) the Eagle sonar site which began operations in 2005. Follow-up phone calls were made to fishermen postseason to verify gear types and locations of harvest by species. Salmon harvested in the SEU area were subtracted from sonar estimates for Chinook and fall chum salmon when determining the U.S./Canadian border passage.

### **Subsistence Harvest Calendars and Postcards**

Prior to the salmon fishing season, subsistence harvest calendars were distributed to households in surveyed communities from the Coastal District, Districts 1–4 and a portion of District 5. Calendars, in which fishermen record their daily salmon harvest by species, were primarily used to help fishermen remember their harvest numbers and provide information on timing of subsistence harvests by species.

In May 2009, calendars were mailed to all households except those in the *Do Not Fish* category. Prior to 2002, calendars were mailed to all households. In 2002, in order to reduce expenses and increase the return rate, calendars were mailed only to those households who had returned a calendar at least once in the previous 10 years (Brase and Hamner 2003). In 2003, with additional funding, calendars were sent to all households (Busher and Hamazaki 2005). Beginning in 2004, calendars were mailed to all identified subsistence salmon fishing households and to households with unknown subsistence salmon fishing habits. Extra calendars were also made available upon request. In an effort to increase the number of calendars returned during community surveys, fliers were sent to community post offices, stores, schools, or city offices with fax numbers to remind fishermen to have their harvest calendars available for the surveyors. Everyone who returned a properly completed 2009 harvest calendar before January 1, 2010, became eligible to win one of six \$100 lottery prizes.

Postcards to document Arctic lamprey *Lampetra camtschatica* harvests (Figure 3) were mailed to every household in 9 lower river communities in November 2008. Households were asked to record the Arctic lamprey harvest taken from October to December 2008. The 2009 non-salmon portion of the survey asked about Arctic lamprey harvested in the previous winter as well, as harvest usually occurs after fishermen in the communities are interviewed.

## **POSTSEASON SUBSISTENCE HOUSEHOLDS SURVEYS**

### **Survey Design**

The primary objective of the subsistence households survey is to estimate the total number of salmon harvested for subsistence and personal use by each community. The survey is based on stratified random sample design (Cochran 1977). In this design, the salmon harvest of a household is a primary sampling unit, and each household is stratified into five use groups based on the level of harvest: the *Unknown*, *Do Not Fish*, *Light Harvester*, *Medium Harvester*, and *Heavy Harvester*. Of those 5 groups, 100% of the households in the *Unknown*, *Medium*, and *Heavy* use groups were selected for surveying, and 30% of the households in the *Light* and *Do Not Fish* use groups were selected to be sampled. Percentage of the *Light* and *Do Not Fish* use groups was increased to 50% in Emmonak, Holy Cross, Pilot Station, and Tanana to improve the

precision of harvest estimates in these larger communities. When any stratum sample size contained 5 or fewer households, the sample size was made equal to the stratum size. In communities with less than 40 households, all households were surveyed (Appendix A14).

It should be noted that a fishing household is defined as “a household that participated in subsistence fishing activities, such as harvesting and processing fish,” and number of fish harvested by a fishing household is defined as “the number of fish harvested or processed by the household for subsistence purposes.” Frequently, several households fish together at a fish camp as a group, not only for themselves, but also for other nonfishing households (e.g., their parents or relatives). Some households harvest salmon, while some only process the catch (i.e., clean, cut, dry, smoke). In these cases, fish brought home by each household corresponds to fish harvested by the household. During the interview a fishing household was identified by the question: “Did anyone in your household harvest salmon for subsistence use OR keep fish for subsistence use from commercial fishing?” (survey question 3: Figure 4) The surveyor was instructed to clarify that “harvest” means any participation in the subsistence fishery, such as cutting fish. To determine the total use of salmon by each household, questions were asked about whether the household shared or received fish.

### **Households Update and Stratification**

A list of the Yukon Area households (*families* database) was updated annually using previous years’ survey information. Prior to the community survey, the list was further updated by contacting knowledgeable individuals in each community. Community census lists, telephone and utility lists, and the Alaska Permanent Fund Dividend application list were also used in creating and maintaining the ADF&G *families* database. Beginning in 2004, the list was reviewed and updated annually by Subsistence Assistants, local knowledgeable residents employed by the Yukon River Drainage Fisheries Association (YRDFA) to assist in the surveys. Households that lived outside of the survey areas but traveled to the Yukon River to fish in or near a surveyed community were included on the household list in the community nearest their fishing location.

The updated households were stratified into 5 use groups based on harvest level: *Unknown*, *Do Not Fish*, *Light*, *Medium*, or *Heavy*. For each household, the most recent 2-year harvest average from the previous 5 years (total harvest of Chinook, chum and coho salmon combined) was calculated. Households with an average harvest of 1 to 100 salmon were classified to *Light*, 101 to 500 salmon to *Medium*, and greater than 500 salmon to *Heavy*. Households with no salmon harvest were classified to *Do Not Fish*, and those with no harvest information were classified to *Unknown* (Appendix A14). When two recent years of harvest data were unavailable, the household’s previous year’s use group designation remained unchanged.

### **Household Survey Questionnaire**

To keep data comparable between years, the subsistence survey questions have been generally consistent from year to year (Figure 4). The questionnaire asked total number of salmon harvested by the household (questions 5 and 7), number of salmon used (question 12), fishing gear used (question 8), and area fished (question 7). To determine distribution of salmon within a community, the survey also asked the number of households that fished together (question 6), total number of the group’s catch (question 5), the number of salmon given to other families (question 11), the number of salmon received from other households, from commercial harvest, or from a test fishery project (question 13), and the number of salmon harvested for dog food (questions 18, 19, 20).

Households were also asked to assess at what level their subsistence salmon needs were met for each species (question 14). This question was changed from asking about the percentage of needs met to a more quantitative question about how many of each species a household usually harvests. Needs met was calculated by comparing the number of salmon harvested/received to the number that the household said they usually harvested/received (received is used in the case of nonfishing households). A space for comments was included for surveyors to identify whether a household normally harvested or used a species, as opposed to those who did not harvest a particular species (usually get zero). Examples of zero harvests include a species that may not be traditionally fished in a particular area (e.g., coho salmon are not commonly fished on the mainstem Yukon River above the community of Tanana because of species distribution) or the respondent may not have wished to harvest the species (e.g., the summer chum salmon run is usually sufficient, so the household does not fish for fall chum salmon). Households were also asked about their harvest of pink and sockeye salmon and miscellaneous fish species (question 15). For species that are commonly harvested in the winter and spring, households were asked about their harvest of that species throughout the previous winter, from the date of the previous year's survey to this year's survey.

### **Household Survey**

Before conducting the survey, surveyors were trained in interviewing techniques that included learning the local names of salmon species (e.g., in some villages fall chum salmon are called "silvers" and summer chum salmon are called "dog salmon") and various ways to obtain the number of fish harvested. The surveyors were also briefed on current fishery issues concerning the survey year's subsistence and commercial salmon fishing season. The surveyors were trained to ask questions consistently and understandably and to foster a cooperative atmosphere so that interviewed household members were able to recall as accurately as possible their household harvest and use, and share any fishery related knowledge and concerns pertinent to the survey outcome.

The surveys were conducted in early fall when the majority of salmon fishing activities ended and fishermen could more easily recall their harvest numbers. In 2009, a total of 1,257 households were selected to be surveyed in 33 communities. Upon arrival in most survey communities, the surveyors coordinated with a local resident hired by YRDFA to update household lists and maps and locate selected households. In 25 of the communities surveyed, 32 community assistants were hired in 2009. Community assistants provided local knowledge, and in a few cases served as translators, but they did not conduct interviews. Surveyors attempted to contact all selected households. After the interview was completed, survey participants were given a small token of appreciation (reusable shopping bag or pen) for participating in the survey.

After the household surveys were done, completed survey forms were edited for clarity. Follow-up calls were made when needed to obtain final harvest numbers or to reconcile conflicting information among households that harvested or shared salmon with each other. Occasionally, fishermen reported amounts of harvest in alternative terms, such as the number of five gallon buckets, Ziploc bags, gunny sacks, or pounds. ADF&G has compiled a conversion sheet over the years of locally used measuring units to estimate fish numbers in these circumstances. For example, a five gallon bucket of poke fish is about 25–30 dried summer chum salmon in seal oil. Any calculations were made when the completed surveys were edited prior to data entry.

## HARVEST ESTIMATION METHODS

Classical stratified random sampling methods (Cochran 1977) were used to estimate the average and total number of fish caught by each of the 5 use groups in each surveyed Yukon Area community.

The following estimation methods were used to estimate: 1) the number of people (question 2: Figure 4), 2) the number of subsistence salmon harvested (question 7), 3) the number of salmon given away (question 11), 4) the number of salmon used for subsistence (question 12), 5) the number of dogs (question 17), 6) the number of salmon retained for dog food (question 20), 7) the number of salmon usually harvested (question 14), and 8) the number of non-salmon fish, (whitefish *Prosopium* spp. and *Coregonus* spp., northern pike (*Esox lucius*), and sheefish or inconnu (*Stenodus leucichthys*), harvested (question 15).

Denote that:

$N_{kj}$  = the number of households in the  $j$ th ( $j = 1 \dots 5$ ) use group of the  $k$ th community

$n_{kj}$  = the number of sampled households in the  $j$ th use group

$y_{kji}$  = response (e.g., the number of fish harvested) of  $i$ th sample household ( $i = 1 \dots n_{kj}$ )

Mean response of the  $j$ th use group ( $\bar{y}_{kj}$ ) was calculated as:

$$\bar{y}_{kj} = \frac{\sum_i y_{kji}}{n_{kj}} \quad (1)$$

and its standard error ( $SE_{kj}$ ) was calculated as:

$$SE_{kj} = \sqrt{\frac{s_{kj}^2}{n_{kj}} \left( \frac{N_{kj} - n_{kj}}{N_{kj}} \right)} \quad \text{where} \quad s_{kj}^2 = \frac{\sum_j (y_{kji} - \bar{y}_{kj})^2}{n_{kj} - 1} \quad (2)$$

The estimate of total responses of the  $k$ th community ( $\hat{T}_k$ ) was calculated as:

$$\hat{T}_k = \sum_{j=1}^5 N_{kj} \bar{y}_{kj} \quad (3)$$

and its 95% confidence interval ( $95\%CI_k$ ) was calculated as:

$$95\%CI_k = 1.96 \cdot \sqrt{\hat{V}(T_k)} \quad \text{where} \quad \hat{V}(T_k) = \sum_{j=1}^5 N_{kj}^2 \left( \frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left( \frac{s_{kj}^2}{n_{kj}} \right). \quad (4)$$

Because estimates of the responses in each community were independent and mutually exclusive, the estimate of survey wide total ( $\hat{T}$ ) was calculated as:

$$\hat{T} = \sum_{k=1} \hat{T}_k \quad (5)$$

and its 95% confidence interval ( $95\%CI$ ) was calculated as:

$$95\%CI = 1.96 \cdot \sqrt{\hat{V}(\hat{T})} \quad \text{where } \hat{V}(T) = \sum_{k=1} \hat{V}(\hat{T}_k). \quad (6)$$

The number of fish harvested at each fishing area (question 7) was estimated as follows:

Denote that:

$y_{kjh}$  = number of fish harvested at the  $h$ th fishing location by  $i$ th household in the  $j$ th use group of the  $k$ th community

Proportion of salmon harvested at  $h$ th fishing area by  $j$ th use group was estimated as:

$$\hat{p}_{kjh} = \frac{\sum_i y_{kjih}}{\sum_i \sum_h y_{kjih}} \quad (7)$$

The number of salmon harvested at the  $h$ th fishing area at the  $k$ th community was calculated as:

$$\hat{T}_{kh} = \sum_j N_{kj} \bar{y}_{kj} \hat{p}_{kjh} \quad (8)$$

where  $\bar{y}_{kj}$  is mean harvest of the  $j$ th use group and  $N_{kj}$  is the number of  $j$ th use group households.

Total number of salmon harvested at the  $h$ th fishing area was estimated as:

$$\hat{T}_h = \sum_k \hat{T}_{kh} \quad (9)$$

For estimation of the number of subsistence fishing households (question 3) and those with dogs/feed salmon to dogs (questions 17, 18), the following expansion method was used:

Proportion of households subsistence fish/own/feed dogs in the  $j$ th use group of the  $k$ th community ( $\hat{p}_{kj(s)}$ ) was calculated as:

$$\hat{p}_{kj(s)} = \frac{n_{kj(s)}}{n_{kj}} \quad (10)$$

where  $n_{kj(s)}$  = the number of sample households that subsistence fish/own/feed dogs

Estimated number of households subsistence fish/own/feed dogs in the  $k$ th community ( $\hat{N}_{k(s)}$ ) was calculated as:

$$\hat{N}_{k(s)} = \sum_{j=1}^5 N_{kj} \hat{p}_{kj(s)} \quad (11)$$

and its 95% confidence interval (95%CI<sub>k</sub>) was calculated as:

$$95\%CI_k = 1.96 \cdot \sqrt{\hat{V}(\hat{N}_{k(s)})} \quad \text{where } \hat{V}(\hat{N}_{k(s)}) = \sum_{j=1}^5 N_{kj}^2 \left( \frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left( \frac{\hat{p}_{kj(s)}(1 - \hat{p}_{kj(s)})}{n_{kj} - 1} \right) \quad (12)$$

Estimated number of households subsistence fish/own/feed dogs in the survey wide total ( $\hat{T}_{(s)}$ ) was calculated as:

$$\hat{N}_{(s)} = \sum_k \hat{N}_k \quad (13)$$

and its 95% confidence interval (95%CI) was calculated as:

$$95\%CI = 1.96 \cdot \sqrt{\hat{V}(\hat{N}_{(s)})} \quad \text{where } \hat{V}(\hat{N}_{(s)}) = \sum_{k=1} \hat{V}(\hat{N}_{k(s)}) \quad (14)$$

The number of gear used by subsistence fishing households was estimated as follows:

From (7) proportion of subsistence fished households in *j*th use group was calculated as:

$$\hat{p}_{kj} = \frac{n_{kj(s)}}{n_{kj}} \quad (15)$$

Proportion of subsistence fished households using *h*th gear was calculated as:

$$\hat{q}_{kjh} = \frac{n_{kjh}}{n_{kj(s)}} \quad (16)$$

where  $n_{kjh}$  = the number of sample households that used the *h*th fishing gear

The number of fishing households using the *h*th fishing gear in the *k*th community ( $\hat{N}_{kh}$ ) was calculated as:

$$\hat{N}_{kh} = \sum_j N_{kj} \hat{p}_{kj} \hat{q}_{kjh} \quad (17)$$

The reported harvests of other miscellaneous fish species were not expanded because of limited harvest information. Use groups stratified for salmon are not adequate to estimate species captured with very different harvest methods. Those fish species include Arctic grayling (*Thymallus arcticus*), Arctic char (*Salvelinus alpinus*), blackfish (*Dallia pectoralis*), burbot (*Lota lota*), Arctic lamprey (*Lampretra camtschatica*), longnose sucker (*Catostomus catostomus*), saffron cod (*Eleginus gracilis*), and rare sockeye salmon (*O. nerka*).

# RESULTS

## OVERALL ESTIMATION OF HARVEST

Surveyors traveled to 32 Yukon Area communities between September 5 and October 20. Due to its small size and difficulties in scheduling travel, the community of Birch Creek was surveyed by phone and letter. An additional 24 unselected households from 15 communities were surveyed, either as new households, unselected households that requested to be surveyed, or that were misidentified as a selected household. These additional surveys are few in number and are not statistically significant in regards to the stratified household selection, therefore they are entered along with the selected households.

Based on the 2009 postseason surveys, returned permits (subsistence and personal use), and salmon made available from test fish projects, an estimated 1,358 households harvested an estimated 33,932 Chinook, 80,847 summer chum, 66,197 fall chum, and 16,076 coho salmon in the Yukon Area (Table 1).

Test fish projects provided 2,233 Chinook, 4,051 summer chum, 774 fall chum, and 579 coho salmon to households for subsistence use (Appendix A11). The primary gear types used for subsistence and personal use salmon fishing throughout the Yukon Area were set gillnets (45%), drift gillnets (48%), and fish wheels (6%) (Table 1).

Salmon harvest by community includes an estimated 1,416 Chinook, 660 summer chum, 100 fall chum, and 49 coho salmon reported as harvest retained from commercial periods, and includes males not sold in roe fisheries. Fish tickets from District 4 reported that 200 Chinook and 1,148 summer chum salmon were retained from the commercial fishery (Table 1). No salmon were retained in District 5 from commercial fishing in 2009. Carcasses from roe fisheries that were returned to subsistence fishermen were estimated under that household's salmon use (Table 2).

In 2009, reporting of incidental harvests on fish tickets was required during commercial/subsistence openings. Records from fish tickets indicate that 12 Chinook, 2,234 fall chum, and 307 coho salmon were retained from commercial fishing in District 6 (Table 1). The personal use fishery in Subdistrict 6-C near Fairbanks has both an individual harvest limit and a fishery limit for each salmon species, and in order not to exceed these limits, fishermen are required to report on fish tickets any incidental harvests of salmon during commercial openings. Of the salmon recorded on District 6 fish tickets, 4 Chinook and 13 fall chum salmon were retained from the commercial fishery in Subdistrict 6-C.

Approximately 112 surveyed households and 96 permitted households reported feeding subsistence caught salmon to their dogs (Tables 3 and 4). An estimated 66,837 salmon were retained for dog food (from both surveyed and permitted households) throughout the Yukon Area (Tables 4, 5, and 6; Appendix B10).

A total of 470 salmon (less than 0.3% of the total salmon harvested) was reported as lost in the surveyed communities. Reasons for loss included poor flesh quality, pathogens, scavengers, and unfavorable processing conditions (Appendix A12). Lost salmon consisted of 50 Chinook, 397 summer chum, and 23 fall chum salmon. Lost salmon are included in household harvest estimates, but are not included in a household's use, unless they were fed to dogs. In 2009, survey respondents reported 32 lost salmon that were suitable for dogs consisting of 9 Chinook, and 23 summer chum salmon.

## POSTSEASON SUBSISTENCE SURVEYS

Surveyors contacted 919 households in person, 94 via telephone, and information for 23 households was collected from surveys or calendars returned by mail for a total of 1,036 households surveyed (Table 7), about 80% of total households selected. Of the 2,366 total households identified in the survey area, an estimated 1,174 households (50%) participated in the 2009 subsistence fishery (Table 8). The total population of surveyed communities was estimated at 8,815 people (Table 9). An estimated 26,571 Chinook, 73,900 summer chum, 36,749 fall chum, and 8,253 coho salmon were harvested in the surveyed communities (Table 10). Harvest by location is presented in Tables 11–14; fishermen from some communities may fish in multiple districts or subdistricts.

Households reported receiving 2,551 Chinook, 7,777 summer chum, 1,604 fall chum, and 494 coho salmon from subsistence fishermen (Appendix A9). Households also reported being provided 243 Chinook, 3,301 summer chum, 6 fall chum, and 2 coho salmon from commercial fishermen (Appendix A10). In 2009, eight communities received a total of 7,637 salmon from test fish projects (Appendix A11, Appendix B8). Of the salmon harvested and/or given to households, 21,054 Chinook, 64,957 summer chum, 33,678 fall chum, and 7,956 coho salmon were used for subsistence purposes (Table 2). This estimate includes salmon used for subsistence by fishing and nonfishing households in the surveyed communities, but may not include fish distributed to unsurveyed households or households outside the survey area. Total subsistence salmon harvest numbers, including permit harvest, test fish given, and commercially retained are reported in Figure 5. These numbers do not include personal use harvest.

The combined total harvest of pink salmon, whitefish, northern pike and sheefish in the Yukon Area was estimated to be 70,000. The pink salmon harvest was estimated to be 2,300 fish, of which approximately 93% were harvested in the Coastal District communities of Scammon Bay and Hooper Bay. The reported harvest of other miscellaneous fish species, not expanded, in surveyed communities totaled 54,740 fish. Alaska blackfish represented 86% of the reported harvest of miscellaneous fish species (expanded and nonexpanded) by number and were primarily taken in the Lower Yukon Area. The reported harvest of sockeye salmon was 216 fish (Tables 15, 16, and Appendix B11).

Fishermen from some communities fish in one or more districts, subdistricts, or tributaries and may harvest different salmon stocks. Districts with the largest catches of subsistence salmon, including salmon retained from commercial harvest, were District 4; 9,314 Chinook salmon, District 1; 21,318 summer chum salmon, District 5; 25,562 fall chum salmon, and District 4; 3,986 coho salmon (Tables 11–14).

An estimated 3,068 dogs lived in the surveyed Yukon River communities (Table 3). In 2009, there was a 22% decrease in the number of dogs compared to the 2004–2008 average (Appendix B10). Although an estimated 1,293 Yukon Area households in surveyed communities owned dogs, only 112 households (9%) fed whole fish to dogs (Table 3). The estimated amount of all species of whole salmon fed to dogs from surveyed communities and permits was 18% lower than the recent 5-year average. Surveyed households indicated dogs were fed an estimated 13,861 summer chum, 23,549 fall chum and 4,296 coho salmon from subsistence harvests and 3,229 summer chum salmon from commercial harvests (Tables 5 and 6). The estimated number of fish fed to dogs was 1% lower than the 5-year average for summer chum, 25% lower than the 5-year average for fall chum salmon, but 8% higher than the 5-year average for coho salmon (Appendix B10).

The percentage of households stating they met 50% or less than their needs was 74% for Chinook, 63% for summer chum, 84% for fall chum, and 88% for coho salmon. The percent of households indicating they met greater than 75% of their needs was 16% for Chinook, 27% for summer chum, 11% for fall chum, and 10% for coho salmon. Not every household responded for each species, therefore the number of respondents varies by species. For example, far more households (618) commented on Chinook salmon needs than for coho salmon (103) (Table 17).

In 2009, households were asked about how many salmon of each species they usually get (harvest or receive) to meet subsistence needs for use and sharing. Surveyed household totals were 72,143 Chinook, 139,643 summer chum, 72,305 fall chum, and 20,318 coho salmon (Tables 18–21). This is the first year this question was asked, thus comparisons from other years are unavailable.

Subsistence households are classified into use groups based on their harvest history, and are selected for survey based on their use group. Households with a total salmon harvest of more than 500 Chinook, summer chum and fall chum salmon combined are classified as “Heavy harvesters.” There were 38 households classified as “Heavy harvesters” who represented 1.6% of the households in the Yukon Area and harvested an estimated 2,177 Chinook salmon, about 8% of the subsistence Chinook salmon harvest. The group with the largest harvest was the “Light harvesters,” with 1,025 households, and an estimated 50% of the total Chinook salmon subsistence harvest (Appendix A1). In comparison, “Heavy harvesters” reported an estimated 628 fall chum salmon per household, representing over 65% of the subsistence fall chum salmon harvest (Appendix A3).

## **CALENDARS AND POSTCARDS**

In May 2009, a total of 1,494 calendars (911 Lower Yukon Area and 583 Upper Yukon Area) were mailed to Yukon Area households. Additional calendars were mailed to households with a history of subsistence fishing in the Yukon Area, to the community of Rampart and in response to individual requests. In 2009, fishermen returned a total of 209 subsistence harvest calendars (approximately 14% of total issued). A total of 182 calendars (87%) documented salmon harvest information. The remaining households that returned harvest calendars in 2009 either indicated they “did not fish” this season (12%) or the calendars were returned blank (1%). Reported harvest on calendars was 8,912 Chinook, 16,883 summer chum, 5,975 fall chum, 1,295 coho, and 124 pink salmon (Figure 6). The timing and distribution of fishing effort by district is shown based on returned calendars (Figure 6 top panel).

Arctic lamprey postcards were mailed to 673 households in November 2008. Cards were returned by 127 households; 34 households indicated they fished for Arctic lamprey with a harvest of 2,562 lbs taken for subsistence use and 6,219 lbs taken as commercial harvest in 2008 (Table 22).

## **PERMITS**

Permit areas in District 5 are not contiguous and include portions of the Yukon River from Rampart to Stevens Village and from below Circle to the US/Canada Border above Eagle (Figure 1). Beginning in 2008, permits were issued to fishermen to document harvest occurring above (SEU) and below (SE) the Eagle sonar site. The timing and distribution of fishing effort by district and by day is shown based on harvest recorded on permits (Figure 6 bottom panel).

## **Subsistence**

In areas that require subsistence fishing permits in District 5 (Yukon River) and District 6 (Tanana River), 404 (96%) of the total subsistence permits issued were returned and 217 households reported participating in salmon and nonsalmon subsistence fisheries. The 2009 permit harvest information is based on permits returned by March 26, 2010 (Table 4). A total of 5,017 Chinook, 1,442 summer chum, 26,962 fall chum, 6,867 coho salmon, 3,991 whitefish, 75 sheefish, 119 burbot, 733 Northern pike, 203 longnose suckers, and 363 Arctic grayling were reported harvested by subsistence permit holders in 2009 (Tables 23 and 24). Primary gear types from the 157 households that fished for subsistence salmon included 73% set gillnets, 25% fish wheels (Table 1) and 2% other gear. This does not include permits issued for the pike fishery in the Tolovana River. Based on salmon permits (does not include pike permits), 99 households indicated that they fed salmon to dogs. These households reported retaining 22,502 whole salmon for dog food (Table 4).

## **Personal Use**

Personal use permits for salmon and nonsalmon species are only issued for the Fairbanks Nonsubsistence Area (Figure 3). In 2009, 68 (100%) of the personal use permits issued were returned (Table 23). Of these, 28 permits reported fishing, 22 were issued for salmon and 6 were issued for nonsalmon species. Personal use permit holders reported harvesting 127 Chinook, 308 summer chum, 78 fall chum, 70 coho salmon, 48 whitefish, 1 sheefish, and 315 longnose suckers. (Tables 23 and 24). Of the 28 households that fished for personal use, primary gear types included set gillnets (89%), fish wheels (4%), and other gear (7%) (Table 1). Historically, the personal use salmon fishery was conducted as a subsistence fishery prior to designation of the Fairbanks Nonsubsistence Area. In personal use fisheries, salmon may only be used for human consumption or for bait and cannot be fed to dogs (Whitmore et al. 1990). Permit harvests are presented by fishery and permit type (Table 18) and by fishery, community and drainage (Table 19). Historical harvest information for the personal use salmon fishery is summarized in Appendix B5. Note Appendix B5 only includes salmon harvest, therefore the number of returned permits on this appendix does not match the number of returned permits on Tables 18 and 19, which also includes harvest of nonsalmon species.

# **DISCUSSION**

## **SALMON RUNS AND MANAGEMENT**

ADF&G's outlook for the 2009 Chinook salmon run was expected to be below average to poor, with concern for a low run of Canadian origin fish. Preseason management strategies were developed with input from U.S. Fish and Wildlife Service, fishermen, tribal council representatives and other stakeholders to reduce harvest and in order to improve escapement. These strategies included subsistence closures during the first Chinook salmon pulse, reduced subsistence time, no directed Chinook salmon commercial fishing, bag and possession limit reductions in the Yukon River sport fishery, and Federal Special Actions limiting the harvest of Chinook salmon to federally qualified rural users (JTC 2010).

In 2009, the Yukon River breakup in Alakanuk was on May 23, one day later than the 1983–2008 average (NOAA 2010). High water was persistent, and implementation of the reduced regulatory subsistence fishing schedule was delayed to allow fishermen time to catch whitefish species and early Chinook salmon. The reduced regulatory fishing schedule is implemented

during years of low salmon runs and is designed to spread subsistence harvest opportunity among users and components of a salmon run while allowing more salmon to reach spawning areas. In 2009 the reduced windows fishing schedule was initiated in District 1 on June 8, then implemented chronologically upriver based on migratory timing as the summer runs traveled upstream. Additional measures were enacted in the 2009 summer season to protect Chinook salmon. Based on run timing, regulatory fishing periods were closed as the first pulse of Chinook salmon moved up river. Mesh size restrictions were implemented in the Coastal District beginning June 8, reducing the allowable mesh size to 6-inches. By regulation, the Coastal District, Subdistrict 5-D, and the Innoko, Kantishna and Koyukuk rivers are typically open to subsistence fishing 7 days a week, however in 2009, Subdistrict 5-D was closed during passage of the first pulse of Chinook salmon (Appendix A13). Under emergency regulation, Chinook salmon caught during the summer chum salmon fishery could not be sold (JTC 2010).

The first subsistence catch of Chinook salmon was reported near Emmonak on June 7, and the first test fish catch in the Lower Yukon Test Fishery was on June 5. Cumulative catch per unit effort (CPUE) in the Lower Yukon Test Fishery was 11.51 at the conclusion of the project on July 15, well below the average of 22.76 CPUE (JTC 2010). Total Pilot Station sonar passage estimate through August 9 was 122,990 Chinook salmon (JTC 2010). The 2009 preliminary total reconstructed Chinook salmon run size was 171,500 (Kathrine Howard, Commercial Fishery Biologist, ADF&G, Anchorage; personal communication).

The 2009 outlook was for an average run of summer chum salmon, which would provide for escapements and a normal subsistence and commercial harvest. In 2009, summer chum salmon passage at Pilot Station sonar was estimated to be approximately 1.3 million with average run timing (JTC 2010). Commercial fishing opportunities and market conditions for summer chum salmon were affected by fishing restrictions implemented to reduce Chinook salmon harvest. Net mesh size in Districts 1 and 2 was restricted to 6-inch maximum mesh to reduce incidental catch of Chinook salmon during the eleven short commercial periods. Seven commercial periods were established in Subdistrict 4-A and six periods in District 6. The 2009 commercial harvest of 170,272 summer chum salmon was also impacted by high water events in District 6 (Tanana River) (JTC 2010).

Pink salmon exhibit a two year cycle with years of low (odd year) and high (even year) abundance (ADF&G 2002), and therefore were expected to be low in 2009. Although pink salmon are often locally abundant in the Lower Yukon Area, they are not typically sought after, and harvests remain low. The 2009 estimated subsistence pink salmon harvest was 35% above the odd-year average for 1999–2007 and 46% below the all year (both odd and even-year) average for 1999–2008 (Appendix B9).

Salmon harvest estimates based on survey results indicated the Chinook salmon subsistence harvest was 34% below the recent 5-year average and 33% below the recent 10-year average (1999–2008) (Appendix B1; Figure 8). The 2009 summer chum salmon subsistence harvest was 14% below the recent 5-year average and 7% below the recent 10-year average (Appendix B2; Figure 9). The 2009 harvest of fall chum salmon was 22% below the recent 5-year average and 2% below the recent 10-year average (Appendix B3; Figure 10). Coho salmon harvest was nearly 25% below the recent 5-year average and 21% below the recent 10-year average (Appendix B4; Figure 11). Appendices B5–B7 document the historical subsistence and personal use harvest from permits, by species, and by permit area, and include comparisons with 5-year and 10-year averages.

Subsistence fishing efforts are usually light during the transition period from summer to fall season when relatively few chum salmon (both summer and fall stocks) are moving into the river. Fishery management transitions from summer season to fall season management on July 16 in District 1. This date is based historically on the average date fall chum salmon outnumber summer chum salmon in District 1 of the Lower Yukon Area. Some subsistence fishermen are able to recognize and report the changes in proportion of the two chum salmon runs in their catches based on body type, skin color, and flesh color. The late arriving summer chum salmon are smaller in size, their skin is more watermarked, and the flesh is pale. This management transition date moves with the fish as they travel up river, and in the Tanana River, fall chum salmon management begins on approximately August 11.

Fall chum salmon are difficult to manage because of their extremely pulsed entry pattern. Chinook and summer chum salmon runs typically build to a peak and then subside, whereas fall chum salmon enter the river in pulses, having one to five distinct peaks throughout the run. This unpredictable entry pattern makes it hard to assess the run inseason or compare runs from year to year. The fall chum salmon run also overlaps with the later-arriving coho salmon run. The two species are of similar physical size, which increases species apportionment difficulties, and reduces the ability to manage harvest by gear type restrictions, as is possible during the Chinook and summer chum salmon season.

The 2009 fall chum salmon run size was predicted to be average to above average based on the strong primary parent year escapement from 2005 and the relationship of fall and summer chum salmon runs. Extremely low water levels affecting fish movement patterns and sonar counts, and weak, fragmented passage of fall chum salmon contributed to a conservative run size estimate of 316,000 to 336,000 fall chum salmon (JTC 2010). Fall chum salmon entered the river in three primary pulses that were spread out over the length of the season and separated by periods of low passage. Subsistence fishing in the Lower Yukon Area was opened for 7 days per week, 24 hours a day in the Coastal District and Districts 1, 2, and 3, except for closures of 12 hours before, during, and after commercial fishing periods. The Innoko River in District 3 was open 7 days per week. The pre-2001 subsistence salmon regulations were applied in the Upper Yukon Area. By mid-August, concerns that the fall chum salmon run was weaker than expected prompted reductions in subsistence fishing times in the lower river on August 18, in District 4 on August 27, and in District 5 on September 2 (Appendix A13).

Coho salmon primarily return as age-4 fish (Bue and Hayes 2008), and the 2009 outlook was anticipated to be a continuation of the trend for average to above average (JTC 2010). The coho salmon estimated cumulative passage by Pilot Station on September 7 was 25% greater than the average of 163,000 for that date, but due to species apportionment difficulties, the overall postseason estimate was for an average run size (JTC 2010). Harvest of coho salmon was impacted by restricted fishing times enacted to protect the perceived weak fall chum salmon run.

The 2009 commercial harvest of 25,269 fall chum salmon was 71% below the previous 10-year average of 85,732 fish, and the commercial harvest of 8,026 coho salmon was 78% below the 10-year average of 35,799 fish (JTC 2010). The number of commercial fishermen and fishing effort has increased in recent years, but are largely concentrated around a few buying stations (JTC 2010). Overall, uncertainties about the fall chum salmon run and efforts to meet escapement goals affected fall fishing efforts.

## **SALMON SURVEY AND AMOUNTS NECESSARY FOR SUBSISTENCE**

There are several inseason and postseason methods for evaluating salmon runs and whether fishermen are meeting their subsistence needs. Managers have routinely maintained continual communications with fishermen to obtain information on fishing success in communities, as a means of assessing fishery openings and closures. Since, 1992, YRDFA schedules weekly inseason teleconferences to provide fishermen in the entire Yukon River drainage (including Canada) an opportunity to discuss the ongoing run with fisheries managers. In addition during the last decade, the USFWS conducts weekly inseason surveys in selected communities to help managers understand how the subsistence season is unfolding. The information assesses harvest goals, fishing conditions, and quality of subsistence catch through interviews of a subsample of fishermen each week to evaluate progress towards meeting subsistence needs (Gerken 2008).

One method for assessing the relative success of Yukon Area fishermen is to compare the annual drainagewide estimated subsistence harvest to historic averages and to the “amount necessary for subsistence” (ANS) harvest ranges established by the Alaska Board of Fisheries (BOF). The ANS represent the needs of all subsistence users drainagewide and do not necessarily reflect the needs of specific individuals, communities, or sections of the drainage. ANS can be used by the BOF as a metric to determine if reasonable subsistence fishing opportunities have been provided. ANS levels can require periodic adjustments since the ANS cannot account for trends over time, such as changes in fishing patterns due to population shifts or changes in the fisheries. In January 2001, the BOF used ADF&G’s historical harvest data to adjust the ANS for each individual salmon species using the years 1990 to 1999, with exceptions for years (1993 and 1998) when subsistence fishing was restricted to meet escapement requirements for fall chum and coho salmon. Coastal communities are included in determining Yukon Area ANS as they harvest most of their salmon from Yukon River drainage salmon stocks. A salmon mark–recapture study conducted in marine waters near Hooper Bay in 1986 showed that 89% of the recovered tagged summer chum salmon were of Yukon River origin. This study also documented the presence of Norton and Kotzebue Sound chum salmon stocks in the area (Kerkvliet 1986).

The 2009 Yukon Area subsistence salmon harvest of 196,469 Chinook, summer chum, fall chum and coho salmon combined (Appendix B1–B4) was approximately 22% below the recent 5-year average (2004–2008) of 251,316 fish. Subsistence harvests of each salmon species was below their respective ANS range, as expected since subsistence restrictions were enacted. The ANS levels are 45,500–66,704 Chinook, 83,500–142,192 summer chum, 89,500–167,900 fall chum, and 20,500–51,980 coho salmon (Figures 8–11).

While comparisons of the annual drainagewide harvest with ANS provides insight into the run strength and relative success of all fishermen, the survey results are unique in breaking down percent needs met by species and community (Table 17), and thus can provide an indicator of how the fishing season went in specific communities. Households are asked whether their subsistence salmon needs were met (question 14, Figure 4). The data provide a postseason assessment of the season’s run strength, as ideally a strong run would be reflected in a strong subsistence harvest, with a higher percent needs met. However, it has been observed that approximately 20–30% of households report their needs were not met even in years with relatively good escapement (Borba and Hamner 2001). Harvest of salmon can be highly variable due to factors unrelated to run strength, such as weather and water conditions, gas prices or lack of equipment, work schedules, or salmon lost to various factors.

Beginning in 1992, ADF&G asked surveyed households whether their subsistence salmon needs were met (yes/no) and in 2000 quality of run (very good, average, or very poor) by species question was added. A general assumption was made by ADF&G that the “needs met” and “run assessment” were linked, in that a higher percent needs met suggests that the run was sufficient to provide for most subsistence needs. Changes to the line of questioning rendered data from 1992–2002 (Appendix B12) not comparable with subsequent years (Appendix B13). In 2003, the (yes/no) “needs met” and “quality of run” questions were combined. In an attempt to capture more detailed and more quantitative data on needs met, the (yes/no) question was replaced with a percent needs met, and households were asked the percent success for each salmon species (Chinook, summer chum, fall chum and coho salmon), rather than for all species combined. In 2009, surveyed households were asked how many salmon of each species they usually get (Figure 4, question 14). A household previously saying they met ‘0%’ of their needs could now add information about unmet community needs by saying they usually get 1 fish or 10 fish, for example.

Identifying the harvest and success of individual households is often difficult in a subsistence economy because harvest is frequently shared and accounted for on the level of extended families or fishing groups rather than on the level of individual households. One basic reality of subsistence economies is that the majority of households use or would like to use salmon, even if the household did not fish. Therefore, even if a household neither harvested nor used salmon that year, the household might still have a need that was not met (Caroline Brown, Division of Subsistence Resource Specialist, ADF&G, Fairbanks; personal communication). Common examples include elders who no longer fish but still have subsistence needs, or households who want fish but have boat or motor problems that prevents them from harvesting. People who do not fish rely on receiving fish from friends, family, and others who fish. Fish are generally given to them throughout the winter as the need arises. At the time of the survey, it may be hard for people to assess whether their needs are met because they have not received their fish yet. It may also be difficult to quantify the number of fish a household usually receives, as it is often transferred as processed or cooked salmon among households, not as whole fish. If the household fished and caught fewer fish than they usually harvest, then surveyors inquired if there was a reason why fishing was poor. ADF&G is especially interested in knowing if there was a fishery-related issue, such as run strength or management actions, that prevented households from meeting their needs.

Compared to the number of responses to percentage of needs met question in 2008, the 2009 responses were between 14%-24% fewer depending on salmon species (Busher et al. 2009). Approximately 60% of contacted households replied with Chinook salmon information, compared to 84% in 2009 (Appendix B13). The low response rate to this question in 2009 was likely due to several factors. In previous years, if a household harvested zero of a species that they usually fish for, an estimate of zero percent of needs met was often entered. With the new wording, a household must estimate the number of salmon it usually gets. If no answer was given, the question was left blank. Surveyors often had difficulty getting responses to the new question format and were instructed to try several alternative questions (“How many would you put up in a good year?” or “How many did you get last year, and was that enough for the winter?” etc.). Reasons for not answering this question included new households with an unestablished harvest pattern, households that had undergone changes in the number of people, households that refused or were unable to provide an estimate, and households that usually only received a highly variable number of fish each year.

Many factors influenced whether subsistence needs were met, including the first ever closure implemented on the first pulse of Chinook salmon, subsistence closures in both the summer and fall seasons due to poor salmon runs, gasoline prices, flooding and loss of gear or time, bad drying weather, water conditions (e.g. water levels, debris), and equipment failure. Just over a quarter (27%) of surveyed households reported they got more than half of the Chinook salmon they usually get. Individual communities ranged from 0% (Birch Creek, Fort Yukon, Venetie, and Chalkyitsik) to 67% (Beaver) of households meeting over half of their subsistence needs for Chinook salmon (Table 17). Less than half of the households (40%) met over half of their needs for summer chum salmon, and 16% and 13% of the households reported meeting over half of their needs for fall chum and coho salmon (Table 17). Community success rates do not account for where individual households fished. In a tributary community, fishermen may travel to the mainstem Yukon River to fish, yet their success data are not differentiated from households who fish on the tributary. Some households were unable to fish for all or part of the season. Common reasons for not fishing included work schedules, fire fighting, lack of gear or equipment (e.g. no boat or motor), being elderly, and health reasons. Fuel prices were mentioned by many households as a hardship in 2009. Recorded retail sale prices for gasoline in July of 2009 ranged from \$4.75 per gallon (Kaltag) to \$7.45 per gallon (Hooper Bay) (DCRA 2009).

## **NONSALMON SPECIES**

Harvest of nonsalmon fish species is most likely significantly underestimated by this project. The stratification and harvest estimation system is based on a household's historical salmon harvests and may not adequately represent households that fish predominantly for other species. The correlation between the level of salmon harvest and the level of nonsalmon harvest has not been determined. In order to improve the harvest estimates of nonsalmon species, additional strata and sampling designs would need to be identified and developed (Borba and Hamner 1998). Additionally, the survey is timed to occur at the end of salmon fishing season, whereas nonsalmon species are often harvested throughout the fall and during the winter under the ice. Households are asked to estimate their harvest of nonsalmon species from the previous twelve months (Brown et. al. 2005). For example, Arctic lamprey harvested October through December of 2008 are documented during the 2009 survey.

The winter of 2008–2009 was the second year that postcards were sent to households for the purpose of documenting Arctic lamprey subsistence and commercial harvests (Figure 3). Commercial fishing for Arctic lamprey is considered exploratory and experimental due to questions regarding life history and abundance of lamprey in the Yukon River. One freshwater commercial fishery permit was issued to an Arctic lamprey buyer for October 25 through December 31. A total of 10 fishermen delivered 11,137 pounds (about 41,700 Arctic lamprey) in Grayling to the commercial permit holder from catches on November 17 and 18 (Heather Hildebrand, Commercial Fishery Biologist, ADF&G, Anchorage, unpublished memorandum 16 March 2009). A catch log was provided to the permit holder for commercial fishermen to record their harvest. Several fishermen reported poor ice conditions during the run, that eels (lamprey) did not run along the bank where they were fishing, or that they missed the run. Surveyed households reported harvesting 1,699 Arctic lamprey (Table 16), and households that returned postcards reported 2,562 pounds harvested, about 7,680 Arctic lamprey (Table 22).

## **COMMERCIALY RETAINED**

Commercially caught fish that are not sold are often kept for subsistence use, and the survey attempts to account for these fish in the total subsistence harvest. Commonly these fish were kept as an “eating fish” for that night’s dinner, particularly in the Lower Yukon Area where commercial and subsistence periods do not overlap. In 2009, emergency regulations were enacted in Districts 1–5 to restrict the sale of Chinook salmon caught incidentally during summer chum salmon commercial fishing openings. A total of 3,680 Chinook salmon were recorded as caught but not sold from Districts 1 and 2, and Subdistrict 4-A (JTC 2010). These Chinook salmon are included in the harvest estimates (Table 1).

In District 6, salmon retained by fishermen are required to be documented on commercial harvest tickets as “not sold.” Fish sold for roe as the primary product are required by Department of Environmental Conservation regulations to be processed at an approved processing facility. In the case of the roe fishery, when the flesh is not marketable due to poor quality, processors are required to properly dispose of carcasses, which may include giving away or selling carcasses as dog food. Households in District 6 are not surveyed, so their use of subsistence salmon is not quantified, only their harvest via fish tickets and permits. Salmon retained from the commercial fishery are included with the District 6 community harvests from Manley, Nenana and Other (Table 1).

## **SURVEY COMMENTS**

Households were asked to estimate the number of “lost” salmon, by species. “Lost” salmon were harvested but were unusable for either human or dog consumption. The purpose of this question is to identify salmon that may not be reported as harvest or use. These additional “lost” numbers are needed to help meet the survey’s goal of estimating the total number of fish killed. When reporting harvest, many fishermen think about how many fish they have put away for the winter, and might not include a batch of fish spoiled by weather while drying. “Lost” fish were not included in the household’s salmon use numbers since these fish were not usable. Salmon may become unusable for human consumption but may still be suitable for dog food or used for trapping bait. Since feeding salmon to dogs is a subsistence use, these fish were not counted as lost and were included in the household’s use numbers. Chinook salmon are generally not fed to dogs, except for fish that are lost to spoilage but still edible by dogs, those captured late in the run that are not suitable quality for human consumption, or small “jacks”, and in areas where there is only one primary species of salmon present at a time (such as in upper portion of District 5). Most salmon were lost due to poor condition at the time of harvest, such as disease, parasites, cuts, or rotting or to conditions during storage such as spoilage or insects. The largest report of loss was 180 summer chum salmon eaten by bears. Total salmon lost amounts are very small, and are less than 1% of the harvest (Appendix A12).

The survey also provides an opportunity for respondents to provide comments to ADF&G on any topic they feel is important related to fishing. The most numerous comments from the survey were regarding fishing windows or fishing schedules that restricted openings, closure of the first pulse, or missed opportunity when salmon were running by their fishing area (212 comments). Additionally, poor run quality (96), management and enforcement complaints (75), and issues with fishing equipment (49) were all mentioned as contributing to subsistence needs not being met. Several fishermen reported that salmon quality was good (21). Only 5 households reported flooding impacts, but it is likely that by the time of the survey other inseason factors were more

important to fishermen. In May 2009 flooding caused by ice jams began at Eagle, Alaska and affected most of the river through the village of Tanana and all the way to the mouth of the river where the delta communities were inundated with water causing major flood damage. A disaster declaration was filed with the Federal Emergency Management Agency. Some of the worst affected communities were within the fishing permit required areas that were not surveyed, and where rebuilding basic shelter before winter was a priority. Fishermen also commented on bycatch issues as a cause for poor Chinook salmon returns. The Bering Sea Pollock trawl bycatch of adult Chinook salmon increased to a record catch of over 140,000 Chinook salmon in 2007 (Bue and Hayes 2008), and mostly impacted younger Chinook salmon that were 1 or 2 years from beginning their spawning migration (Witherell et al. 2002).

Fishermen also commented on wanting to change the specific hours of fishing scheduled for their district, either to allow more fishing time or, specifically, to allow fishing on weekends. Fishermen in the lower Yukon (43) wanted more commercial fishing. In 2009, some fishermen commented that the timing of fishing openings was off and that fish were not running during the open fishing periods. The “windows” schedule was implemented in 2001 by the BOF and modified in 2003. This schedule was a response to poor runs and was intended as a conservation measure. The schedule included “windows” of allowed fishing time for each district. The schedule was intended to provide sufficient opportunity for fishing, but also to allow portions of the run to migrate upriver with reduced exploitation. The schedule was designed to reduce harvest early in the run when there is a much higher level of uncertainty in projecting the total run abundance. In 2003, the BOF clarified the windows schedule by allowing ADF&G to relax the subsistence schedule in districts where there was not anticipated to be any commercial fishing as market interests were lost in many areas of the middle Yukon due to the cost of moving product out of the remote communities. Another goal was to distribute the harvest throughout the run, thereby reducing the impact on any particular component of the run and to spread subsistence harvest opportunities among subsistence users along the entire river. Fishermen pointed out that by restricting fishing times, the windows schedule reduced the ability of fishermen to adapt to circumstances such as poor weather, water levels, debris, work schedules, etcetera. It was also difficult to know when fishing was open, and that greater communication of schedules and management was desired. For some fishermen, the windows schedule prevented them from catching all their fish at once, which could impact processing and storage of fish. Short openings also stretched out the season, an important consideration when gasoline costs and work schedules limited the number of possible trips to a fish camp. In 2009 the windows schedule was further modified when it closed periods to protect the first pulse of Chinook salmon. Comments in favor of this first pulse closure (89%, n=27) were primarily from the Upper Yukon Area communities.

The surveyors heard many comments to the effect that fishermen only catch what they need to eat for subsistence and then stop fishing and that restrictions of subsistence fishing were unnecessary. ADF&G maintains consistency in most years by setting schedules similar to previous years so fishermen know when fishing is open. The closed periods are sometimes necessary to allow harvest to be spread out among various stocks and in some areas will continue to be used to separate commercial and subsistence opportunity.

Overall harvests of all salmon species were lower in 2009 than in 2008 and they were lower than the 5 and 10 year average harvests (Appendices B1–B4). Poor Chinook and fall salmon runs necessitated closures in both the summer and fall seasons and reduced opportunity for fishermen

to harvest summer chum and coho salmon. Harvests from 2009 will not be used when recalculating household use groups and should not be used in any future ANS updates. A household's harvest from these years may not be indicative of a new use pattern for the household caused by internal factors such as a change in household size, but it may instead be driven by external factors such as reduced fishing opportunity and adverse conditions.

## **ACKNOWLEDGEMENTS**

The authors would like to thank the 2009 Yukon River surveyors Michelle Gillette and Seth Wilson for their hard work, persistence, and attention to detail in surveying the selected communities. We are also grateful to Dayna Green for her coordination of the permit program. The authors would also like to acknowledge Christopher Lawn and Holly Krenz for their ongoing support with the subsistence salmon survey database. The authors would like to thank Shannon Royse, Publications Technician, for guidance and expertise in formatting the numerous tables within this report. The authors also gratefully acknowledge Patricia Costello for producing the 2009 harvest calendars and her expertise in editing and reviewing documents related to this project. The authors also acknowledge Bonnie Borba (Yukon Area Research Biologist) Jeff Estensen (Fall Season Area Management Biologist), Dayna Green (Fall Season Assistant Area Management Biologist), Caroline Brown (Division of Subsistence Resource Specialist) and Dan Bergstrom (Regional Management Supervisor) for providing constructive comments during reviews of this report.

Yukon River Drainage Fisheries Association (YRDFA) was provided funding to coordinate the Community Subsistence Assistants program. Thanks to Lauren Sill and YRDFA staff for coordinating the Community Subsistence Assistant program. The authors would like to thank all of the individuals hired by YRDFA to assist ADF&G's survey crew. These individuals were Denis Sheldon, Alakanuk; Pollock Simon, Sr., Allakaket; Willie Nicholi, Anvik; Craig Edwards, Beaver; Carol Thomas, Chalkyitsik; Michelle Hamilton, Michael Jimmy, Emmonak; Jordan Jones, Eric Luke, Ft. Yukon; Sandy Scotton, Galena; David Peter, Grayling; Rita Paul, Holy Cross; George T. Moses, Jr., Linora E. Night, Hooper Bay; Mary Ann Sam, Huslia; Wayne Nickoli, Kaltag; Cyril P. Okitkun, Kotlik; Percy Lolnitz, Koyukuk; Augusta Askoak, Danielle Oney, Marshall; Stanley George, Norma Hess, Mountain Village; Wendy Waska, Nunam Iqua; Julia Nick, Pilot Station; Marissa McCarty, Ruby; Simeon Housler, Russian Mission; Marvin Aguchak, Scammon Bay; Agnes George, Augusta Westdahl, St. Mary's; Blanche Edwin, Tanana; and Lance Whitwell II, Bobby Tritt, Venetie.

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## **TABLES AND FIGURES**

Table 1.–Subsistence and personal use salmon harvest estimates which include commercially related and test fish harvests provided for subsistence use, and related information, Yukon Area, 2009.

Community	Survey Date, Permit Area <sup>a</sup>	Number of Fishing Households <sup>b</sup>	Number of Dogs <sup>c</sup>	Estimated Harvest				Primary Gear Used <sup>d</sup>		
				Chinook	Chum	Chum	Coho	Set	Drift	Fish Wheels
Hooper Bay	9/11-13	101	108	183	9,195	41	24	100	1	0
Scammon Bay	9/9-10	35	25	722	3,602	117	222	31	4	0
Coastal District Total		136	133	905	12,797	158	246	131	5	0
Nunam Iqua <sup>e</sup>	9/10-11	24	37	200	2,280	41	71	22	1	0
Alakanuk <sup>f</sup>	9/8-10	69	165	634	5,152	116	194	11	55	0
Emmonak <sup>f</sup>	9/5-7	59	139	1,634	9,038	1,589	401	18	41	0
Kotlik <sup>f</sup>	9/7-8	69	49	1,657	7,528	171	181	43	24	0
<i>District 1 Subtotal</i>		221	390	4,125	23,998	1,917	847	94	121	0
Mountain Village <sup>f</sup>	9/17-18	98	140	1,482	7,204	926	413	17	80	0
Pitkas Point	9/16	15	34	265	994	76	45	0	15	0
St. Mary's <sup>f</sup>	9/14-19	77	99	1,929	5,831	106	151	13	60	0
Pilot Station <sup>f</sup>	9/20-22	50	82	1,258	4,888	265	203	1	47	0
Marshall <sup>f</sup>	9/23-24	48	102	1,201	2,172	190	245	1	47	0
<i>District 2 Subtotal</i>		288	457	6,135	21,089	1,563	1,057	32	249	0
Russian Mission	9/25-25	27	129	978	849	205	96	7	20	0
Holy Cross	9/21-22	35	76	1,745	194	627	120	15	20	0
Shageluk	9/23	14	32	201	103	105	105	5	8	0
<i>District 3 Subtotal</i>		76	237	2,924	1,146	937	321	27	48	0
Lower Yukon River Total		585	1,084	13,184	46,233	4,417	2,225	153	418	0
Anvik	9/24-25	18	67	796	277	176	137	8	9	1
Grayling	9/23-24	41	74	1,133	1,429	490	318	1	40	0
Kaltag <sup>f</sup>	10/6-7	49	52	1,970	50	200	40	0	48	0
Nulato	10/7-9	41	109	1,551	133	552	171	1	40	0
Koyukuk	10/9-10	34	81	982	1,378	578	198	3	22	0
Galena	10/2-5	72	197	1,370	1,718	4,306	2,353	18	52	2
Ruby	10/1-10/2	18	75	542	603	134	314	8	9	1
<i>District 4 Yukon River Subtotal</i>		273	655	8,344	5,588	6,436	3,531	39	220	4
Huslia	10/5-6	20	140	969	2,554	86	323	19	0	0
Hughes	10/6-8	9	33	101	1,723	288	89	9	0	0
Allakaket	10/7-8	11	83	90	4,924	572	43	11	0	0
Alatna	10/8	4	6	10	163	0	0	4	0	0
Bettles	10/9-10	3	21	0	6	0	0	3	0	0
<i>Koyukuk River Subtotal</i>		47	283	1,170	9,370	946	455	46	0	0
<i>District 4 Subtotal</i>		320	938	9,514	14,958	7,382	3,986	85	220	4

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Table 1.–Page 2 of 3.

Community	Survey Date, Permit Area <sup>a</sup>	Number of Fishing Households <sup>b</sup>	Number of Dogs <sup>c</sup>	Estimated Harvest				Primary Gear Used <sup>d</sup>		
				Summer Chinook	Chum	Fall Chum	Coho	Set Gillnet	Drift Gillnet	Fish Wheels
Tanana	10/13-15	45	382	2,950	4,665	19,595	2,373	31	0	14
Rampart	permits	4	5	528	112	1,000	0	3	0	1
Fairbanks NSB <sup>g</sup>	permits	45	148	1,509	44	229	13	43	0	1
Stevens Village <sup>h</sup>	10/14, permits	8	54	405	6	770	90	8	0	1
Birch Creek	10/19-20	1	15	15	0	0	0	1	0	0
Beaver	10/15-16	14	25	516	22	120	0	13	0	1
Fort Yukon	10/16-19	49	294	846	275	2,829	2	29	0	19
Circle	permits	9	79	372	0	110	13	1	0	8
Central	permits	5	10	167	2	0	0	4	0	1
Eagle <sup>f</sup>	permits	15	242	446	0	10,941	0	7	0	8
Other District 5 <sup>i</sup>	permits	12	38	541	29	71	7	12	0	0
<i>District 5 Yukon River Subtotal</i>		<i>207</i>	<i>1,292</i>	<i>8,295</i>	<i>5,155</i>	<i>35,665</i>	<i>2,498</i>	<i>152</i>	<i>0</i>	<i>54</i>
Venetie	10/16-17	13	126	622	143	2,373	0	12	0	0
Chalkyitsik	10/18-19	3	17	0	0	45	0	2	0	0
<i>Chandalar and Black Rivers Subtotal</i>		<i>16</i>	<i>143</i>	<i>622</i>	<i>143</i>	<i>2,418</i>	<i>0</i>	<i>14</i>	<i>0</i>	<i>0</i>
<i>District 5 Subtotal</i>		<i>223</i>	<i>1,435</i>	<i>8,917</i>	<i>5,298</i>	<i>38,083</i>	<i>2,498</i>	<i>166</i>	<i>0</i>	<i>54</i>
Manley	permits	13	116	345	367	4,126	2,308	10	0	3
Minto	permits	1	91	0	1	0	0	1	0	0
Nenana <sup>f</sup>	permits	24	145	463	509	7,623	3,475	9	0	15
Healy	permits	5	32	15	2	773	691	5	0	0
Fairbanks NSB <sup>j</sup>	permits	31	178	518	677	3,538	647	28	0	3
Other District 6 <sup>k</sup>	permits	20	68	71	5	97	0	16	0	0
<i>District 6 Tanana River Subtotal <sup>l</sup></i>		<i>94</i>	<i>630</i>	<i>1,412</i>	<i>1,561</i>	<i>16,157</i>	<i>7,121</i>	<i>69</i>	<i>0</i>	<i>21</i>
Upper Yukon River Total		637	3,003	19,843	21,817	61,622	13,605	320	220	79
Survey Village Subtotal		1,174	3,068	26,740	75,048	36,919	8,343	465	643	39
Subsistence Permit Subtotal <sup>m</sup>		157	1,152	4,820	1,440	26,192	6,777	114	0	39
Subsistence Test Fish Subtotal <sup>n</sup>		-	-	2,233	4,051	774	579	-	-	-
District 6 Commercial Related <sup>o</sup>		-	-	12	0	2,234	307	-	-	-
<i>Subsistence Harvests Subtotal</i>		<i>1,331</i>	<i>4,220</i>	<i>33,805</i>	<i>80,539</i>	<i>66,119</i>	<i>16,006</i>	<i>579</i>	<i>643</i>	<i>78</i>
<i>Personal Use Permit Subtotals</i>		<i>28</i>	<i>-</i>	<i>127</i>	<i>308</i>	<i>78</i>	<i>70</i>			
Alaska, Yukon River Total <sup>p,q</sup>		1,222	4,087	33,027	68,050	66,039	15,830	473	638	79
Alaska, Yukon Area Total		1,358	4,220	33,932	80,847	66,197	16,076	604	643	79
AK, Yukon Area Percentages of the Total		-	-	17%	41%	34%	8%	45%	48%	6%

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*Note:* Dashes indicate indefinable values.

- <sup>a</sup> Data collected by Alaska Department of Fish and Game (ADF&G), Division of Commercial Fisheries. Survey data are expanded for number of fishing households, number of dogs, and harvest. Permit data are unexpanded, and are from all permits received as of March 26, 2010.
- <sup>b</sup> Estimated number of households that fished in surveyed communities or number of permit households who reported fishing in permit required areas. Does not include 51 Tolovana River pike permits issued in 2009, except for 1 pike permit from Minto reporting a harvest of 1 summer chum.
- <sup>c</sup> The number of dogs is based on survey information or from permits issued.
- <sup>d</sup> Primary fishing gear used is based on survey information or from subsistence permits issued. Totals for gear and household may not be equal due to a small number of fishermen using unknown or 'Other' gear types. Primary gear information for surveyed communities was expanded in 2009 for households that were not surveyed. Primary gear is determined by the larger number of salmon harvested by gear types in the household.
- <sup>e</sup> Formerly known as Sheldon or Sheldon's Point.
- <sup>f</sup> Test fish have been added to the total fish harvested in surveyed and permit required communities.
- <sup>g</sup> Fairbanks North Star Borough (FNSB) households that obtained a permit and indicated they fished in the Yukon River permit required area.
- <sup>h</sup> Permit harvest information from Stevens Village residents was used to complement the information obtained by the survey.
- <sup>i</sup> "Other District 5" includes residents of Anchorage, Manley, Minto, Nenana, and Wiseman, and the Upper Tanana River drainage community of Tok who obtained a household permit and fished in a Yukon River permit required area.
- <sup>j</sup> Fairbanks North Star Borough (FNSB) households that obtained a subsistence and/or personal use permit and indicated they fished in the Tanana River permit required area.
- <sup>k</sup> "Other District 6" includes residents of the Upper Tanana River drainage communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok, and the communities of Anderson and Eagle River who obtained a permit and fished in the Tanana River.
- <sup>l</sup> Includes harvest of female chum and coho salmon sold commercially for roe and carcasses returned to fishermen for dog food in Subdistrict 6-B.
- <sup>m</sup> Subsistence permit subtotal does not include Stevens Village permit information or commercially retained salmon from District 6.
- <sup>n</sup> Test fish given away for subsistence use.
- <sup>o</sup> District 6 "Commercial Related" included fish caught during commercial fishing and "not sold" but retained for subsistence use. These salmon are included in Manley, Nenana, and Other community harvests above.
- <sup>p</sup> Does not include Coastal District.
- <sup>q</sup> Based on survey estimates, 1,416 Chinook, 660 summer chum, 100 fall chum, and 49 coho salmon were retained from commercial harvests. Totals also include 200 Chinook, and 1,148 summer chum salmon reported on fish tickets as retained from commercial harvests in Districts 4 and 5.

Table 2.—Estimated number of salmon used for subsistence purposes and corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community			Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
	Total Households	Households Contacted <sup>a</sup>	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	71	170	119	8,136	2,035	41	31	20	18	8,367
Scammon Bay	80	33	679	230	3,375	1,217	92	110	222	205	4,368
<i>Coastal District</i>	<i>284</i>	<i>104</i>	<i>849</i>	<i>259</i>	<i>11,511</i>	<i>2,371</i>	<i>133</i>	<i>114</i>	<i>242</i>	<i>206</i>	<i>12,735</i>
Nunam Iqua	31	26	154	26	1,792	260	41	16	62	14	2,049
Alakanuk	117	46	452	207	4,261	1,385	75	42	121	73	4,909
Emmonak	150	71	482	140	5,946	1,275	1,056	650	318	329	7,802
Kotlik	97	35	832	186	6,134	2,862	105	179	107	179	7,178
<i>District 1</i>	<i>395</i>	<i>178</i>	<i>1,920</i>	<i>313</i>	<i>18,133</i>	<i>3,436</i>	<i>1,277</i>	<i>676</i>	<i>608</i>	<i>382</i>	<i>21,938</i>
Mountain Village	141	65	1,262	255	6,443	1,274	543	445	190	99	8,438
Pitkas Point	27	23	228	53	931	132	75	66	44	38	1,278
St. Mary's	119	44	1,721	528	4,992	1,088	106	61	117	103	6,936
Pilot Station	106	53	612	150	3,457	829	5	8	0	0	4,074
Marshall	74	30	945	423	1,948	997	181	28	180	104	3,254
<i>District 2</i>	<i>467</i>	<i>215</i>	<i>4,768</i>	<i>740</i>	<i>17,771</i>	<i>2,123</i>	<i>910</i>	<i>455</i>	<i>531</i>	<i>181</i>	<i>23,980</i>
Russian Mission	67	32	855	409	700	367	205	227	96	45	1,856
Holy Cross	55	33	1,449	259	120	58	595	314	98	78	2,262
Shageluk	29	21	164	73	103	47	105	72	105	33	477
<i>District 3</i>	<i>151</i>	<i>86</i>	<i>2,468</i>	<i>490</i>	<i>923</i>	<i>374</i>	<i>905</i>	<i>394</i>	<i>299</i>	<i>95</i>	<i>4,595</i>
Anvik	28	24	568	77	135	51	162	31	107	22	972
Grayling	46	17	992	241	294	198	490	371	318	214	2,094
Kaltag	65	18	1,944	809	50	40	200	168	40	46	2,234
Nulato	80	22	1,446	880	133	21	552	436	171	128	2,302
Koyukuk	41	18	745	331	1,378	52	578	21	198	0	2,899
Galena	162	50	1,139	289	1,390	1,191	3,716	3,975	2,310	2,846	8,555
Ruby	57	19	489	61	603	132	134	136	314	14	1,540
Huslia	75	26	368	443	2,067	1,365	86	0	323	0	2,844
Hughes	23	19	46	12	1,180	83	262	53	77	53	1,565
Allakaket	47	18	61	0	4,644	1,175	572	0	43	0	5,320
Alatna	7	5	10	0	63	13	0	0	0	0	73
Bettles	20	17	0	0	6	0	0	0	0	0	6
<i>District 4</i>	<i>651</i>	<i>253</i>	<i>7,808</i>	<i>1,373</i>	<i>11,943</i>	<i>2,175</i>	<i>6,752</i>	<i>4,022</i>	<i>3,901</i>	<i>2,858</i>	<i>30,404</i>

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Table 2.–Page 2 of 2.

Community	Total Households	Households Contacted <sup>a</sup>	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
			Estimated	CI (95%)	Estimated	CI (95%)	Estimated	CI (95%)	Estimated	CI (95%)	Estimated
			Total	(+/-)	Total	(+/-)	Total	(+/-)	Total	(+/-)	Total
Tanana	98	51	1,799	295	4,438	12	18,342	55	2,373	0	26,952
Stevens Village	21	15	257	47	4	2	600	0	0	0	861
Birch Creek	16	12	9	9	0	0	0	0	0	0	9
Beaver	27	24	419	88	16	3	120	83	0	0	555
Fort Yukon	171	58	441	243	218	123	2,221	723	2	1	2,882
Venetie	58	15	316	513	0	0	2,373	2,565	0	0	2,689
Chalkyitsik	27	20	0	0	0	0	45	41	0	0	45
<i>District 5</i>	<i>418</i>	<i>195</i>	<i>3,241</i>	<i>647</i>	<i>4,676</i>	<i>124</i>	<i>23,701</i>	<i>2,667</i>	<i>2,375</i>	<i>1</i>	<i>33,993</i>
Survey Totals	2,366	1,031	21,054	1,805	64,957	5,179	33,678	4,912	7,956	2,898	127,645

Note: Salmon used include fish harvested (subsistence and commercially retained) and fish received from another subsistence fisherman and/or commercial fisherman, and from test fish project(s) that were kept for the household's own subsistence use.

<sup>a</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 3.—Estimated number of households with dogs, households that feed fish to dogs, numbers of dogs, and corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community	Total Households	Households Contacted	Number of Households with Dogs		Number of Households that Feed Fish to Dogs		Number of Dogs	
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)
Hooper Bay	204	70	83	22	0	0	108	34
Scammon Bay	80	32	21	12	0	0	25	12
<i>Coastal District</i>	<i>284</i>	<i>102</i>	<i>104</i>	<i>25</i>	<i>0</i>	<i>0</i>	<i>133</i>	<i>36</i>
Nunam Iqua	31	28	18	1	2	1	37	4
Alakanuk	117	46	98	10	0	0	165	28
Emmonak	150	70	72	13	7	5	139	32
Kotlik	97	36	40	16	6	6	49	19
<i>District 1</i>	<i>395</i>	<i>180</i>	<i>228</i>	<i>23</i>	<i>15</i>	<i>8</i>	<i>390</i>	<i>47</i>
Mountain Village	141	62	90	16	0	0	140	29
Pitkas Point	27	23	14	1	1	1	34	8
St. Mary's	119	43	52	14	0	0	99	30
Pilot Station	106	53	64	10	1	1	82	14
Marshall	74	30	49	13	1	0	102	23
<i>District 2</i>	<i>467</i>	<i>211</i>	<i>269</i>	<i>27</i>	<i>3</i>	<i>1</i>	<i>457</i>	<i>50</i>
Russian Mission	67	32	46	9	4	5	129	43
Holy Cross	55	32	33	6	0	0	76	38
Shageluk	29	21	11	3	0	0	32	10
<i>District 3</i>	<i>151</i>	<i>85</i>	<i>90</i>	<i>11</i>	<i>4</i>	<i>5</i>	<i>237</i>	<i>58</i>
Anvik	28	24	21	2	7	1	67	9
Grayling	46	17	38	8	4	1	74	19
Kaltag	65	18	36	15	0	0	52	23
Nulato	80	22	50	14	1	0	109	37
Koyukuk	41	18	28	6	13	0	81	10
Galena	162	49	97	21	9	8	197	104
Ruby	57	18	26	12	1	0	75	26
Huslia	75	24	38	11	10	8	140	57
Hughes	23	18	9	3	2	1	33	10
Allakaket	47	18	18	9	4	0	83	22
Alatna	7	5	3	0	1	0	6	0
Bettles	20	17	6	1	0	0	21	8
<i>District 4</i>	<i>651</i>	<i>248</i>	<i>371</i>	<i>36</i>	<i>53</i>	<i>12</i>	<i>938</i>	<i>134</i>
Tanana	98	49	55	11	13	2	382	59
Stevens Village	21	15	17	2	1	0	54	11
Birch Creek	16	11	8	3	0	0	15	8
Beaver	27	24	12	2	1	1	25	8
Fort Yukon	171	56	88	20	12	8	294	101
Venetie	58	15	42	11	7	8	126	37
Chalkyitsik	27	20	9	2	4	2	17	4
<i>District 5</i>	<i>418</i>	<i>190</i>	<i>231</i>	<i>26</i>	<i>37</i>	<i>11</i>	<i>913</i>	<i>124</i>
Survey Totals	2,366	1,016	1,293	63	112	19	3,068	206

Note: The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 4.–Household and dog information reported by subsistence and personal use permits issued and returned, listed by fishery and by community of residence, Yukon Area, 2009.

	Permit Information <sup>a</sup>				Reported Household Information (based on permits issued)						
	Permits <sup>b</sup>		Percent Returned	Numbers of Permits Returned that Fished <sup>c</sup>	Number of People	Number of Fishermen	Number of Households with Dogs	Number of Dogs	Number of Households Feeding Whole Salmon to Dogs	Number of Whole Salmon Fed to Dogs	
	Issued	Returned									
<b>Subsistence Permits</b>											
Central	6	6	100%	5	14	9	5	10	1	0	
Circle	21	19	90%	9	57	34	18	79	13	36	
Eagle	31	31	100%	15	85	58	20	242	18	7,188	
Rampart	5	5	100%	4	21	19	4	5	2	425	
Fairbanks (FNSB) <sup>d</sup>	200	190	95%	104	565	460	63	326	16	954	
Healy	5	5	100%	5	16	14	4	32	2	1,441	
Manley	16	16	100%	14	39	25	13	118	10	5,216	
Minto	27	26	96%	5	90	45	15	112	6	0	
Nenana	40	40	100%	24	107	64	23	146	18	6,538	
Stevens Village <sup>e</sup>	5	5	100%	3	14	13	5	24	3	600	
Upper Tanana Villages <sup>f</sup>	50	48	96%	21	158	103	32	73	8	84	
Other Subsistence <sup>g</sup>	13	13	100%	8	36	98	5	9	2	20	
<i>Subsistence Permit Subtotal</i>	<i>419</i>	<i>404</i>	<i>96%</i>	<i>217</i>	<i>1,202</i>	<i>942</i>	<i>207</i>	<i>1,176</i>	<i>99</i>	<i>22,502</i>	
<b>Personal Use Permits</b>											
Fairbanks (FNSB) <sup>d</sup>	65	65	100%	25	179	116	-	-	-	-	
Other Personal Use <sup>h</sup>	3	3	100%	3	6	6	-	-	-	-	
<i>Personal Use Permit Subtotal</i>	<i>68</i>	<i>68</i>	<i>100%</i>	<i>28</i>	<i>185</i>	<i>122</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	
<b>Permit Totals</b>	<b>487</b>	<b>472</b>	<b>97%</b>	<b>245</b>	<b>1,387</b>	<b>1,064</b>	<b>207</b>	<b>1,176</b>	<b>99</b>	<b>22,502</b>	

Note: Dashes indicate no data.

<sup>a</sup> Permits returned as of March 26, 2010.

<sup>b</sup> Includes 24 households that were "issued" permits for more than one area, two households that were issued a duplicate permit for the same area, and five permit holders that were issued an SE and SEU permit to track harvest above and below Eagle sonar.

<sup>c</sup> Includes 5 households that "fished" in two different areas and one household that fished above and below the Eagle sonar.

<sup>d</sup> Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

<sup>e</sup> Stevens Village is a surveyed community, but many residents fish in permit areas. Therefore this permit information is not included in any final harvest estimates to avoid double counting.

<sup>f</sup> Upper Tanana River communities include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

<sup>g</sup> Includes residents from Anchorage, Anderson, Copper Center, Denali Park, Eagle River, Palmer, Tanana, Wasilla, and Wiseman who were issued a subsistence fishing permit for the Yukon, Tanana, Tolovana, Kantishna, and Upper Koyukuk Rivers.

<sup>h</sup> Includes residents of Nenana and Delta Junction that applied for a personal use permit.

Table 5.—Estimated number of salmon retained for dog food from subsistence harvests with corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community	Total Households		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon <sup>a</sup>
	Households	Contacted <sup>b</sup>	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	70	0	0	0	0	0	0	0
Scammon Bay	80	32	0	0	0	0	0	0	0
<i>Coastal District</i>	<i>284</i>	<i>102</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Nunam Iqua	31	28	4	2	0	0	0	0	4
Alakanuk	117	46	0	0	0	0	0	0	0
Emmonak	150	70	300	304	75	85	0	0	375
Kotlik	97	36	328	346	0	0	0	0	328
<i>District 1</i>	<i>395</i>	<i>180</i>	<i>632</i>	<i>460</i>	<i>75</i>	<i>85</i>	<i>0</i>	<i>0</i>	<i>707</i>
Mountain Village	141	62	0	0	0	0	0	0	0
Pitkas Point	27	23	0	0	0	0	44	38	44
St. Mary's	119	43	0	0	0	0	0	0	0
Pilot Station	106	53	0	0	0	0	0	0	0
Marshall	74	30	100	0	0	0	0	0	100
<i>District 2</i>	<i>467</i>	<i>211</i>	<i>100</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>44</i>	<i>38</i>	<i>144</i>
Russian Mission	67	32	0	0	160	223	72	19	232
Holy Cross	55	32	0	0	0	0	0	0	0
Shageluk	29	21	0	0	0	0	0	0	0
<i>District 3</i>	<i>151</i>	<i>85</i>	<i>0</i>	<i>0</i>	<i>160</i>	<i>223</i>	<i>72</i>	<i>19</i>	<i>232</i>
Anvik	28	24	20	0	0	0	0	0	20
Grayling	46	17	125	110	438	383	188	164	751
Kaltag	65	18	0	0	0	0	0	0	0
Nulato	80	22	127	0	12	0	110	0	249
Koyukuk	41	18	1,324	0	164	0	180	0	1,668
Galena	162	49	913	606	1,696	2,121	1,662	2,272	4,271
Ruby	57	18	500	0	0	0	0	0	500
Huslia	75	24	2,171	1,610	52	0	313	0	2,536
Hughes	23	18	1,000	0	38	40	49	51	1,087
Allakaket	47	18	3,539	0	455	0	0	0	3,994
Alatna	7	5	25	0	0	0	0	0	25
Bettles	20	17	0	0	0	0	0	0	0
<i>District 4</i>	<i>651</i>	<i>248</i>	<i>9,744</i>	<i>1,723</i>	<i>2,855</i>	<i>2,155</i>	<i>2,502</i>	<i>2,279</i>	<i>15,101</i>
Tanana	98	48	3,038	656	15,917	4,189	1,678	777	20,633
Stevens Village	21	15	0	0	620	0	0	0	620
Birch Creek	16	11	0	0	0	0	0	0	0
Beaver	27	24	0	0	120	83	0	0	120
Fort Yukon	171	54	347	263	1,362	1,083	0	0	1,709
Venetie	58	15	0	0	2,383	2,565	0	0	2,383
Chalkyitsik	27	20	0	0	57	41	0	0	57
<i>District 5</i>	<i>418</i>	<i>187</i>	<i>3,385</i>	<i>707</i>	<i>20,459</i>	<i>5,031</i>	<i>1,678</i>	<i>777</i>	<i>25,522</i>
Survey Totals	2,366	1,013	13,861	1,919	23,549	5,478	4,296	2,408	41,706

<sup>a</sup> Does not include an undetermined amount of Chinook salmon not fit for human consumption but possibly fed to dogs.

<sup>b</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 6.–Estimated number of salmon retained for dog food from commercial harvests with corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community	Total Households		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon <sup>a</sup>
	Households	Contacted <sup>b</sup>	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	70	0	0	0	0	0	0	0
Scammon Bay	80	32	0	0	0	0	0	0	0
<i>Coastal District</i>	<i>284</i>	<i>102</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Nunam Iqua	31	28	0	0	0	0	0	0	0
Alakanuk	117	46	0	0	0	0	0	0	0
Emmonak	150	70	0	0	0	0	0	0	0
Kotlik	97	36	0	0	0	0	0	0	0
<i>District 1</i>	<i>395</i>	<i>180</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Mountain Village	141	62	0	0	0	0	0	0	0
Pitkas Point	27	23	0	0	0	0	0	0	0
St. Mary's	119	43	0	0	0	0	0	0	0
Pilot Station	106	53	0	0	0	0	0	0	0
Marshall	74	30	0	0	0	0	0	0	0
<i>District 2</i>	<i>467</i>	<i>211</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Russian Mission	67	32	0	0	0	0	0	0	0
Holy Cross	55	32	0	0	0	0	0	0	0
Shageluk	29	21	0	0	0	0	0	0	0
<i>District 3</i>	<i>151</i>	<i>85</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Anvik	28	24	2,404	318	0	0	0	0	2,404
Grayling	46	17	825	548	0	0	0	0	825
Kaltag	65	18	0	0	0	0	0	0	0
Nulato	80	22	0	0	0	0	0	0	0
Koyukuk	41	18	0	0	0	0	0	0	0
Galena	162	49	0	0	0	0	0	0	0
Ruby	57	18	0	0	0	0	0	0	0
Hushia	75	24	0	0	0	0	0	0	0
Hughes	23	18	0	0	0	0	0	0	0
Allakaket	47	18	0	0	0	0	0	0	0
Alatna	7	5	0	0	0	0	0	0	0
Bettles	20	17	0	0	0	0	0	0	0
<i>District 4</i>	<i>651</i>	<i>248</i>	<i>3,229</i>	<i>634</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3,229</i>
Tanana	98	49	0	0	0	0	0	0	0
Stevens Village	21	15	0	0	0	0	0	0	0
Birch Creek	16	11	0	0	0	0	0	0	0
Beaver	27	24	0	0	0	0	0	0	0
Fort Yukon	171	55	0	0	0	0	0	0	0
Venetie	58	15	0	0	0	0	0	0	0
Chalkyitsik	27	20	0	0	0	0	0	0	0
<i>District 5</i>	<i>418</i>	<i>189</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Survey Totals	2,366	1,015	3,229	634	0	0	0	0	3,229

<sup>a</sup> Does not include an undetermined amount of Chinook salmon not fit for human consumption but possibly fed to dogs.

<sup>b</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 7.—Estimated total number of households, sample size, number contacted, and percentage of sampled households that were contacted in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Community Totals			
	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C
Hooper Bay	5	3	3	100%	70	21	13	62%	100	31	30	97%	29	29	25	86%	-	-	-	-	204	84	71	85%
Scammon Bay	1	1	1	100%	24	8	7	88%	40	12	10	83%	15	15	15	100%	-	-	-	-	80	36	33	92%
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>4</i>	<i>100%</i>	<i>94</i>	<i>29</i>	<i>20</i>	<i>69%</i>	<i>140</i>	<i>43</i>	<i>40</i>	<i>93%</i>	<i>44</i>	<i>44</i>	<i>40</i>	<i>91%</i>	-	-	-	-	<i>284</i>	<i>120</i>	<i>104</i>	<i>87%</i>
Nunam Iqua	1	1	0	0%	12	12	11	92%	8	8	7	88%	10	10	10	100%	-	-	-	-	31	31	28	90%
Alakanuk	2	0	0	-	36	13	11	85%	56	18	18	100%	23	23	17	74%	-	-	-	-	117	54	46	85%
Emmonak	4	2	1	50%	47	25	22	88%	66	34	26	76%	33	33	22	67%	-	-	-	-	150	94	71	76%
Kotlik	3	0	0	-	23	6	5	83%	53	16	14	88%	18	18	17	94%	-	-	-	-	97	40	36	90%
<i>District 1</i>	<i>10</i>	<i>3</i>	<i>1</i>	<i>33%</i>	<i>118</i>	<i>56</i>	<i>49</i>	<i>88%</i>	<i>183</i>	<i>76</i>	<i>65</i>	<i>86%</i>	<i>84</i>	<i>84</i>	<i>66</i>	<i>79%</i>	-	-	-	-	<i>395</i>	<i>219</i>	<i>181</i>	<i>83%</i>
Mountain Village	2	2	2	100%	35	11	10	91%	71	22	22	100%	32	32	30	94%	1	1	1	100%	141	68	65	96%
Pitkas Point	2	1	2	200%	7	7	5	71%	13	13	12	92%	5	5	4	80%	-	-	-	-	27	26	23	88%
St. Mary's	1	1	1	100%	21	6	4	67%	73	22	21	95%	24	24	19	79%	-	-	-	-	119	53	45	85%
Pilot Station	4	2	0	0%	35	18	17	94%	51	26	22	85%	16	16	15	94%	-	-	-	-	106	62	54	87%
Marshall	4	2	1	50%	15	5	5	100%	41	12	10	83%	14	14	14	100%	-	-	-	-	74	33	30	91%
<i>District 2</i>	<i>13</i>	<i>8</i>	<i>6</i>	<i>75%</i>	<i>113</i>	<i>47</i>	<i>41</i>	<i>87%</i>	<i>249</i>	<i>95</i>	<i>87</i>	<i>92%</i>	<i>91</i>	<i>91</i>	<i>82</i>	<i>90%</i>	<i>1</i>	<i>1</i>	<i>1</i>	<i>100%</i>	<i>467</i>	<i>242</i>	<i>217</i>	<i>90%</i>
Russian Mission	6	5	6	120%	14	4	4	100%	38	12	13	108%	9	9	9	100%	-	-	-	-	67	30	32	107%
Holy Cross	3	2	1	50%	15	9	9	100%	24	12	12	100%	13	13	11	85%	-	-	-	-	55	36	33	92%
Shageluk	1	1	1	100%	8	8	6	75%	17	17	12	71%	3	3	2	67%	-	-	-	-	29	29	21	72%
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>8</i>	<i>100%</i>	<i>37</i>	<i>21</i>	<i>19</i>	<i>90%</i>	<i>79</i>	<i>41</i>	<i>37</i>	<i>90%</i>	<i>25</i>	<i>25</i>	<i>22</i>	<i>88%</i>	-	-	-	-	<i>151</i>	<i>95</i>	<i>86</i>	<i>91%</i>
Anvik	2	1	1	100%	11	11	10	91%	7	7	5	71%	6	6	6	100%	2	2	2	100%	28	27	24	89%
Grayling	2	2	2	100%	5	2	2	100%	33	10	8	80%	5	5	4	80%	1	1	1	100%	46	20	17	85%
Kaltag	2	1	0	0%	15	5	3	60%	43	11	10	91%	5	5	5	100%	-	-	-	-	65	22	18	82%
Nulato	.	.	.	-	20	6	4	67%	57	17	15	88%	3	3	3	100%	-	-	-	-	80	26	22	85%
Koyukuk	9	9	7	78%	11	4	1	25%	15	4	5	125%	3	3	2	67%	3	3	3	100%	41	23	18	78%
Galena	7	6	6	100%	79	20	17	85%	69	19	20	105%	6	6	6	100%	1	1	1	100%	162	52	50	96%
Ruby	-	-	-	-	40	11	11	100%	14	5	5	100%	1	1	1	100%	2	2	2	100%	57	19	19	100%
Hushia	3	2	0	0%	49	15	15	100%	17	6	5	83%	4	4	4	100%	2	2	2	100%	75	29	26	90%
Hughes	-	-	-	-	14	14	11	79%	6	6	5	83%	3	3	3	100%	-	-	-	-	23	23	19	83%
Allakaket	2	2	0	0%	32	10	8	80%	7	3	4	133%	3	3	3	100%	3	3	3	100%	47	21	18	86%
Alatna	1	0	1	-	4	4	3	75%	2	2	1	50%	-	-	-	-	-	-	-	-	7	6	5	83%
Bettles	3	1	1	100%	16	16	15	94%	1	1	1	100%	-	-	-	-	-	-	-	-	20	18	17	94%
<i>District 4</i>	<i>31</i>	<i>24</i>	<i>18</i>	<i>75%</i>	<i>296</i>	<i>118</i>	<i>100</i>	<i>85%</i>	<i>271</i>	<i>91</i>	<i>84</i>	<i>92%</i>	<i>39</i>	<i>39</i>	<i>37</i>	<i>95%</i>	<i>14</i>	<i>14</i>	<i>14</i>	<i>100%</i>	<i>651</i>	<i>286</i>	<i>253</i>	<i>88%</i>

-continued-

Table 7.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Community Totals			
	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C	N	n	C	%C
Tanana	7	5	4	80%	43	22	20	91%	28	14	10	71%	9	9	6	67%	11	11	11	100%	98	61	51	84%
Stevens Village	2	2	1	50%	5	5	2	40%	11	11	9	82%	3	3	3	100%	-	-	-	-	21	21	15	71%
Birch Creek	6	2	4	200%	6	6	5	83%	4	4	3	75%	-	-	-	-	-	-	-	-	16	12	12	100%
Beaver	1	1	1	100%	13	13	11	85%	8	8	7	88%	5	5	5	100%	-	-	-	-	27	27	24	89%
Fort Yukon	18	5	4	80%	101	29	25	86%	34	12	12	100%	6	6	6	100%	12	12	11	92%	171	64	58	91%
Venetie	3	2	0	0%	38	11	9	82%	14	3	3	100%	3	3	3	100%	-	-	-	-	58	19	15	79%
Chalkyitsik	4	1	1	100%	18	18	16	89%	4	4	3	75%	1	1	0	0%	-	-	-	-	27	24	20	83%
<i>District 5</i>	<i>41</i>	<i>18</i>	<i>15</i>	<i>83%</i>	<i>224</i>	<i>104</i>	<i>88</i>	<i>85%</i>	<i>103</i>	<i>56</i>	<i>47</i>	<i>84%</i>	<i>27</i>	<i>27</i>	<i>23</i>	<i>85%</i>	<i>23</i>	<i>23</i>	<i>22</i>	<i>96%</i>	<i>418</i>	<i>228</i>	<i>195</i>	<i>86%</i>
Survey Totals	111	65	52	80%	882	375	317	85%	1,025	402	360	90%	310	310	270	87%	38	38	37	97%	2,366	1,190	1,036	87%

Note: Dashes indicate indefinable values. Households contacted (C) may include some households not pre-selected resulting in a household contacted percentage (%C) greater than 100%. Total number of households (N), the sample size (n), the number of households contacted (C), and the percent of the sampled households that were contacted (%C).

Table 8.—Estimated number of subsistence fishing households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total N	Total n	Total Est	CI (95%) (+/-)
Hooper Bay	5	3	0.7	0.2	70	13	0.2	0.1	100	30	0.6	0.1	29	25	0.9	0.0	-	-	-	-	204	71	101	20
Scammon Bay	1	1	0.0	-	24	7	0.1	0.1	40	10	0.5	0.1	15	15	0.8	0.0	-	-	-	-	80	33	35	13
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0.6</i>	<i>0.2</i>	<i>94</i>	<i>20</i>	<i>0.2</i>	<i>0.1</i>	<i>140</i>	<i>40</i>	<i>0.6</i>	<i>0.1</i>	<i>44</i>	<i>40</i>	<i>0.9</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>136</i>	<i>24</i>
Nunam Iqua	1	0	-	-	12	11	0.5	0.0	8	7	1.0	0.0	10	10	0.9	0.0	-	-	-	-	31	28	24	1
Alakanuk	2	0	-	-	36	11	0.3	0.1	56	18	0.7	0.1	23	17	0.9	0.0	-	-	-	-	117	46	69	14
Emmonak	4	1	0.0	-	47	22	0.1	0.0	66	26	0.5	0.1	33	22	0.7	0.1	-	-	-	-	150	71	59	11
Kotlik	3	0	-	-	23	5	0.4	0.2	53	14	0.8	0.1	18	17	0.9	0.0	-	-	-	-	97	36	69	15
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>49</i>	<i>0.3</i>	<i>0.1</i>	<i>183</i>	<i>65</i>	<i>0.6</i>	<i>0.0</i>	<i>84</i>	<i>66</i>	<i>0.8</i>	<i>0.0</i>	-	-	-	-	<i>395</i>	<i>181</i>	<i>221</i>	<i>23</i>
Mountain Village	2	2	0.0	0.0	35	10	0.4	0.1	71	22	0.8	0.1	32	30	0.9	0.0	1	1	0.0	-	141	65	98	14
Pitkas Point	2	2	0.0	0.0	7	5	0.4	0.1	13	12	0.6	0.0	5	4	1.0	0.0	-	-	-	-	27	23	15	2
St. Mary's	1	1	1.0	-	21	4	0.3	0.2	73	21	0.7	0.1	24	19	0.8	0.0	-	-	-	-	119	45	77	15
Pilot Station	4	0	-	-	35	17	0.1	0.1	51	22	0.6	0.1	16	15	0.9	0.0	-	-	-	-	106	54	50	9
Marshall	4	1	0.0	-	15	5	0.8	0.2	41	10	0.6	0.1	14	14	0.8	0.0	-	-	-	-	74	30	48	12
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>0.1</i>	<i>0.0</i>	<i>113</i>	<i>41</i>	<i>0.3</i>	<i>0.1</i>	<i>249</i>	<i>87</i>	<i>0.7</i>	<i>0.0</i>	<i>91</i>	<i>82</i>	<i>0.9</i>	<i>0.0</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>217</i>	<i>288</i>	<i>26</i>
Russian Mission	6	6	0.2	0.0	14	4	0.3	0.2	38	13	0.4	0.1	9	9	0.9	0.0	-	-	-	-	67	32	27	10
Holy Cross	3	1	1.0	-	15	9	0.2	0.1	24	12	0.7	0.1	13	11	1.0	0.0	-	-	-	-	55	33	35	5
Shageluk	1	1	1.0	-	8	6	0.2	0.1	17	12	0.6	0.1	3	2	0.5	0.3	-	-	-	-	29	21	14	3
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>0.5</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>0.2</i>	<i>0.1</i>	<i>79</i>	<i>37</i>	<i>0.5</i>	<i>0.1</i>	<i>25</i>	<i>22</i>	<i>0.9</i>	<i>0.0</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>76</i>	<i>12</i>
Anvik	2	1	1.0	-	11	10	0.1	0.0	7	5	1.0	0.0	6	6	1.0	0.0	2	2	1.0	0.0	28	24	18	1
Grayling	2	2	1.0	0.0	5	2	0.5	0.4	33	8	1.0	0.0	5	4	0.8	0.1	1	1	0.0	-	46	17	41	4
Kaltag	2	0	-	-	15	3	0.3	0.3	43	10	0.9	0.1	5	5	0.8	0.0	-	-	-	-	65	18	49	12
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	0.7	0.1	3	3	1.0	0.0	-	-	-	-	80	22	41	12
Koyukuk	9	7	0.4	0.1	11	1	0.0	-	15	5	1.0	0.0	3	2	1.0	0.0	3	3	1.0	0.0	41	18	34	2
Galena	7	6	0.2	0.1	79	17	0.1	0.1	69	20	0.8	0.1	6	6	0.8	0.0	1	1	1.0	-	162	50	72	15
Ruby	-	-	-	-	40	11	0.1	0.1	14	5	0.8	0.2	1	1	1.0	-	2	2	1.0	0.0	57	19	18	7
Huslia	3	0	-	-	49	15	0.2	0.1	17	5	0.2	0.2	4	4	1.0	0.0	2	2	1.0	0.0	75	26	20	11
Hughes	-	-	-	-	14	11	0.2	0.1	6	5	0.8	0.1	3	3	0.7	0.0	-	-	-	-	23	19	9	2
Allakaket	2	0	-	-	32	8	0.1	0.1	7	4	0.3	0.2	3	3	0.7	0.0	3	3	1.0	0.0	47	18	11	7
Alatna	1	1	1.0	-	4	3	0.3	0.2	2	1	1.0	-	-	-	-	-	-	-	-	-	7	5	4	1
Bettles	3	1	1.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	3	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>0.5</i>	<i>0.0</i>	<i>296</i>	<i>100</i>	<i>0.1</i>	<i>0.0</i>	<i>271</i>	<i>84</i>	<i>0.8</i>	<i>0.0</i>	<i>39</i>	<i>37</i>	<i>0.9</i>	<i>0.0</i>	<i>14</i>	<i>14</i>	<i>0.9</i>	<i>0.0</i>	<i>651</i>	<i>253</i>	<i>320</i>	<i>28</i>

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Table 8.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined				
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)
Tanana	7	4	0.3	0.2	43	20	0.1	0.0	28	10	0.8	0.1	9	6	1.0	0.0	11	11	0.9	0.0	98	51	45		7
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.4	0.1	3	3	1.0	0.0	-	-	-	-	21	15	8		2
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.3	0.2	-	-	-	-	-	-	-	-	16	12	1		1
Beaver	1	1	1.0	-	13	11	0.3	0.1	8	7	0.7	0.1	5	5	0.8	0.0	-	-	-	-	27	24	14		2
Fort Yukon	18	4	0.0	0.0	101	25	0.2	0.1	34	12	0.5	0.1	6	6	0.8	0.0	12	11	0.5	0.0	171	58	49		16
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	0.7	0.3	3	3	1.0	0.0	-	-	-	-	58	15	13		9
Chalkyitsik	4	1	0.0	-	18	16	0.1	0.0	4	3	0.3	0.2	1	0	-	-	-	-	-	-	27	20	3		2
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.1</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.1</i>	<i>0.0</i>	<i>103</i>	<i>47</i>	<i>0.6</i>	<i>0.1</i>	<i>27</i>	<i>23</i>	<i>0.9</i>	<i>0.0</i>	<i>23</i>	<i>22</i>	<i>0.7</i>	<i>0.0</i>	<i>418</i>	<i>195</i>	<i>133</i>		<i>20</i>
Survey Totals	111	52	0.3	0.0	882	317	0.2	0.0	1,025	360	0.7	0.0	310	270	0.9	0.0	38	37	0.8	0.0	2,366	1,036	1,174		56

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Table 9.—Estimated number of people in households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total	Est	CI (95%)	
Hooper Bay	5	3	2.3	0.8	70	13	3.1	0.6	100	26	4.9	0.4	29	25	5.6	0.3	-	-	-	-	204	67	879	118
Scammon Bay	1	1	1.0	-	24	7	5.6	1.8	40	8	5.9	0.7	15	15	6.6	0.0	-	-	-	-	80	31	469	100
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>2.1</i>	<i>0.7</i>	<i>94</i>	<i>20</i>	<i>3.7</i>	<i>0.6</i>	<i>140</i>	<i>34</i>	<i>5.2</i>	<i>0.4</i>	<i>44</i>	<i>40</i>	<i>6.0</i>	<i>0.2</i>	-	-	-	-	<i>284</i>	<i>98</i>	<i>1,348</i>	<i>155</i>
Nunam Iqua	1	0	-	-	12	11	6.2	0.2	8	7	4.0	0.3	10	10	5.4	0.0	-	-	-	-	31	28	166	8
Alakanuk	2	0	-	-	36	11	4.2	0.7	56	18	5.4	0.5	23	17	4.5	0.3	-	-	-	-	117	46	566	75
Emmonak	4	1	4.0	-	47	21	4.0	0.5	66	26	3.7	0.3	33	21	6.5	0.6	-	-	-	-	150	69	657	73
Kotlik	3	0	-	-	23	5	4.8	0.6	53	14	4.6	0.7	18	17	3.8	0.1	-	-	-	-	97	36	438	77
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>4.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>4.4</i>	<i>0.3</i>	<i>183</i>	<i>65</i>	<i>4.5</i>	<i>0.3</i>	<i>84</i>	<i>65</i>	<i>5.2</i>	<i>0.2</i>	-	-	-	-	<i>395</i>	<i>179</i>	<i>1,827</i>	<i>130</i>
Mountain Village	2	2	8.0	0.0	35	10	3.6	0.7	71	22	5.1	0.5	32	30	6.1	0.1	1	1	4.0	-	141	65	702	84
Pitkas Point	2	2	3.5	0.0	7	5	3.2	0.4	13	12	4.8	0.2	5	4	5.0	0.5	-	-	-	-	27	23	117	9
St. Mary's	1	1	3.0	-	21	4	2.3	0.9	73	21	4.2	0.6	24	18	5.1	0.3	-	-	-	-	119	44	477	87
Pilot Station	4	0	-	-	35	17	4.5	0.4	51	22	4.8	0.4	16	14	5.2	0.2	-	-	-	-	106	53	507	53
Marshall	4	1	3.0	-	15	5	4.6	0.8	41	10	3.8	0.8	14	14	5.3	0.0	-	-	-	-	74	30	311	65
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>4.2</i>	<i>0.0</i>	<i>113</i>	<i>41</i>	<i>3.7</i>	<i>0.3</i>	<i>249</i>	<i>87</i>	<i>4.5</i>	<i>0.3</i>	<i>91</i>	<i>80</i>	<i>5.5</i>	<i>0.1</i>	<i>1</i>	<i>1</i>	<i>4.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>2,114</i>	<i>148</i>
Russian Mission	6	6	3.5	0.0	14	4	4.0	0.6	38	13	4.8	0.5	9	9	6.0	0.0	-	-	-	-	67	32	312	40
Holy Cross	3	1	7.0	-	15	9	3.8	0.3	24	11	2.6	0.4	13	11	2.9	0.2	-	-	-	-	55	32	179	21
Shageluk	1	1	1.0	-	8	6	2.8	0.4	17	11	2.4	0.2	3	2	2.5	0.9	-	-	-	-	29	20	71	11
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>4.3</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>3.7</i>	<i>0.3</i>	<i>79</i>	<i>35</i>	<i>3.6</i>	<i>0.3</i>	<i>25</i>	<i>22</i>	<i>4.0</i>	<i>0.2</i>	-	-	-	-	<i>151</i>	<i>84</i>	<i>562</i>	<i>47</i>
Anvik	2	1	2.0	-	11	9	2.3	0.3	7	5	3.6	0.8	6	6	2.5	0.0	2	2	4.5	0.0	28	23	79	12
Grayling	2	2	8.5	0.0	5	2	2.0	0.8	33	7	2.9	0.5	5	4	4.5	0.3	1	1	2.0	-	46	16	146	33
Kaltag	2	0	-	-	15	3	1.3	0.3	43	10	3.9	0.4	5	5	3.8	0.0	-	-	-	-	65	18	213	34
Nulato	-	-	-	-	20	3	1.7	0.3	57	15	2.7	0.3	3	3	2.7	0.0	-	-	-	-	80	21	193	38
Koyukuk	9	7	3.9	0.4	11	1	2.0	-	15	5	2.0	0.5	3	2	3.0	0.0	3	3	3.3	0.0	41	18	114	23
Galena	7	5	2.2	0.4	79	16	2.8	0.3	69	18	3.2	0.3	6	6	2.3	0.0	1	1	4.0	-	162	46	474	64
Ruby	-	-	-	-	40	9	2.8	0.6	14	5	2.6	0.5	1	1	2.0	-	2	2	2.5	0.0	57	17	155	51
Huslia	3	0	-	-	49	11	4.4	0.9	17	5	2.6	0.3	4	4	3.8	0.0	2	2	4.5	0.0	75	22	294	93
Hughes	-	-	-	-	14	11	2.5	0.2	6	5	3.0	0.4	3	3	3.7	0.0	-	-	-	-	23	19	65	8
Allakaket	2	0	-	-	32	8	3.3	0.6	7	4	2.8	0.6	3	3	2.3	0.0	3	3	4.3	0.0	47	18	150	42
Alatna	1	1	5.0	-	4	3	1.7	0.3	2	1	5.0	-	-	-	-	-	-	-	-	-	7	5	22	3
Bettles	3	1	1.0	-	16	15	1.5	0.0	1	1	1.0	-	-	-	-	-	-	-	-	-	20	17	27	1
<i>District 4</i>	<i>31</i>	<i>17</i>	<i>3.3</i>	<i>0.2</i>	<i>296</i>	<i>91</i>	<i>2.8</i>	<i>0.2</i>	<i>271</i>	<i>81</i>	<i>3.0</i>	<i>0.1</i>	<i>39</i>	<i>37</i>	<i>3.1</i>	<i>0.0</i>	<i>14</i>	<i>14</i>	<i>3.7</i>	<i>0.0</i>	<i>651</i>	<i>240</i>	<i>1,932</i>	<i>147</i>

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Table 9.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total N	n	Total	Est CI (95%) (+/-)
Tanana	7	4	4.0	0.5	43	20	2.1	0.2	28	10	2.2	0.2	9	6	2.8	0.3	11	11	2.2	0.0	98	51	229	26
Stevens Village	2	0	-	-	5	2	1.5	0.4	11	9	2.4	0.2	3	3	3.7	0.0	-	-	-	-	21	14	50	6
Birch Creek	6	2	3.0	0.0	6	5	1.4	0.2	4	3	2.0	0.0	-	-	-	-	-	-	-	-	16	10	34	2
Beaver	1	1	4.0	-	13	9	2.2	0.3	8	7	2.0	0.2	5	5	2.6	0.0	-	-	-	-	27	22	62	8
Fort Yukon	18	4	1.5	0.4	101	23	2.6	0.3	34	12	2.8	0.3	6	6	2.8	0.0	12	10	2.6	0.2	171	55	428	67
Venetie	3	0	-	-	38	8	2.1	0.4	14	3	3.0	0.5	3	3	5.0	0.0	-	-	-	-	58	14	145	37
Chalkyitsik	4	1	6.0	-	18	16	2.5	0.1	4	3	3.0	0.5	1	0	-	-	-	-	-	-	27	20	84	6
<i>District 5</i>	<i>41</i>	<i>12</i>	<i>2.8</i>	<i>0.2</i>	<i>224</i>	<i>83</i>	<i>2.3</i>	<i>0.2</i>	<i>103</i>	<i>47</i>	<i>2.5</i>	<i>0.1</i>	<i>27</i>	<i>23</i>	<i>3.1</i>	<i>0.1</i>	<i>23</i>	<i>21</i>	<i>2.4</i>	<i>0.1</i>	<i>418</i>	<i>186</i>	<i>1,032</i>	<i>81</i>
Survey Totals	111	48	3.3	0.1	882	302	3.2	0.1	1,025	349	3.9	0.1	310	267	4.9	0.1	38	36	2.9	0.1	2,366	1,002	8,815	305

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Table 10.–Subsistence salmon harvest estimates including commercially retained (not including test fish) and corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community	Total Households	Households Contacted <sup>a</sup>	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	71	183	119	9,085	2,079	41	31	24	19	9,333
Scammon Bay	80	33	721	277	3,588	1,217	101	110	222	205	4,632
<i>Coastal District</i>	<i>284</i>	<i>104</i>	<i>904</i>	<i>301</i>	<i>12,673</i>	<i>2,409</i>	<i>142</i>	<i>114</i>	<i>246</i>	<i>206</i>	<i>13,965</i>
Nunam Iqua	31	26	200	29	2,280	266	41	16	71	17	2,592
Alakanuk	117	46	511	217	5,001	1,598	107	65	185	126	5,804
Emmonak	150	71	598	173	7,338	1,888	1,505	814	318	329	9,759
Kotlik	97	35	1,111	230	6,699	2,865	105	179	107	179	8,022
<i>District 1</i>	<i>395</i>	<i>178</i>	<i>2,420</i>	<i>361</i>	<i>21,318</i>	<i>3,794</i>	<i>1,758</i>	<i>836</i>	<i>681</i>	<i>395</i>	<i>26,177</i>
Mountain Village	141	65	1,480	282	7,204	1,495	591	446	203	110	9,478
Pitkas Point	27	23	265	60	994	144	76	66	45	38	1,380
St. Mary's	119	44	1,929	613	5,831	1,430	106	61	151	129	8,017
Pilot Station	106	53	780	211	3,641	839	5	8	0	0	4,426
Marshall	74	30	1,201	585	2,172	1,057	190	42	245	208	3,808
<i>District 2</i>	<i>467</i>	<i>215</i>	<i>5,655</i>	<i>920</i>	<i>19,842</i>	<i>2,475</i>	<i>968</i>	<i>457</i>	<i>644</i>	<i>271</i>	<i>27,109</i>
Russian Mission	67	32	978	484	849	398	205	227	96	45	2,128
Holy Cross	55	33	1,745	282	194	64	627	314	120	78	2,686
Shageluk	29	21	201	82	103	47	105	72	105	33	514
<i>District 3</i>	<i>151</i>	<i>86</i>	<i>2,924</i>	<i>566</i>	<i>1,146</i>	<i>406</i>	<i>937</i>	<i>394</i>	<i>321</i>	<i>96</i>	<i>5,328</i>
Anvik	28	24	597	77	135	51	176	31	137	22	1,045
Grayling	46	17	1,132	187	423	260	490	371	318	214	2,363
Kaltag	65	18	1,970	812	50	40	200	168	40	46	2,260
Nulato	80	22	1,551	951	133	21	552	436	171	128	2,407
Koyukuk	41	18	982	427	1,378	52	578	21	198	0	3,136
Galena	162	50	1,370	369	1,718	1,191	4,306	3,975	2,353	2,845	9,747
Ruby	57	19	542	68	603	132	134	136	314	14	1,593
Huslia	75	26	969	1,330	2,554	1,641	86	0	323	0	3,932
Hughes	23	19	101	13	1,723	98	288	62	89	55	2,201
Allakaket	47	18	90	0	4,924	1,206	572	0	43	0	5,629
Alatna	7	5	10	0	163	13	0	0	0	0	173
Bettles	20	17	0	0	6	0	0	0	0	0	6
<i>District 4</i>	<i>651</i>	<i>253</i>	<i>9,314</i>	<i>1,923</i>	<i>13,810</i>	<i>2,381</i>	<i>7,382</i>	<i>4,022</i>	<i>3,986</i>	<i>2,857</i>	<i>34,492</i>

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Table 10.–Page 2 of 2.

Community	Total Households	Households Contacted <sup>a</sup>	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Tanana	98	51	2,950	894	4,665	12	19,595	169	2,373	0	29,583
Stevens Village	21	15	405	110	6	2	600	0	0	0	1,011
Birch Creek	16	12	15	14	0	0	0	0	0	0	15
Beaver	27	24	516	97	22	5	120	83	0	0	658
Fort Yukon	171	58	846	357	275	152	2,829	906	2	1	3,952
Venetie	58	15	622	1,026	143	248	2,373	2,565	0	0	3,138
Chalkyitsik	27	20	0	0	0	0	45	41	0	0	45
<i>District 5</i>	<i>418</i>	<i>195</i>	<i>5,354</i>	<i>1,415</i>	<i>5,111</i>	<i>291</i>	<i>25,562</i>	<i>2,727</i>	<i>2,375</i>	<i>1</i>	<i>38,402</i>
Survey Totals	2,366	1,031	26,571	2,662	73,900	5,678	36,749	4,969	8,253	2,906	145,473

*Note:* Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

<sup>a</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 11.–Estimated subsistence harvest including commercially retained (not including test fish) of Chinook salmon by fishing location in surveyed communities, Yukon Area, 2009.

Community	Coastal District	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by Community <sup>b</sup>	
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine		Black
Hooper Bay	183	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	183
Scammon Bay	91	630	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	721
<i>Coastal District</i>	<i>274</i>	<i>630</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>904</i>
Nunam Iqua	31	161	8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	200
Alakanuk	0	511	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	511
Emmonak	0	578	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	598
Kotlik	463	648	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,111
<i>District 1</i>	<i>494</i>	<i>1,898</i>	<i>28</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,420</i>
Mountain Village	0	163	1,300	17	0	0	0	0	0	0	0	0	0	0	0	0	0	1,480
Pitkas Point	0	12	253	0	0	0	0	0	0	0	0	0	0	0	0	0	0	265
St. Mary's	0	303	1,626	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,929
Pilot Station	0	0	780	0	0	0	0	0	0	0	0	0	0	0	0	0	0	780
Marshall	0	0	1,014	187	0	0	0	0	0	0	0	0	0	0	0	0	0	1,201
<i>District 2</i>	<i>0</i>	<i>478</i>	<i>4,973</i>	<i>204</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5,655</i>
Russian Mission	0	0	250	728	0	0	0	0	0	0	0	0	0	0	0	0	0	978
Holy Cross	0	0	0	1,745	0	0	0	0	0	0	0	0	0	0	0	0	0	1,745
Shageluk	0	0	0	130	45	0	0	0	0	0	0	26	0	0	0	0	0	201
<i>District 3</i>	<i>0</i>	<i>0</i>	<i>250</i>	<i>2,603</i>	<i>45</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>26</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,924</i>
Anvik	0	0	0	0	597	0	0	0	0	0	0	0	0	0	0	0	0	597
Grayling	0	0	0	0	1,132	0	0	0	0	0	0	0	0	0	0	0	0	1,132
Kaltag	0	0	0	0	1,970	0	0	0	0	0	0	0	0	0	0	0	0	1,970
Nulato	0	0	0	0	1,551	0	0	0	0	0	0	0	0	0	0	0	0	1,551
Koyukuk	0	0	0	0	923	59	0	0	0	0	0	0	0	0	0	0	0	982
Galena	0	0	0	0	965	290	115	0	0	0	0	0	0	0	0	0	0	1,370
Ruby	0	0	0	0	0	42	500	0	0	0	0	0	0	0	0	0	0	542
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	969	0	0	0	0	969
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	101	0	0	0	0	101
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	90	0	0	0	0	90
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	10	0	0	0	0	10
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7,138</i>	<i>391</i>	<i>615</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,170</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9,314</i>

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Table 11.–Page 2 of 2.

Community	Coastal	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by	
	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community <sup>b</sup>
Tanana	0	0	0	0	0	0	0	242	2,708	0	0	0	0	0	0	0	0	2,950
Stevens Village	0	0	0	0	0	0	0	0	0	43	362	0	0	0	0	0	0	405
Birch Creek	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
Beaver	0	0	0	0	0	0	0	0	0	0	516	0	0	0	0	0	0	516
Fort Yukon	0	0	0	0	0	0	0	0	0	0	301	496	0	0	0	49	0	846
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	622	0	0	622
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>242</i>	<i>2,708</i>	<i>43</i>	<i>1,194</i>	<i>496</i>	<i>0</i>	<i>0</i>	<i>622</i>	<i>49</i>	<i>0</i>	<i>5,354</i>
Survey Totals	768	3,006	5,251	2,807	7,183	391	615	242	2,708	43	1,194	496	26	1,170	622	49	0	26,571

*Note:* Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

<sup>a</sup> Harvest in Subdistrict 5D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

<sup>b</sup> Totals may not add in both directions due to decimal rounding. Subsistence harvest estimates include fish caught during commercial openers but retained for subsistence use.

Table 12.–Estimated subsistence harvest including commercially retained (not including test fish) of summer chum salmon by fishing location in surveyed communities, Yukon Area, 2009.

Community	Coastal District	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by Community <sup>b</sup>	
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine		Black
Hooper Bay	9,085	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9,085
Scammon Bay	1,076	2,512	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,588
<i>Coastal District</i>	<i>10,161</i>	<i>2,512</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>12,673</i>
Nunam Iqua	470	1,743	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,280
Alakanuk	0	4,996	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,001
Emmonak	0	7,338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,338
Kotlik	2,010	4,689	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,699
<i>District 1</i>	<i>2,480</i>	<i>18,766</i>	<i>72</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>21,318</i>
Mountain Village	0	906	6,209	89	0	0	0	0	0	0	0	0	0	0	0	0	0	7,204
Pitkas Point	0	63	931	0	0	0	0	0	0	0	0	0	0	0	0	0	0	994
St. Mary's	0	435	5,396	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,831
Pilot Station	0	107	3,534	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,641
Marshall	0	0	1,574	598	0	0	0	0	0	0	0	0	0	0	0	0	0	2,172
<i>District 2</i>	<i>0</i>	<i>1,511</i>	<i>17,644</i>	<i>687</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>19,842</i>
Russian Mission	0	0	126	723	0	0	0	0	0	0	0	0	0	0	0	0	0	849
Holy Cross	0	0	0	194	0	0	0	0	0	0	0	0	0	0	0	0	0	194
Shageluk	0	0	0	46	0	0	0	8	0	0	0	0	49	0	0	0	0	103
<i>District 3</i>	<i>0</i>	<i>0</i>	<i>126</i>	<i>963</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>8</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>49</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,146</i>
Anvik	0	0	0	0	135	0	0	0	0	0	0	0	0	0	0	0	0	135
Grayling	0	0	0	0	423	0	0	0	0	0	0	0	0	0	0	0	0	423
Kaltag	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	50
Nulato	0	0	0	0	133	0	0	0	0	0	0	0	0	0	0	0	0	133
Koyukuk	0	0	0	0	1,357	21	0	0	0	0	0	0	0	0	0	0	0	1,378
Galena	0	0	0	0	126	1,088	504	0	0	0	0	0	0	0	0	0	0	1,718
Ruby	0	0	0	0	0	47	556	0	0	0	0	0	0	0	0	0	0	603
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	2,554	0	0	0	0	2,554
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	1,723	0	0	0	0	1,723
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	4,924	0	0	0	0	4,924
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	163	0	0	0	0	163
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	6
<i>District 4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,224</i>	<i>1,156</i>	<i>1,060</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9,370</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>13,810</i>

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Table 12.–Page 2 of 2.

Community	Coastal	Districts			Subdistricts <sup>a</sup>								River Drainages					Total by
	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community <sup>b</sup>
Tanana	0	0	0	0	0	0	0	3,304	1,361	0	0	0	0	0	0	0	0	4,665
Stevens Village	0	0	0	0	0	0	0	0	0	5	1	0	0	0	0	0	0	6
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	22
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	275	0	0	0	0	0	275
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	143	0	0	0	143
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>3,304</i>	<i>1,361</i>	<i>5</i>	<i>23</i>	<i>275</i>	<i>0</i>	<i>0</i>	<i>143</i>	<i>0</i>	<i>0</i>	<i>5,111</i>
Survey Totals	12,641	22,789	17,842	1,650	2,224	1,156	1,060	3,312	1,361	5	23	275	49	9,370	143	0	0	73,900

*Note:* Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

<sup>a</sup> Harvest in Subdistrict 5D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

<sup>b</sup> Totals may not add in both directions due to decimal rounding. Subsistence harvest estimates include fish caught during commercial openers but retained for subsistence use.

Table 13.—Estimated subsistence harvest including commercially retained (not including test fish) of fall chum salmon by fishing location in surveyed communities, Yukon Area, 2009.

Community	Coastal District	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by Community <sup>b</sup>	
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine		Black
Hooper Bay	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Scammon Bay	25	76	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	101
<i>Coastal District</i>	<i>66</i>	<i>76</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>142</i>
Nunam Iqua	0	41	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	41
Alakanuk	0	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107
Emmonak	0	1,505	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,505
Kotlik	0	105	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	105
<i>District 1</i>	<i>0</i>	<i>1,758</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,758</i>
Mountain Village	0	0	583	8	0	0	0	0	0	0	0	0	0	0	0	0	0	591
Pitkas Point	0	0	1	75	0	0	0	0	0	0	0	0	0	0	0	0	0	76
St. Mary's	0	0	106	0	0	0	0	0	0	0	0	0	0	0	0	0	0	106
Pilot Station	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
Marshall	0	0	162	28	0	0	0	0	0	0	0	0	0	0	0	0	0	190
<i>District 2</i>	<i>0</i>	<i>0</i>	<i>857</i>	<i>111</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>968</i>
Russian Mission	0	0	0	205	0	0	0	0	0	0	0	0	0	0	0	0	0	205
Holy Cross	0	0	0	627	0	0	0	0	0	0	0	0	0	0	0	0	0	627
Shageluk	0	0	0	87	0	0	0	0	0	0	0	18	0	0	0	0	0	105
<i>District 3</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>919</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>18</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>937</i>
Anvik	0	0	0	0	176	0	0	0	0	0	0	0	0	0	0	0	0	176
Grayling	0	0	0	0	490	0	0	0	0	0	0	0	0	0	0	0	0	490
Kaltag	0	0	0	0	200	0	0	0	0	0	0	0	0	0	0	0	0	200
Nulato	0	0	0	0	552	0	0	0	0	0	0	0	0	0	0	0	0	552
Koyukuk	0	0	0	0	205	373	0	0	0	0	0	0	0	0	0	0	0	578
Galena	0	0	0	0	108	2,382	1,816	0	0	0	0	0	0	0	0	0	0	4,306
Ruby	0	0	0	0	0	84	50	0	0	0	0	0	0	0	0	0	0	134
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	86	0	0	0	0	86
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	288	0	0	0	0	288
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	572	0	0	0	0	572
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 4</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,731</i>	<i>2,839</i>	<i>1,866</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>946</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>7,382</i>

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Table 13.–Page 2 of 2.

Community	Coastal	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by	
	District	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	Community <sup>b</sup>
Tanana	0	0	0	0	0	0	0	5,265	14,330	0	0	0	0	0	0	0	0	19,595
Stevens Village	0	0	0	0	0	0	0	0	0	0	600	0	0	0	0	0	0	600
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	120	0	0	0	0	0	0	120
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	2,104	0	0	0	725	0	2,829
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	2,373	0	0	0	2,373
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45	45
<i>District 5</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>5,265</i>	<i>14,330</i>	<i>0</i>	<i>720</i>	<i>2,104</i>	<i>0</i>	<i>0</i>	<i>2,373</i>	<i>725</i>	<i>45</i>	<i>25,562</i>
Survey Totals	66	1,834	857	1,030	1,731	2,839	1,866	5,265	14,330	0	720	2,104	18	946	2,373	725	45	36,749

Note: Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

<sup>a</sup> Harvest in Subdistrict 5D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

<sup>b</sup> Totals may not add in both directions due to decimal rounding. Subsistence harvest estimates include fish caught during commercial openers but retained for subsistence use.

Table 14.–Estimated subsistence harvest including commercially retained (not including test fish) of coho salmon by fishing location in surveyed communities, Yukon Area, 2009.

Community	Coastal District	Districts			Subdistricts <sup>a</sup>								River Drainages					Total by Community <sup>b</sup>
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	
Hooper Bay	24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	24
Scammon Bay	31	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	222
<i>Coastal District</i>	55	191	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	246
Nunam Iqua	6	65	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71
Alakanuk	0	185	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	185
Emmonak	0	318	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	318
Kotlik	0	107	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	107
<i>District 1</i>	6	675	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	681
Mountain Village	0	0	195	8	0	0	0	0	0	0	0	0	0	0	0	0	0	203
Pitkas Point	0	1	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	45
St. Mary's	0	0	151	0	0	0	0	0	0	0	0	0	0	0	0	0	0	151
Pilot Station	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Marshall	0	0	108	137	0	0	0	0	0	0	0	0	0	0	0	0	0	245
<i>District 2</i>	0	1	498	145	0	0	0	0	0	0	0	0	0	0	0	0	0	644
Russian Mission	0	0	0	96	0	0	0	0	0	0	0	0	0	0	0	0	0	96
Holy Cross	0	0	0	120	0	0	0	0	0	0	0	0	0	0	0	0	0	120
Shageluk	0	0	0	86	0	0	0	0	0	0	0	19	0	0	0	0	0	105
<i>District 3</i>	0	0	0	302	0	0	0	0	0	0	0	19	0	0	0	0	0	321
Anvik	0	0	0	0	137	0	0	0	0	0	0	0	0	0	0	0	0	137
Grayling	0	0	0	0	318	0	0	0	0	0	0	0	0	0	0	0	0	318
Kaltag	0	0	0	0	40	0	0	0	0	0	0	0	0	0	0	0	0	40
Nulato	0	0	0	0	171	0	0	0	0	0	0	0	0	0	0	0	0	171
Koyukuk	0	0	0	0	180	18	0	0	0	0	0	0	0	0	0	0	0	198
Galena	0	0	0	0	327	1,885	141	0	0	0	0	0	0	0	0	0	0	2,353
Ruby	0	0	0	0	0	2	312	0	0	0	0	0	0	0	0	0	0	314
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	323	0	0	0	0	323
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	89	0	0	0	0	89
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	43	0	0	0	0	43
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 4</i>	0	0	0	0	1,173	1,905	453	0	0	0	0	0	455	0	0	0	0	3,986

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Table 14.–Page 2 of 2.

Community	Coastal District	Districts			Subdistricts <sup>a</sup>								River Drainages				Total by Community <sup>b</sup>		
		1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine		Black	
Tanana	0	0	0	0	0	0	0	1,000	1,373	0	0	0	0	0	0	0	0	0	2,373
Stevens Village	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>1,000</i>	<i>1,373</i>	<i>0</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>2,375</i>
Survey Totals	61	867	498	447	1,173	1,905	453	1,000	1,373	0	0	2	19	455	0	0	0	0	8,253

*Note:* Commercially retained fish are salmon harvested during commercial fishing that were not sold, but retained and used for subsistence purposes.

<sup>a</sup> Harvest in Subdistrict 5D near Ft. Yukon is divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine River with the Yukon River.

<sup>b</sup> Totals may not add in both directions due to decimal rounding. Subsistence harvest estimates include fish caught during commercial openers but retained for subsistence use.

Table 15.—Estimated subsistence harvest of pink salmon, whitefish, pike, and sheefish by surveyed communities, Yukon Area, 2009.

Community	Estimated Subsistence Harvest													Total Expanded Miscellaneous Fish Harvest
	Total Households	Households Contacted <sup>b</sup>	Pink Salmon		Large Whitefish <sup>a</sup>		Small Whitefish		Pike		Sheefish			
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)		
Hooper Bay	204	71	957	799	1,504	686	741	578	143	104	20	33	3,365	
Scammon Bay	80	33	1,186	870	234	96	245	0	80	0	0	0	1,745	
<i>Coastal District</i>	<i>284</i>	<i>104</i>	<i>2,143</i>	<i>1,181</i>	<i>1,738</i>	<i>692</i>	<i>986</i>	<i>578</i>	<i>223</i>	<i>104</i>	<i>20</i>	<i>33</i>	<i>5,110</i>	
Nunam Iqua	31	28	61	9	256	8	1,651	659	86	15	510	134	2,564	
Alakanuk	117	46	24	31	565	346	3,826	1,683	1,463	941	2,156	2,043	8,034	
Emmonak	150	71	5	8	564	296	2,409	1,623	847	403	687	268	4,512	
Kotlik	97	36	42	72	194	199	238	144	375	418	551	532	1,400	
<i>District 1</i>	<i>395</i>	<i>181</i>	<i>132</i>	<i>79</i>	<i>1,579</i>	<i>497</i>	<i>8,124</i>	<i>2,433</i>	<i>2,771</i>	<i>1,106</i>	<i>3,904</i>	<i>2,132</i>	<i>16,510</i>	
Mountain Village	141	65	6	2	2,511	1,029	113	110	668	334	243	131	3,541	
Pitkas Point	27	23	0	0	802	496	108	59	70	47	42	30	1,022	
St. Mary's	119	45	5	5	6,183	3,747	71	115	475	314	508	332	7,242	
Pilot Station	106	53	3	4	1,937	829	38	37	74	79	77	33	2,129	
Marshall	74	30	0	0	1,753	1,666	0	0	437	331	198	96	2,388	
<i>District 2</i>	<i>467</i>	<i>216</i>	<i>14</i>	<i>6</i>	<i>13,186</i>	<i>4,337</i>	<i>330</i>	<i>173</i>	<i>1,724</i>	<i>572</i>	<i>1,068</i>	<i>372</i>	<i>16,322</i>	
Russian Mission	67	32	0	0	260	159	0	0	345	157	42	47	647	
Holy Cross	55	33	0	0	1,578	1,652	0	0	226	144	144	138	1,948	
Shageluk	29	21	9	10	2,908	1,988	0	0	115	38	94	41	3,126	
<i>District 3</i>	<i>151</i>	<i>86</i>	<i>9</i>	<i>10</i>	<i>4,746</i>	<i>2,590</i>	<i>0</i>	<i>0</i>	<i>686</i>	<i>217</i>	<i>280</i>	<i>152</i>	<i>5,721</i>	
Anvik	28	24	2	0	521	37	6	3	192	38	159	28	880	
Grayling	46	17	0	0	562	289	250	219	225	213	308	207	1,345	
Kaltag	65	18	0	0	31	0	0	0	10	0	92	77	133	
Nulato	80	22	0	0	53	0	2	0	2	0	120	81	177	
Koyukuk	41	18	0	0	245	197	0	0	126	115	66	41	437	
Galena	162	50	0	0	7,827	8,463	0	0	162	214	104	48	8,093	
Ruby	57	19	0	0	511	0	0	0	10	0	51	49	572	
Huslia	75	26	0	0	876	331	98	125	826	366	265	209	2,065	
Hughes	23	19	0	0	512	340	240	192	105	3	362	219	1,219	
Allakaket	47	18	0	0	687	117	15	19	109	23	304	12	1,115	
Alatna	7	5	0	0	83	13	50	0	30	0	8	0	171	
Bettles	20	17	0	0	0	0	0	0	2	1	4	2	6	
<i>District 4</i>	<i>651</i>	<i>253</i>	<i>2</i>	<i>0</i>	<i>11,908</i>	<i>8,485</i>	<i>661</i>	<i>318</i>	<i>1,799</i>	<i>490</i>	<i>1,843</i>	<i>393</i>	<i>16,213</i>	

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Table 15.–Page 2 of 2.

Community	Estimated Subsistence Harvest												Total Expanded Miscellaneous Fish Harvest
	Total Households	Households Contacted <sup>b</sup>	Pink Salmon		Large Whitefish <sup>a</sup>		Small Whitefish		Pike		Sheefish		
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	
Tanana	98	51	0	0	5,723	283	1,988	102	172	61	474	127	8,357
Stevens Village	21	15	0	0	74	27	2	1	91	35	32	20	199
Birch Creek	16	12	0	0	40	39	0	0	80	65	13	13	133
Beaver	27	24	0	0	15	11	8	7	71	22	6	5	100
Fort Yukon	171	58	0	0	352	262	283	168	414	269	163	159	1,212
Venetie	58	15	0	0	20	34	0	0	0	0	5	9	25
Chalkyitsik	27	20	0	0	15	7	0	0	30	6	53	8	98
<i>District 5</i>	<i>418</i>	<i>195</i>	<i>0</i>	<i>0</i>	<i>6,239</i>	<i>390</i>	<i>2,281</i>	<i>196</i>	<i>858</i>	<i>286</i>	<i>746</i>	<i>205</i>	<i>10,124</i>
Survey Totals	2,366	1,035	2,300	1,184	39,396	9,919	12,382	2,535	8,061	1,390	7,861	2,215	70,000

Note: The estimated harvest in surveyed communities is based on a stratified random sample of households as designated for the estimation of subsistence salmon harvests. Estimations include 95% confidence interval, CI (95%).

<sup>a</sup> Large whitefish are considered those four pounds or larger and small whitefish are less than four pounds.

<sup>b</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Table 16.—Reported subsistence harvest of other miscellaneous fish species by surveyed communities, Yukon Area, 2009.

Community	Total Households	Households Contacted <sup>a</sup>	Reported Harvest of Miscellaneous Fish Species, (Not Expanded)								Total Not Expanded Miscellaneous Fish Harvest
			Burbot	Arctic Lamprey <sup>b</sup>	Tomcod	Arctic Grayling	Sucker	Arctic Char	Blackfish	Sockeye Salmon <sup>c</sup>	
Hooper Bay	204	71	8	0	1,376	0	0	0	305	9	1,698
Scammon Bay	80	33	0	0	396	0	0	1	420	50	867
<i>Coastal District</i>	<i>284</i>	<i>104</i>	<i>8</i>	<i>0</i>	<i>1,772</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>725</i>	<i>59</i>	<i>2,565</i>
Nunam Iqua	31	28	390	0	604	5	0	7	8,070	5	9,081
Alakanuk	117	46	715	0	5	0	0	1	15,680	3	16,404
Emmonak	150	71	171	0	325	0	0	3	4,600	5	5,104
Kotlik	97	36	20	0	3	0	0	0	1,295	22	1,340
<i>District 1</i>	<i>395</i>	<i>181</i>	<i>1,296</i>	<i>0</i>	<i>937</i>	<i>5</i>	<i>0</i>	<i>11</i>	<i>29,645</i>	<i>35</i>	<i>31,929</i>
Mountain Village	141	65	167	2	0	20	0	5	700	50	944
Pitkas Point	27	23	15	0	0	0	0	0	4,900	0	4,915
St. Mary's	119	45	88	5	0	0	0	0	4,300	10	4,403
Pilot Station	106	53	28	20	0	0	0	1	7,050	3	7,102
Marshall	74	30	130	1,500	0	0	40	0	0	24	1,694
<i>District 2</i>	<i>467</i>	<i>216</i>	<i>428</i>	<i>1,527</i>	<i>0</i>	<i>20</i>	<i>40</i>	<i>6</i>	<i>16,950</i>	<i>87</i>	<i>19,058</i>
Russian Mission	67	32	8	0	0	0	0	0	0	15	23
Holy Cross	55	33	23	2	0	18	0	0	0	0	43
Shageluk	29	21	21	0	0	0	0	0	0	0	21
<i>District 3</i>	<i>151</i>	<i>86</i>	<i>52</i>	<i>2</i>	<i>0</i>	<i>18</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>15</i>	<i>87</i>
Anvik	28	24	5	0	0	15	0	12	0	5	37
Grayling	46	17	7	170	0	195	0	0	0	15	387
Kaltag	65	18	1	0	0	15	0	0	0	0	16
Nulato	80	22	0	0	0	157	0	8	0	0	165
Koyukuk	41	18	3	0	0	0	0	0	0	0	3
Galena	162	50	60	0	0	5	0	0	0	0	65
Ruby	57	19	1	0	0	30	0	0	0	0	31
Huslia	75	26	22	0	0	57	0	0	0	0	79
Hughes	23	19	5	0	0	2	0	0	0	0	7
Allakaket	47	18	10	0	0	1	0	0	0	0	11
Alatna	7	5	0	0	0	17	0	0	0	0	17
Bettles	20	17	0	0	0	4	0	5	0	0	9
<i>District 4</i>	<i>651</i>	<i>253</i>	<i>114</i>	<i>170</i>	<i>0</i>	<i>498</i>	<i>0</i>	<i>25</i>	<i>0</i>	<i>20</i>	<i>827</i>

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Community	Reported Harvest of Miscellaneous Fish Species, (Not Expanded)											Total Not Expanded Miscellaneous Fish Harvest
	Total	Households	Arctic		Arctic		Arctic		Sockeye			
	Households	Contacted <sup>a</sup>	Burbot	Lamprey <sup>b</sup>	Tomcod	Grayling	Sucker	Char	Blackfish	Salmon <sup>c</sup>		
Tanana	98	51	107	0	0	0	8	0	0	0	0	115
Stevens Village	21	15	3	0	0	0	5	0	0	0	0	8
Birch Creek	16	12	0	0	0	0	0	0	0	0	0	0
Beaver	27	24	1	0	0	18	0	0	0	0	0	19
Fort Yukon	171	58	18	0	0	19	5	0	0	0	0	42
Venetie	58	15	0	0	0	89	1	0	0	0	0	90
Chalkyitsik	27	20	0	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>418</i>	<i>195</i>	<i>129</i>	<i>0</i>	<i>0</i>	<i>126</i>	<i>19</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>274</i>
Survey Totals	2,366	1,035	2,027	1,699	2,709	667	59	43	47,320	216		54,740

<sup>a</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

<sup>b</sup> Surveys are conducted before the Arctic lamprey fishery occurs in November and December. Consequently totals are for previous year harvest, i.e., the 2009 reported harvest here is for the calendar year 2008.

<sup>c</sup> Due to low harvest numbers of sockeye salmon and difficulties with identification by fishermen, the harvest is not estimated.

Table 17.—Responses to survey question assessing percentage of subsistence salmon needs being met, by community, by species, Yukon Area, 2009.

Community	Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species										
	Total Households	Chinook Salmon				Summer Chum Salmon					
		Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%	Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%
Hooper Bay	204	45	62%	13%	7%	18%	42	43%	7%	10%	40%
Scammon Bay	80	26	50%	4%	15%	31%	20	40%	5%	10%	45%
<i>Coastal District</i>	284	71	58%	10%	10%	23%	62	42%	6%	10%	42%
Nunam Iqua	31	16	75%	13%	6%	6%	16	38%	13%	25%	25%
Alakanuk	117	37	70%	19%	3%	8%	39	41%	15%	31%	13%
Emmonak	150	47	81%	0%	9%	11%	36	69%	0%	17%	14%
Kotlik	97	26	50%	23%	12%	15%	25	48%	8%	8%	36%
<i>District 1</i>	395	126	71%	12%	7%	10%	116	51%	9%	21%	20%
Mountain Village	141	38	32%	21%	18%	29%	39	31%	18%	28%	23%
Pitkas Point	27	14	57%	21%	0%	21%	10	50%	10%	10%	30%
St. Mary's	119	31	45%	16%	13%	26%	26	27%	31%	19%	23%
Pilot Station	106	31	65%	19%	13%	3%	35	57%	6%	14%	23%
Marshall	74	23	61%	22%	0%	17%	20	50%	30%	5%	15%
<i>District 2</i>	467	137	50%	20%	11%	20%	130	42%	18%	18%	22%
Russian Mission	67	30	53%	17%	7%	23%	18	50%	6%	17%	28%
Holy Cross	55	23	35%	26%	22%	17%	10	60%	30%	0%	10%
Shageluk	29	8	50%	25%	13%	13%	4	75%	25%	0%	0%
<i>District 3</i>	151	61	46%	21%	13%	20%	32	56%	16%	9%	19%
Anvik	28	15	47%	33%	20%	0%	6	83%	17%	0%	0%
Grayling	46	11	18%	36%	27%	18%	2	50%	50%	0%	0%
Kaltag	65	14	43%	14%	36%	7%	0	-	-	-	-
Nulato	80	15	20%	20%	27%	33%	1	0%	100%	0%	0%
Koyukuk	41	12	25%	17%	17%	42%	3	0%	33%	0%	67%
Galena	162	34	56%	18%	9%	18%	4	0%	25%	25%	50%
Ruby	57	9	67%	11%	11%	11%	2	50%	0%	0%	50%
Huslia	75	8	88%	0%	13%	0%	4	50%	0%	25%	25%
Hughes	23	5	80%	0%	0%	20%	1	100%	0%	0%	0%
Allakaket	47	4	75%	0%	0%	25%	4	75%	0%	0%	25%
Alatna	7	0	-	-	-	-	1	0%	0%	0%	100%
Bettles	0	0	-	-	-	-	0	-	-	-	-
<i>District 4</i>	631	127	47%	18%	17%	17%	28	46%	18%	7%	29%

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Table 17.–Page 2 of 4.

Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species											
Community	Total Households	Chinook Salmon					Summer Chum Salmon				
		Total Number of Household Responses	% HH's Responses	% HH's Responses	% HH's Responses	% HH's Responses	Total Number of Household Responses	% HH's Responses	% HH's Responses	% HH's Responses	% HH's Responses
			0% to 25%	26 % to 50%	51% to 75%	76% to 100%		0% to 25%	26 % to 50%	51% to 75%	76% to 100%
Tanana	98	39	59%	23%	13%	5%	10	50%	20%	0%	30%
Stevens Village	21	7	86%	0%	14%	0%	1	100%	0%	0%	0%
Birch Creek	16	2	50%	50%	0%	0%	0	-	-	-	-
Beaver	27	3	33%	0%	0%	67%	1	0%	0%	0%	100%
Fort Yukon	171	36	86%	14%	0%	0%	2	100%	0%	0%	0%
Venetie	58	2	100%	0%	0%	0%	0	-	-	-	-
Chalkyitsik	27	7	100%	0%	0%	0%	0	-	-	-	-
<i>District 5</i>	<i>418</i>	<i>96</i>	<i>74%</i>	<i>16%</i>	<i>6%</i>	<i>4%</i>	<i>14</i>	<i>57%</i>	<i>14%</i>	<i>0%</i>	<i>29%</i>
Survey Totals	2,436	618	58%	16%	11%	16%	382	49%	14%	11%	27%

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Community	Total Households	Fall Chum Salmon					Coho Salmon				
		Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%	Total Number of Household Responses	% HH's Responses 0% to 25%	% HH's Responses 26 % to 50%	% HH's Responses 51% to 75%	% HH's Responses 76% to 100%
		Hooper Bay	204	1	0%	100%	0%	0%	2	0%	50%
Scammon Bay	80	4	25%	0%	0%	75%	4	25%	0%	0%	75%
<i>Coastal District</i>	284	5	20%	20%	0%	60%	6	17%	17%	0%	67%
Nunam Iqua	31	9	100%	0%	0%	0%	5	100%	0%	0%	0%
Alakanuk	117	20	80%	5%	10%	5%	16	81%	19%	0%	0%
Emmonak	150	24	92%	4%	4%	0%	19	100%	0%	0%	0%
Kotlik	97	6	83%	17%	0%	0%	1	100%	0%	0%	0%
<i>District 1</i>	395	59	88%	5%	5%	2%	41	93%	7%	0%	0%
Mountain Village	141	6	67%	17%	0%	17%	2	100%	0%	0%	0%
Pitkas Point	27	2	100%	0%	0%	0%	0	-	-	-	-
St. Mary's	119	9	89%	11%	0%	0%	6	50%	50%	0%	0%
Pilot Station	106	5	100%	0%	0%	0%	1	100%	0	0	0
Marshall	74	6	83%	0%	0%	17%	6	83%	0%	0%	17%
<i>District 2</i>	467	28	86%	7%	0%	7%	15	73%	20%	0%	7%
Russian Mission	67	6	100%	0%	0%	0%	8	75%	13%	13%	0%
Holy Cross	55	7	57%	14%	14%	14%	4	75%	25%	0%	0%
Shageluk	29	3	67%	0%	0%	33%	2	50%	50%	0%	0%
<i>District 3</i>	151	16	75%	6%	6%	13%	14	71%	21%	7%	0%
Anvik	28	6	50%	33%	0%	17%	3	67%	0%	0%	33%
Grayling	46	3	67%	0%	0%	33%	3	67%	0%	0%	33%
Kaltag	65	2	50%	50%	0%	0%	0	-	-	-	-
Nulato	80	4	75%	0%	0%	25%	0	-	-	-	-
Koyukuk	41	9	89%	11%	0%	0%	2	100%	0%	0%	0%
Galena	162	12	58%	17%	17%	8%	7	43%	43%	14%	0%
Ruby	57	0	-	-	-	-	1	0%	0%	0%	100%
Huslia	75	3	100%	0%	0%	0%	0	-	-	-	-
Hughes	23	2	50%	0%	0%	50%	1	0%	0%	0%	100%
Allakaket	47	1	100%	0%	0%	0%	2	50%	0%	50%	0%
Alatna	7	1	100%	0%	0%	0%	0	-	-	-	-
Bettles	0	0	-	-	-	-	0	-	-	-	-
<i>District 4</i>	631	43	70%	14%	5%	12%	19	53%	16%	11%	21%

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Table 17.–Page 4 of 4.

Percent of Households (HH's) That Responded to Subsistence Needs Met Question, By Community, By Species											
Community	Total Households	Fall Chum Salmon					Coho Salmon				
		Total Number of Household Responses	% HH's Responses	% HH's Responses	% HH's Responses	% HH's Responses	Total Number of Household Responses	% HH's Responses	% HH's Responses	% HH's Responses	% HH's Responses
			0% to 25%	26 % to 50%	51% to 75%	76% to 100%		0% to 25%	26 % to 50%	51% to 75%	76% to 100%
Tanana	98	19	63%	5%	5%	26%	1	0%	0%	0%	100%
Stevens Village	21	2	50%	50%	0%	0%	1	100%	0%	0%	0%
Birch Creek	16	0	-	-	-	-	0	-	-	-	-
Beaver	27	1	100%	0%	0%	0%	1	100%	0%	0%	0%
Fort Yukon	171	18	72%	11%	11%	6%	5	100%	0%	0%	0%
Venetie	58	3	0%	0%	0%	100%	0	-	-	-	-
Chalkyitsik	27	2	50%	50%	0%	0%	0	-	-	-	-
<i>District 5</i>	<i>418</i>	<i>45</i>	<i>62%</i>	<i>11%</i>	<i>7%</i>	<i>20%</i>	<i>8</i>	<i>88%</i>	<i>0%</i>	<i>0%</i>	<i>13%</i>
Survey Totals	2,346	196	75%	9%	5%	11%	103	75%	13%	3%	10%

Table 18.—Number of Chinook salmon a household usually harvests or receives, estimated by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total	N	n	Est
Hooper Bay	5	3	3	1.0	70	9	3	2.0	100	22	8	2.1	29	22	11	1.3	-	-	-	-	204	56	1,334	496
Scammon Bay	1	1	1	-	24	6	4	1.3	40	7	27	11.8	15	14	56	5.9	-	-	-	-	80	28	2,003	943
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>3</i>	<i>0.8</i>	<i>94</i>	<i>15</i>	<i>3</i>	<i>1.5</i>	<i>140</i>	<i>29</i>	<i>14</i>	<i>3.7</i>	<i>44</i>	<i>36</i>	<i>26</i>	<i>2.2</i>	-	-	-	-	<i>284</i>	<i>84</i>	<i>3,337</i>	<i>1,065</i>
Nunam Iqua	1	0	-	-	12	5	44	20.4	8	5	18	1.6	10	9	51	3.8	-	-	-	-	31	19	1,225	501
Alakanuk	2	0	-	-	36	10	11	2.9	56	15	25	4.3	23	16	20	2.0	-	-	-	-	117	41	2,281	538
Emmonak	4	1	6	-	47	13	11	2.1	66	19	32	9.3	33	21	16	1.6	-	-	-	-	150	54	3,204	1,229
Kotlik	3	0	-	-	23	5	28	10.9	53	13	21	3.7	18	16	43	2.3	-	-	-	-	97	34	2,616	651
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>6</i>	-	<i>118</i>	<i>33</i>	<i>18</i>	<i>3.2</i>	<i>183</i>	<i>52</i>	<i>26</i>	<i>3.8</i>	<i>84</i>	<i>62</i>	<i>27</i>	<i>1.1</i>	-	-	-	-	<i>395</i>	<i>148</i>	<i>9,326</i>	<i>1,573</i>
Mountain Village	2	1	0	-	35	5	8	5.2	71	19	31	4.4	32	24	32	2.2	1	0	-	-	141	49	3,475	731
Pitkas Point	2	1	35	-	7	4	2	0.7	13	8	20	3.5	5	4	71	19.2	-	-	-	-	27	17	699	208
St. Mary's	1	1	120	-	21	2	13	2.4	73	19	51	13.3	24	17	38	3.0	-	-	-	-	119	39	5,761	2,325
Pilot Station	4	0	-	-	35	12	10	3.4	51	21	30	4.6	16	14	29	3.1	-	-	-	-	106	47	2,419	548
Marshall	4	1	1	-	15	4	38	13.4	41	9	29	8.4	14	14	68	0.0	-	-	-	-	74	28	2,724	784
<i>District 2</i>	<i>13</i>	<i>4</i>	<i>22</i>	-	<i>113</i>	<i>27</i>	<i>13</i>	<i>3.2</i>	<i>249</i>	<i>76</i>	<i>36</i>	<i>4.4</i>	<i>91</i>	<i>73</i>	<i>41</i>	<i>1.6</i>	<i>1</i>	<i>0</i>	-	-	<i>467</i>	<i>180</i>	<i>15,078</i>	<i>2,627</i>
Russian Mission	6	5	10	1.9	14	4	39	14.5	38	13	35	6.3	9	9	54	0.0	-	-	-	-	67	31	2,433	616
Holy Cross	3	1	150	-	15	5	14	7.6	24	10	74	7.9	13	11	95	6.4	-	-	-	-	55	27	3,655	462
Shageluk	1	0	-	-	8	2	18	15.2	17	7	39	11.8	3	1	50	-	-	-	-	-	29	10	992	475
<i>District 3</i>	<i>10</i>	<i>6</i>	<i>56</i>	<i>1.2</i>	<i>37</i>	<i>11</i>	<i>24</i>	<i>7.1</i>	<i>79</i>	<i>30</i>	<i>48</i>	<i>4.6</i>	<i>25</i>	<i>21</i>	<i>75</i>	<i>3.3</i>	-	-	-	-	<i>151</i>	<i>68</i>	<i>7,080</i>	<i>905</i>
Anvik	2	1	22	-	11	3	6	2.0	7	5	60	5.5	6	5	131	15.5	2	2	163	0.0	28	16	1,640	202
Grayling	2	2	50	0.0	5	2	6	4.6	33	6	74	13.9	5	3	63	3.8	1	0	-	-	46	13	2,958	923
Kaltag	2	0	-	-	15	2	1	0.0	43	8	89	16.1	5	5	69	0.0	-	-	-	-	65	15	5,629	1,836
Nulato	-	-	-	-	20	2	3	2.4	57	15	40	11.7	3	3	91	0.0	-	-	-	-	80	20	3,431	1,743
Koyukuk	9	5	41	21.6	11	1	10	-	15	5	18	9.5	3	2	65	8.7	3	2	43	18.8	41	15	1,307	667
Galena	7	4	6	0.8	79	16	9	3.8	69	19	30	4.2	6	6	80	0.0	1	1	80	-	162	46	3,401	815
Ruby	-	-	-	-	40	5	8	4.0	14	4	21	6.2	1	1	15	-	2	1	350	-	57	11	1,321	355
Huslia	3	0	-	-	49	9	9	3.7	17	3	11	5.1	4	4	9	0.0	2	2	12	0.0	75	18	720	411
Hughes	-	-	-	-	14	8	2	0.5	6	4	2	0.7	3	3	14	0.0	-	-	-	-	23	15	73	17
Allakaket	2	0	-	-	32	3	4	3.7	7	2	0	0.0	3	2	14	6.6	3	2	21	5.2	47	9	253	245
Alatna	1	1	0	-	4	1	0	-	2	1	2	-	-	-	-	-	-	-	-	-	7	3	4	-
Bettles	3	0	-	-	16	6	0	0.0	1	1	0	-	-	-	-	-	-	-	-	-	20	7	0	0
<i>District 4</i>	<i>31</i>	<i>13</i>	<i>26</i>	<i>9.3</i>	<i>296</i>	<i>58</i>	<i>7</i>	<i>1.6</i>	<i>271</i>	<i>73</i>	<i>44</i>	<i>4.1</i>	<i>39</i>	<i>34</i>	<i>65</i>	<i>2.6</i>	<i>14</i>	<i>10</i>	<i>101</i>	<i>4.5</i>	<i>651</i>	<i>188</i>	<i>20,737</i>	<i>2,961</i>

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Table 18.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined				
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total	N	n	Total	Est
Tanana	7	4	10	3.5	43	20	19	9.1	28	9	39	9.7	9	6	65	16.5	11	9	370	44.8	98	48	6,629	1,374	
Stevens Village	2	1	0	-	5	0	-	-	11	6	56	17.6	3	3	117	0.0	-	-	-	-	21	10	1,265	499	
Birch Creek	6	0	-	-	6	2	5	4.1	4	1	30	-	-	-	-	-	-	-	-	-	16	3	240	77	
Beaver	1	0	-	-	13	1	25	-	8	3	17	11.3	5	1	150	-	-	-	-	-	27	5	1,835	367	
Fort Yukon	18	3	25	16.0	101	19	24	6.4	34	11	41	8.6	6	4	96	31.7	12	7	100	27.2	171	44	6,058	1,677	
Venetie	3	0	-	-	38	4	0	0.0	14	2	10	9.3	3	2	122	45.3	-	-	-	-	58	8	516	377	
Chalkyitsik	4	1	0	-	18	12	2	0.7	4	3	1	0.2	1	0	-	-	-	-	-	-	27	16	42	27	
<i>District 5</i>	<i>41</i>	<i>9</i>	<i>17</i>	<i>9.3</i>	<i>224</i>	<i>58</i>	<i>16</i>	<i>3.7</i>	<i>103</i>	<i>35</i>	<i>38</i>	<i>5.1</i>	<i>27</i>	<i>16</i>	<i>101</i>	<i>10.7</i>	<i>23</i>	<i>16</i>	<i>229</i>	<i>25.7</i>	<i>418</i>	<i>134</i>	<i>16,585</i>	<i>2,288</i>	
Survey Totals	111	37	23	4.4	882	202	12	1.3	1,025	295	34	1.9	310	242	46	1.2	38	26	183	16.5	2,366	802	72,143	5,033	

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95 percent confidence interval, CI (95%). Dashes indicate indefinable values.

Table 19.--Number of summer chum salmon a household usually harvests or receives, estimated by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total	Est	CI (95%)	
Hooper Bay	5	3	50	16.7	70	10	53	13.3	100	22	64	11.1	29	24	148	8.9	-	-	-	-	204	59	14,697	2,882
Scammon Bay	1	1	0	-	24	6	35	16.2	40	7	64	11.2	15	14	156	6.2	-	-	-	-	80	28	5,746	1,177
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>42</i>	<i>13.9</i>	<i>94</i>	<i>16</i>	<i>49</i>	<i>10.7</i>	<i>140</i>	<i>29</i>	<i>64</i>	<i>8.5</i>	<i>44</i>	<i>38</i>	<i>151</i>	<i>6.2</i>	-	-	-	-	<i>284</i>	<i>87</i>	<i>20,443</i>	<i>3,113</i>
Nunam Iqua	1	0	-	-	12	5	111	33.5	8	5	92	17.0	10	8	233	18.5	-	-	-	-	31	18	4,534	939
Alakanuk	2	0	-	-	36	10	91	25.7	56	15	119	28.5	23	16	142	12.0	-	-	-	-	117	41	13,473	3,720
Emmonak	4	1	20	-	47	13	34	11.3	66	19	113	27.3	33	21	171	16.6	-	-	-	-	150	54	14,763	3,830
Kotlik	3	0	-	-	23	5	60	25.6	53	13	98	20.4	18	16	161	7.7	-	-	-	-	97	34	9,781	2,507
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>20</i>	-	<i>118</i>	<i>33</i>	<i>64</i>	<i>10.9</i>	<i>183</i>	<i>52</i>	<i>110</i>	<i>14.4</i>	<i>84</i>	<i>61</i>	<i>168</i>	<i>7.8</i>	-	-	-	-	<i>395</i>	<i>147</i>	<i>42,551</i>	<i>5,972</i>
Mountain Village	2	1	0	-	35	5	32	17.3	71	19	107	11.9	32	24	147	7.5	1	0	-	-	141	49	13,483	2,103
Pitkas Point	2	0	-	-	7	4	11	6.3	13	9	50	10.0	5	4	103	16.0	-	-	-	-	27	17	1,337	336
St. Mary's	1	1	90	-	21	2	13	2.4	73	19	114	26.9	24	17	166	13.2	-	-	-	-	119	39	15,050	4,732
Pilot Station	4	0	-	-	35	13	43	9.2	51	21	105	16.2	16	15	98	4.3	-	-	-	-	106	49	8,744	1,814
Marshall	4	1	3	-	15	4	71	26.3	41	9	30	10.1	14	14	89	0.0	-	-	-	-	74	28	3,561	1,119
<i>District 2</i>	<i>13</i>	<i>3</i>	<i>15</i>	-	<i>113</i>	<i>28</i>	<i>41</i>	<i>8.6</i>	<i>249</i>	<i>77</i>	<i>93</i>	<i>9.4</i>	<i>91</i>	<i>74</i>	<i>132</i>	<i>4.5</i>	<i>1</i>	<i>0</i>	-	-	<i>467</i>	<i>182</i>	<i>42,175</i>	<i>5,610</i>
Russian Mission	6	5	20	4.0	14	4	25	21.1	38	13	24	6.9	9	9	45	0.0	-	-	-	-	67	31	1,784	778
Holy Cross	3	1	0	-	15	4	5	2.5	24	10	4	1.6	13	11	26	4.7	-	-	-	-	55	26	495	159
Shageluk	1	0	-	-	8	2	25	21.7	17	5	35	26.4	3	0	-	-	-	-	-	-	29	7	918	1,092
<i>District 3</i>	<i>10</i>	<i>6</i>	<i>13</i>	<i>2.7</i>	<i>37</i>	<i>10</i>	<i>17</i>	<i>9.3</i>	<i>79</i>	<i>28</i>	<i>20</i>	<i>6.6</i>	<i>25</i>	<i>20</i>	<i>33</i>	<i>2.8</i>	-	-	-	-	<i>151</i>	<i>64</i>	<i>3,197</i>	<i>1,350</i>
Anvik	2	0	-	-	11	3	7	5.7	7	5	60	32.1	6	4	97	45.7	2	2	50	0.0	28	14	1,266	759
Grayling	2	1	0	-	5	2	0	0.0	33	5	12	11.1	5	1	400	-	1	0	-	-	46	9	2,449	731
Kaltag	2	0	-	-	15	3	0	0.0	43	10	0	0.0	5	5	0	0.0	-	-	-	-	65	18	0	0
Nulato	-	-	-	-	20	3	0	0.0	57	15	0	0.0	3	3	117	0.0	-	-	-	-	80	21	350	0
Koyukuk	9	7	0	0.0	11	1	0	-	15	5	0	0.0	3	2	0	0.0	3	3	538	0.0	41	18	2,207	0
Galena	7	4	0	0.0	79	15	0	0.0	69	19	21	17.9	6	5	100	40.8	1	1	300	-	162	44	2,371	2,469
Ruby	-	-	-	-	40	6	4	3.7	14	1	0	-	1	1	0	-	2	2	250	0.0	57	10	875	383
Huslia	3	0	-	-	49	10	15	13.4	17	3	5	4.5	4	4	156	0.0	2	2	250	0.0	75	19	2,026	1,348
Hughes	-	-	-	-	14	8	0	0.0	6	2	3	2.0	3	3	333	0.0	-	-	-	-	23	13	1,015	24
Allakaket	2	0	-	-	32	3	12	11.0	7	2	5	4.2	3	1	75	-	3	0	-	-	47	6	721	771
Alatna	1	1	30	-	4	1	0	-	2	1	35	-	-	-	-	-	-	-	-	-	7	3	100	-
Bettles	3	0	-	-	16	6	0	0.0	1	1	0	-	-	-	-	-	-	-	-	-	20	7	0	0
<i>District 4</i>	<i>31</i>	<i>13</i>	<i>2</i>	<i>0.0</i>	<i>296</i>	<i>61</i>	<i>5</i>	<i>2.7</i>	<i>271</i>	<i>69</i>	<i>10</i>	<i>5.1</i>	<i>39</i>	<i>29</i>	<i>138</i>	<i>9.4</i>	<i>14</i>	<i>10</i>	<i>302</i>	<i>0.0</i>	<i>651</i>	<i>182</i>	<i>13,380</i>	<i>3,125</i>

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Table 19.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)		
Tanana	7	4	0	0.0	43	20	13	9.1	28	8	0	0.0	9	5	10	6.7	11	9	1222	137.6	98	46	14,072	3,067						
Stevens Village	2	1	0	-	5	0	-	-	11	5	10	7.4	3	1	0	-	-	-	-	-	-	21	7	144	209					
Birch Creek	6	1	0	-	6	2	0	0.0	4	1	0	-	-	-	-	-	-	-	-	-	-	16	4	0	0					
Beaver	1	0	-	-	13	0	-	-	8	2	3	2.6	5	0	-	-	-	-	-	-	-	27	2	81	137					
Fort Yukon	18	3	0	0.0	101	20	0	0.0	34	12	0	0.0	6	5	0	0.0	12	6	300	173.2	171	46	3,600	4,074						
Venetie	3	0	-	-	38	4	0	0.0	14	1	0	-	3	2	0	0.0	-	-	-	-	-	58	7	0	0					
Chalkyitsik	4	1	0	-	18	14	0	0.0	4	3	0	0.0	1	0	-	-	-	-	-	-	-	27	18	0	0					
<i>District 5</i>	<i>41</i>	<i>10</i>	<i>0</i>	<i>0.0</i>	<i>224</i>	<i>60</i>	<i>3</i>	<i>1.9</i>	<i>103</i>	<i>32</i>	<i>2</i>	<i>0.9</i>	<i>27</i>	<i>13</i>	<i>4</i>	<i>2.9</i>	<i>23</i>	<i>15</i>	<i>741</i>	<i>111.8</i>	<i>418</i>	<i>130</i>	<i>17,897</i>	<i>5,105</i>						
Survey Totals	111	37	7	1.1	882	208	22	2.4	1,025	287	57	4.0	310	235	130	3.0	38	25	608	77.9	2,366	792	139,643	10,700						

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Table 20.—Number of fall chum salmon a household usually harvests or receives, estimated by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (+/-)	
Hooper Bay	5	3	0	0.0	70	10	0	0.0	100	24	0	0.4	29	24	0	0.0	-	-	-	-	204	61	42	71						
Scammon Bay	1	1	0	-	24	6	0	0.1	40	8	3	1.8	15	15	1	0.0	-	-	-	-	80	30	128	140						
<i>Coastal District</i>	6	4	0	0.0	94	16	0	0.0	140	32	1	0.6	44	39	0	0.0	-	-	-	-	284	91	170	157						
Nunam Iqua	1	0	-	-	12	5	17	8.2	8	5	21	6.3	10	9	21	5.2	-	-	-	-	31	19	598	246						
Alakanuk	2	0	-	-	36	10	3	1.5	56	13	21	7.8	23	15	34	8.7	-	-	-	-	117	38	2,128	958						
Emmonak	4	1	10	-	47	13	18	10.0	66	21	34	12.2	33	21	26	11.7	-	-	-	-	150	56	3,933	1,979						
Kotlik	3	0	-	-	23	5	1	1.1	53	13	6	5.3	18	17	8	1.4	-	-	-	-	97	35	511	577						
<i>District 1</i>	10	1	10	-	118	33	10	4.1	183	52	22	5.2	84	62	23	5.2	-	-	-	-	395	148	7,170	2,287						
Mountain Village	2	1	0	-	35	3	0	0.0	71	19	0	0.3	32	24	7	2.2	1	0	-	-	141	47	265	141						
Pitkas Point	2	2	0	0.0	7	5	0	0.0	13	10	5	2.4	5	4	35	9.7	-	-	-	-	27	21	240	113						
St. Mary's	1	1	0	-	21	2	0	0.0	73	20	1	0.7	24	18	24	5.9	-	-	-	-	119	41	812	358						
Pilot Station	4	0	-	-	35	14	0	0.0	51	21	2	1.1	16	15	1	0.2	-	-	-	-	106	50	140	118						
Marshall	4	1	0	-	15	4	14	4.7	41	9	1	0.5	14	14	20	0.0	-	-	-	-	74	28	514	145						
<i>District 2</i>	13	5	0	0.0	113	28	2	0.8	249	79	1	0.3	91	75	14	1.8	1	0	-	-	467	187	1,971	443						
Russian Mission	6	5	0	0.0	14	4	0	0.0	38	13	10	4.4	9	9	11	0.0	-	-	-	-	67	31	480	328						
Holy Cross	3	1	0	-	15	4	5	2.5	24	10	3	1.9	13	10	39	5.7	-	-	-	-	55	25	641	186						
Shageluk	1	0	-	-	8	2	0	0.0	17	5	38	18.6	3	0	-	-	-	-	-	-	29	7	749	720						
<i>District 3</i>	10	6	0	0.0	37	10	2	1.0	79	28	14	4.6	25	19	28	3.4	-	-	-	-	151	63	1,870	813						
Anvik	2	0	-	-	11	3	7	5.7	7	5	12	4.1	6	4	98	45.4	2	2	25	0.0	28	14	855	593						
Grayling	2	2	10	0.0	5	2	2	1.2	33	2	0	0.0	5	1	350	-	1	0	-	-	46	7	6,814	44						
Kaltag	2	0	-	-	15	3	0	0.0	43	10	2	1.8	5	5	10	0.0	-	-	-	-	65	18	140	152						
Nulato	-	-	-	-	20	3	0	0.0	57	14	5	2.0	3	3	5	0.0	-	-	-	-	80	20	280	219						
Koyukuk	9	6	7	2.3	11	1	10	-	15	4	3	2.1	3	2	75	14.4	3	3	543	0.0	41	16	2,677	155						
Galena	7	4	1	0.8	79	17	0	0.0	69	19	58	44.6	6	6	242	0.0	1	1	200	-	162	47	5,690	6,028						
Ruby	-	-	-	-	40	6	0	0.0	14	1	0	-	1	1	0	-	2	1	300	-	57	9	795	0						
Huslia	3	0	-	-	49	9	7	4.5	17	3	10	9.1	4	2	0	0.0	2	1	0	-	75	15	546	546						
Hughes	-	-	-	-	14	8	4	2.9	6	3	12	6.6	3	2	0	0.0	-	-	-	-	23	13	131	110						
Allakaket	2	0	-	-	32	5	0	0.0	7	2	5	4.2	3	2	0	0.0	3	1	320	-	47	10	1,039	61						
Alatna	1	1	0	-	4	1	6	-	2	1	0	-	-	-	-	-	-	-	-	-	7	3	24	-						
Bettles	3	0	-	-	16	6	0	0.0	1	1	0	-	-	-	-	-	-	-	-	-	20	7	0	0						
<i>District 4</i>	31	13	5	1.1	296	64	2	0.8	271	65	21	13.8	39	28	105	7.1	14	9	265	0.0	651	179	18,991	6,091						

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Table 20.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined				
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)
Tanana	7	4	5	2.3	43	20	3	1.0	28	8	19	11.1	9	5	44	11.1	11	9	1901	248.4	98	46	21,984		5,395
Stevens Village	2	1	0	-	5	0	-	-	11	5	0	0.0	3	3	783	0.0	-	-	-	-	21	9	3,084		0
Birch Creek	6	1	0	-	6	2	0	0.0	4	1	0	-	-	-	-	-	-	-	-	-	16	4	0		0
Beaver	1	0	-	-	13	0	-	-	8	2	0	0.0	5	2	15	11.6	-	-	-	-	27	4	156		236
Fort Yukon	18	3	0	0.0	101	20	17	9.7	34	11	23	14.7	6	4	3	1.4	12	7	1029	345.8	171	45	14,894		8,417
Venetie	3	0	-	-	38	4	0	0.0	14	1	300	-	3	2	430	40.4	-	-	-	-	58	7	1,825		336
Chalkyitsik	4	1	0	-	18	13	5	2.4	4	3	25	12.5	1	0	-	-	-	-	-	-	27	17	190		135
<i>District 5</i>	<i>41</i>	<i>10</i>	<i>1</i>	<i>0.4</i>	<i>224</i>	<i>59</i>	<i>10</i>	<i>4.8</i>	<i>103</i>	<i>31</i>	<i>16</i>	<i>6.7</i>	<i>27</i>	<i>16</i>	<i>159</i>	<i>6.4</i>	<i>23</i>	<i>16</i>	<i>1446</i>	<i>216.0</i>	<i>418</i>	<i>132</i>	<i>42,133</i>		<i>10,006</i>
Survey Totals	111	39	2	0.3	882	210	5	1.4	1,025	287	12	3.4	310	239	40	1.9	38	25	1019	138.0	2,366	800	72,305		11,973

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Table 21.—Number of coho salmon a household usually harvests or receives, estimated by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total N	Total n	Est Total	CI (95%) (+/-)
Hooper Bay	5	3	0	0.0	70	10	0	0.0	100	24	0	0.4	29	24	0	0.1	-	-	-	-	204	61	47	71
Scammon Bay	1	1	0	-	24	6	0	0.1	40	8	5	2.9	15	15	2	0.0	-	-	-	-	80	30	240	230
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0</i>	<i>0.0</i>	<i>94</i>	<i>16</i>	<i>0</i>	<i>0.0</i>	<i>140</i>	<i>32</i>	<i>2</i>	<i>0.9</i>	<i>44</i>	<i>39</i>	<i>1</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>91</i>	<i>287</i>	<i>240</i>
Nunam Iqua	1	0	-	-	12	5	10	7.6	8	5	17	5.6	10	9	2	0.7	-	-	-	-	31	19	287	207
Alakanuk	2	0	-	-	36	10	4	2.0	56	13	14	4.9	23	16	13	3.8	-	-	-	-	117	39	1,235	587
Emmonak	4	1	20	-	47	13	5	3.3	66	21	31	19.7	33	21	7	2.6	-	-	-	-	150	56	2,620	2,569
Kotlik	3	0	-	-	23	5	0	0.0	53	13	0	0.2	18	17	0	0.0	-	-	-	-	97	35	13	21
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>20</i>	<i>-</i>	<i>118</i>	<i>33</i>	<i>4</i>	<i>1.6</i>	<i>183</i>	<i>52</i>	<i>16</i>	<i>7.3</i>	<i>84</i>	<i>63</i>	<i>7</i>	<i>1.5</i>	-	-	-	-	<i>395</i>	<i>149</i>	<i>4,155</i>	<i>2,643</i>
Mountain Village	2	1	0	-	35	4	0	0.0	71	18	0	0.1	32	24	2	0.5	1	0	-	-	141	47	59	38
Pitkas Point	2	2	0	0.0	7	5	0	0.0	13	10	0	0.0	5	4	0	0.0	-	-	-	-	27	21	0	0
St. Mary's	1	1	0	-	21	2	0	0.0	73	19	4	2.3	24	18	3	0.7	-	-	-	-	119	40	399	405
Pilot Station	4	0	-	-	35	14	0	0.0	51	21	0	0.0	16	15	1	0.2	-	-	-	-	106	50	11	5
Marshall	4	1	0	-	15	4	14	4.7	41	9	1	0.5	14	14	6	0.0	-	-	-	-	74	28	314	145
<i>District 2</i>	<i>13</i>	<i>5</i>	<i>0</i>	<i>0.0</i>	<i>113</i>	<i>29</i>	<i>2</i>	<i>0.8</i>	<i>249</i>	<i>77</i>	<i>1</i>	<i>0.7</i>	<i>91</i>	<i>75</i>	<i>2</i>	<i>0.3</i>	<i>1</i>	<i>0</i>	<i>-</i>	<i>-</i>	<i>467</i>	<i>186</i>	<i>783</i>	<i>432</i>
Russian Mission	6	5	3	1.2	14	4	7	5.7	38	13	5	1.8	9	9	11	0.0	-	-	-	-	67	31	403	209
Holy Cross	3	1	0	-	15	4	5	2.5	24	10	3	1.9	13	10	15	4.8	-	-	-	-	55	25	326	168
Shageluk	1	0	-	-	8	2	0	0.0	17	5	33	19.7	3	0	-	-	-	-	-	-	29	7	651	761
<i>District 3</i>	<i>10</i>	<i>6</i>	<i>2</i>	<i>0.8</i>	<i>37</i>	<i>10</i>	<i>5</i>	<i>2.4</i>	<i>79</i>	<i>28</i>	<i>10</i>	<i>4.4</i>	<i>25</i>	<i>19</i>	<i>13</i>	<i>2.8</i>	-	-	-	-	<i>151</i>	<i>63</i>	<i>1,380</i>	<i>807</i>
Anvik	2	0	-	-	11	3	0	0.0	7	5	0	0.0	6	4	98	45.4	2	2	13	0.0	28	14	662	575
Grayling	2	1	0	-	5	1	0	-	33	3	60	43.7	5	1	150	-	1	0	-	-	46	6	2,791	2,889
Kaltag	2	0	-	-	15	3	0	0.0	43	10	0	0.0	5	5	0	0.0	-	-	-	-	65	18	0	0
Nulato	-	-	-	-	20	3	0	0.0	57	15	0	0.0	3	3	3	0.0	-	-	-	-	80	21	10	0
Koyukuk	9	7	0	0.0	11	1	0	-	15	5	0	0.0	3	2	0	0.0	3	3	503	0.0	41	18	2,064	0
Galena	7	3	0	0.0	79	17	0	0.0	69	19	54	44.8	6	5	190	37.9	1	1	200	-	162	45	5,048	6,069
Ruby	-	-	-	-	40	6	0	0.0	14	1	0	-	1	1	0	-	2	1	300	-	57	9	795	0
Huslia	3	0	-	-	49	9	0	0.0	17	3	0	0.0	4	3	0	0.0	2	1	0	-	75	16	0	0
Hughes	-	-	-	-	14	8	6	3.7	6	3	0	0.0	3	3	0	0.0	-	-	-	-	23	14	79	101
Allakaket	2	0	-	-	32	5	0	0.0	7	2	5	4.2	3	2	0	0.0	3	1	50	-	47	10	193	61
Alatna	1	1	0	-	4	1	0	-	2	1	0	-	-	-	-	-	-	-	-	-	7	3	0	-
Bettles	3	0	-	-	16	6	0	0.0	1	1	0	-	-	-	-	-	-	-	-	-	20	7	0	0
<i>District 4</i>	<i>31</i>	<i>12</i>	<i>0</i>	<i>0.0</i>	<i>296</i>	<i>63</i>	<i>0</i>	<i>0.2</i>	<i>271</i>	<i>68</i>	<i>22</i>	<i>13.3</i>	<i>39</i>	<i>29</i>	<i>64</i>	<i>9.1</i>	<i>14</i>	<i>9</i>	<i>191</i>	<i>0.0</i>	<i>651</i>	<i>181</i>	<i>11,642</i>	<i>6,747</i>

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Table 21.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined				
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)
Tanana	7	4	0	0.0	43	20	0	0.0	28	8	0	0.0	9	4	0	0.0	11	9	133	36.2	98	45	1,467		781
Stevens Village	2	1	0	-	5	0	-	-	11	5	0	0.0	3	2	50	28.9	-	-	-	-	21	8	197		223
Birch Creek	6	1	0	-	6	2	0	0.0	4	1	0	-	-	-	-	-	-	-	-	-	16	4	0		0
Beaver	1	0	-	-	13	0	-	-	8	2	0	0.0	5	2	15	11.6	-	-	-	-	27	4	156		236
Fort Yukon	18	3	0	0.0	101	21	1	0.6	34	12	0	0.0	6	5	0	0.0	12	6	12	5.9	171	47	251		181
Venetie	3	0	-	-	38	4	0	0.0	14	1	0	-	3	2	0	0.0	-	-	-	-	58	7	0		0
Chalkyitsik	4	1	0	-	18	14	0	0.0	4	3	0	0.0	1	0	-	-	-	-	-	-	27	18	0		0
<i>District 5</i>	<i>41</i>	<i>10</i>	<i>0</i>	<i>0.0</i>	<i>224</i>	<i>61</i>	<i>1</i>	<i>0.3</i>	<i>103</i>	<i>32</i>	<i>0</i>	<i>0.0</i>	<i>27</i>	<i>15</i>	<i>9</i>	<i>4.0</i>	<i>23</i>	<i>15</i>	<i>70</i>	<i>17.6</i>	<i>418</i>	<i>133</i>	<i>2,071</i>		<i>865</i>
Survey Totals	111	38	1	0.1	882	212	1	0.3	1,025	289	10	3.7	310	240	12	1.3	38	24	114	11.2	2,366	803	20,318		7,359

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Table 22.—Reported subsistence and commercial harvest of Arctic lamprey from postseason postcards for the October 1 to December 31, 2008 fishing period.

Community	Date Mailed <sup>a</sup>	Households Mailed Postcards	Returned Postcards	Reported Subsistence Fishing	Subsistence Lamprey Harvested (lbs) <sup>b</sup>	Reported Commercial Fishing <sup>b</sup>	Commercial Lamprey Harvested (lbs) <sup>b</sup>	Lamprey Given away (lbs) <sup>b</sup>	Lamprey Received (lbs) <sup>b</sup>
Mountain Village	11/19/08	144	25	7	114	1	0	61	0
Pitkas Point	11/19/08	26	2	0	0	0	0	0	0
St. Mary's	11/19/08	126	38	11	1	8	0	0	43
Pilot Station	11/19/08	107	11	1	0	1	0	0	8
Marshall	11/19/08	73	15	7	1,570	0	0	245	300
Russian Mission	11/19/08	68	10	2	235	0	0	10	10
Holy Cross	11/19/08	54	15	2	0	2	0	0	0
Anvik	11/19/08	31	3	1	200	1	1,069	50	0
Grayling	11/19/08	44	8	3	442	4	5,150	310	10
Totals		673	127	34	2,562	17	6,219	676	371
Percent			19%	5%					

<sup>a</sup> Arctic lamprey harvest occurs after communities have been surveyed. The 2009 survey asks about harvests from the previous winter.

<sup>b</sup> Arctic lamprey are estimated to weigh 1/3 of a pound each for converting between pounds and number harvested.

Table 23.—Reported subsistence and personal use fish harvested under the authority of a permit, listed by permit area, Yukon Area, 2009.

Permit Fishing Area	Permit Type	Permit <sup>a</sup>		Percent Returned	Number of Permits Returned that Fished <sup>c</sup>	Reported Harvest										
		Issued <sup>b</sup>	Returned			Chinook <sup>d</sup>	Summer Chum <sup>d</sup>	Fall Chum <sup>d</sup>	Coho <sup>d</sup>	Whitefish	Sheefish	Burbot	Pike	Longnose Suckers	Arctic Grayling	
<b>Subsistence Permit</b>																
Koyukuk Middle and South Fork Rivers	SF	1	1	100%	1	0	0	0	0	4	0	0	0	13	18	
Yukon River Rampart Area	SR	25	24	96%	20	1,404	159	1,070	4	147	0	0	10	0	8	
Yukon River near Haul Road Bridge	SY	68	66	97%	38	1,248	28	996	106	60	9	37	60	0	0	
Yukon River near Circle and Eagle <sup>e</sup>	SE	45	42	93%	21	710	2	4,056	13	180	30	1	1	62	224	
	SEU	28	28	100%	13	382	0	6,995	0	128	7	8	3	1	15	
Tanana River Subdistrict 6A	SA	24	23	96%	16	543	422	4,213	2,369	105	5	2	9	0	0	
Tanana River Subdistrict 6B	SB	69	68	99%	37	730	830	9,112	4,064	1,073	10	33	25	21	0	
Tanana River Upstream of Subdistrict 6C	SU	42	40	95%	17	0	0	84	0	2,035	0	0	44	35	98	
Kantishna River Subdistrict 6A	SK	4	4	100%	3	0	0	436	311	57	0	32	21	71	0	
Tolovana River Pike Subdistrict 6B	ST	113	108	96%	51	0	1	0	0	202	14	6	560	0	0	
<i>Subsistence Permit Subtotals</i>		<i>419</i>	<i>404</i>	<i>96%</i>	<i>217</i>	<i>5,017</i>	<i>1,442</i>	<i>26,962</i>	<i>6,867</i>	<i>3,991</i>	<i>75</i>	<i>119</i>	<i>733</i>	<i>203</i>	<i>363</i>	
<b>Personal Use Permit</b>																
Tanana River Salmon Subdistrict 6C	PC	57	57	100%	22	127	308	71	65	2	1	0	0	1	0	
Tanana River Whitefish Upstream of Subdistrict 6C	PW	11	11	100%	6	0	0	7	5	46	0	0	0	314	0	
<i>Personal Use Permit Subtotals</i>		<i>68</i>	<i>68</i>	<i>100%</i>	<i>28</i>	<i>127</i>	<i>308</i>	<i>78</i>	<i>70</i>	<i>48</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>315</i>	<i>0</i>	
<b>Permit Totals</b>		<b>487</b>	<b>472</b>	<b>97%</b>	<b>245</b>	<b>5,144</b>	<b>1,750</b>	<b>27,040</b>	<b>6,937</b>	<b>4,039</b>	<b>76</b>	<b>119</b>	<b>733</b>	<b>518</b>	<b>363</b>	

-continued-

Table 23.–Page 2 of 2.

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- <sup>a</sup> Permits returned as of March 26, 2010.
- <sup>b</sup> Includes 24 households that were "issued" permits for more than one area, 2 households that were issued a duplicate permit for same area, and 5 permit holders issued an additional SE or SEU permit to track harvest above and below Eagle sonar.
- <sup>c</sup> Includes 6 households that "fished" in two different permit areas.
- <sup>d</sup> Does not include District 6 commercial related harvest of 12 Chinook, 2,234 fall chum, and 307 coho salmon caught but "not sold" during commercial fishing and retained for subsistence use in 2009.
- <sup>e</sup> Does not include fish distributed to community households from ADF&G Eagle Sonar test fish project (16 Chinook and 4 fall chum salmon).

Table 24.—Reported subsistence and personal use fish harvested under the authority of a permit, listed by fishery, by community of residence, and by drainage, Yukon Area, 2009.

Community	Harvest by Drainage	Permits <sup>a</sup>		Percent Returned	Number of Permits Returned that Fished <sup>c</sup>	Reported Harvest									
		Issued <sup>b</sup>	Returned			Chinook <sup>d</sup>	Chum <sup>d</sup>	Summer Chum <sup>d</sup>	Fall Chum <sup>d</sup>	Coho <sup>d</sup>	Whitefish	Sheefish	Burbot	Pike	Longnose Suckers
Subsistence Permit															
Central	Yukon River	6	6	100%	5	167	2	0	0	4	1	0	0	0	0
Circle	Yukon River	21	19	90%	9	372	0	110	13	0	0	0	0	0	0
Eagle <sup>e</sup>	Yukon River	31	31	100%	15	430	0	10,937	0	300	34	7	3	62	239
Fairbanks (FNSB) <sup>f</sup>	Yukon River	79	75	95%	45	1,509	44	229	13	41	10	37	41	1	0
	Tanana River	21	20	95%	12	396	372	3,460	577	510	0	2	3	0	0
	Tolovana River	99	94	95%	46	0	0	0	0	0	0	0	411	0	0
	Kantishna River	1	1	100%	1	0	0	0	0	0	0	0	0	12	0
	<i>FNSB Subtotal</i>	<i>200</i>	<i>190</i>	<i>95%</i>	<i>104</i>	<i>1,905</i>	<i>416</i>	<i>3,689</i>	<i>590</i>	<i>551</i>	<i>10</i>	<i>39</i>	<i>467</i>	<i>1</i>	<i>0</i>
Healy	Yukon River	0	0	-	0	0	0	0	0	0	0	0	0	0	0
	Tanana River	5	5	100%	5	15	2	773	691	266	4	1	17	4	0
	<i>Healy Subtotal</i>	<i>5</i>	<i>5</i>	<i>100%</i>	<i>5</i>	<i>15</i>	<i>2</i>	<i>773</i>	<i>691</i>	<i>266</i>	<i>4</i>	<i>1</i>	<i>17</i>	<i>4</i>	<i>0</i>
Manley	Yukon River	1	1	100%	1	197	6	0	0	0	0	0	0	0	0
	Tanana River	14	14	100%	12	343	367	2,837	2,241	83	5	0	6	0	0
	Kantishna River	1	1	100%	1	0	0	39	67	3	0	0	0	0	0
	<i>Manley Subtotal</i>	<i>16</i>	<i>16</i>	<i>100%</i>	<i>14</i>	<i>540</i>	<i>373</i>	<i>2,876</i>	<i>2,308</i>	<i>86</i>	<i>5</i>	<i>0</i>	<i>6</i>	<i>0</i>	<i>0</i>
Minto	Yukon River	2	2	100%	2	120	0	0	0	0	0	0	0	0	0
	Tanana River	15	14	93%	0	0	0	0	0	0	0	0	0	0	0
	Tolovana River	10	10	100%	3	0	1	0	0	202	14	6	149	0	0
	<i>Minto Subtotal</i>	<i>27</i>	<i>26</i>	<i>96%</i>	<i>5</i>	<i>120</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>202</i>	<i>14</i>	<i>6</i>	<i>149</i>	<i>0</i>	<i>0</i>
Nenana	Yukon River	1	1	100%	1	33	3	0	0	0	0	0	0	0	0
	Tanana River	37	37	100%	22	452	506	6,255	2,924	319	6	14	8	17	0
	Kantishna River	2	2	100%	1	0	0	397	244	54	0	32	9	71	0
	<i>Nenana Subtotal</i>	<i>40</i>	<i>40</i>	<i>100%</i>	<i>24</i>	<i>485</i>	<i>509</i>	<i>6652</i>	<i>3168</i>	<i>373</i>	<i>6</i>	<i>46</i>	<i>17</i>	<i>88</i>	<i>0</i>
Rampart	Yukon River	5	5	100%	4	528	112	1,000	0	120	0	0	0	0	8
Stevens Village	Yukon River	5	5	100%	3	197	2	770	90	23	0	2	20	0	0
Villages (UTV) <sup>g</sup>	Yukon River	10	10	100%	4	81	0	11	2	1	1	0	0	0	0
	Tanana River	40	38	95%	17	0	0	84	0	2,035	0	0	44	35	98
	<i>UTV Subtotal</i>	<i>50</i>	<i>48</i>	<i>96%</i>	<i>21</i>	<i>81</i>	<i>0</i>	<i>95</i>	<i>2</i>	<i>2,036</i>	<i>1</i>	<i>0</i>	<i>44</i>	<i>35</i>	<i>98</i>

-continued-

Table 24.–Page 2 of 2.

Community	Harvest by Drainage	Permits <sup>a</sup>		Percent Returned	Number of Permits Returned that Fished <sup>c</sup>	Reported Harvest									
		Issued <sup>b</sup>	Returned			Summer Chinook <sup>d</sup>	Chum <sup>d</sup>	Fall Chum <sup>d</sup>	Coho <sup>d</sup>	Whitefish	Sheefish	Burbot	Pike	Longnose Sucker	Arctic Grayling
Other Subsistence <sup>h</sup>	Yukon River	6	6	100%	4	110	20	60	5	30	0	0	10	13	18
	Tanana River	3	3	100%	2	67	5	0	0	0	0	18	0	0	0
	Tolovana River	4	4	100%	2	0	0	0	0	0	0	0	0	0	0
	Kantishna River	0	0	-	0	0	0	0	0	0	0	0	0	0	0
	<i>Other Subtotal</i>	<i>13</i>	<i>13</i>	<i>100%</i>	<i>8</i>	<i>177</i>	<i>25</i>	<i>60</i>	<i>5</i>	<i>30</i>	<i>0</i>	<i>18</i>	<i>10</i>	<i>13</i>	<i>18</i>
<i>Subsistence Permit Subtotals</i>		<i>419</i>	<i>404</i>	<i>96%</i>	<i>217</i>	<i>5,017</i>	<i>1,442</i>	<i>26,962</i>	<i>6,867</i>	<i>3,991</i>	<i>75</i>	<i>119</i>	<i>733</i>	<i>203</i>	<i>363</i>
Personal Use Permit															
Fairbanks (FNSB) <sup>f</sup>	Tanana River	65	65	100%	25	122	305	78	70	14	1	0	0	2	0
Others Personal Use <sup>i</sup>	Tanana River	3	3	100%	3	5	3	0	0	34	0	0	0	313	0
<i>Personal Use Permit Subtotals</i>		<i>68</i>	<i>68</i>	<i>100%</i>	<i>28</i>	<i>127</i>	<i>308</i>	<i>78</i>	<i>70</i>	<i>48</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>315</i>	<i>0</i>
Permit Totals		487	472	97%	245	5,144	1,750	27,040	6,937	4,039	76	119	733	518	363

<sup>a</sup> Permits returned as of March 26, 2010.

<sup>b</sup> Includes 24 households that were "issued" permits for more than one area. Additionally includes two households that were issued duplicate permits for same area.

<sup>c</sup> Includes 5 households issued SE and SEU permits, and one household that "fished" in both permit areas.

<sup>d</sup> Does not include District 6 commercial related harvest of 12 Chinook, 2,234 fall chum, and 307 coho salmon caught but "not sold" during commercial fishing and retained for subsistence use.

<sup>e</sup> Does not include fish distributed to community households from ADF&G Eagle Sonar test fish project (16 Chinook and 4 summer chum salmon).

<sup>f</sup> Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

<sup>g</sup> Upper Tanana Villages (UTV) include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

<sup>h</sup> "Other Subsistence" represents residents from Anchorage, Anderson, Copper Center, Denali Park, Palmer, Tanana, Wasilla, and Wiseman who were issued a subsistence fishing permit for Yukon, Tanana, Tolovana, Kantishna, and Upper Koyukuk rivers.

<sup>i</sup> "Others Personal Use" includes residents from Nenana and Delta Junction.

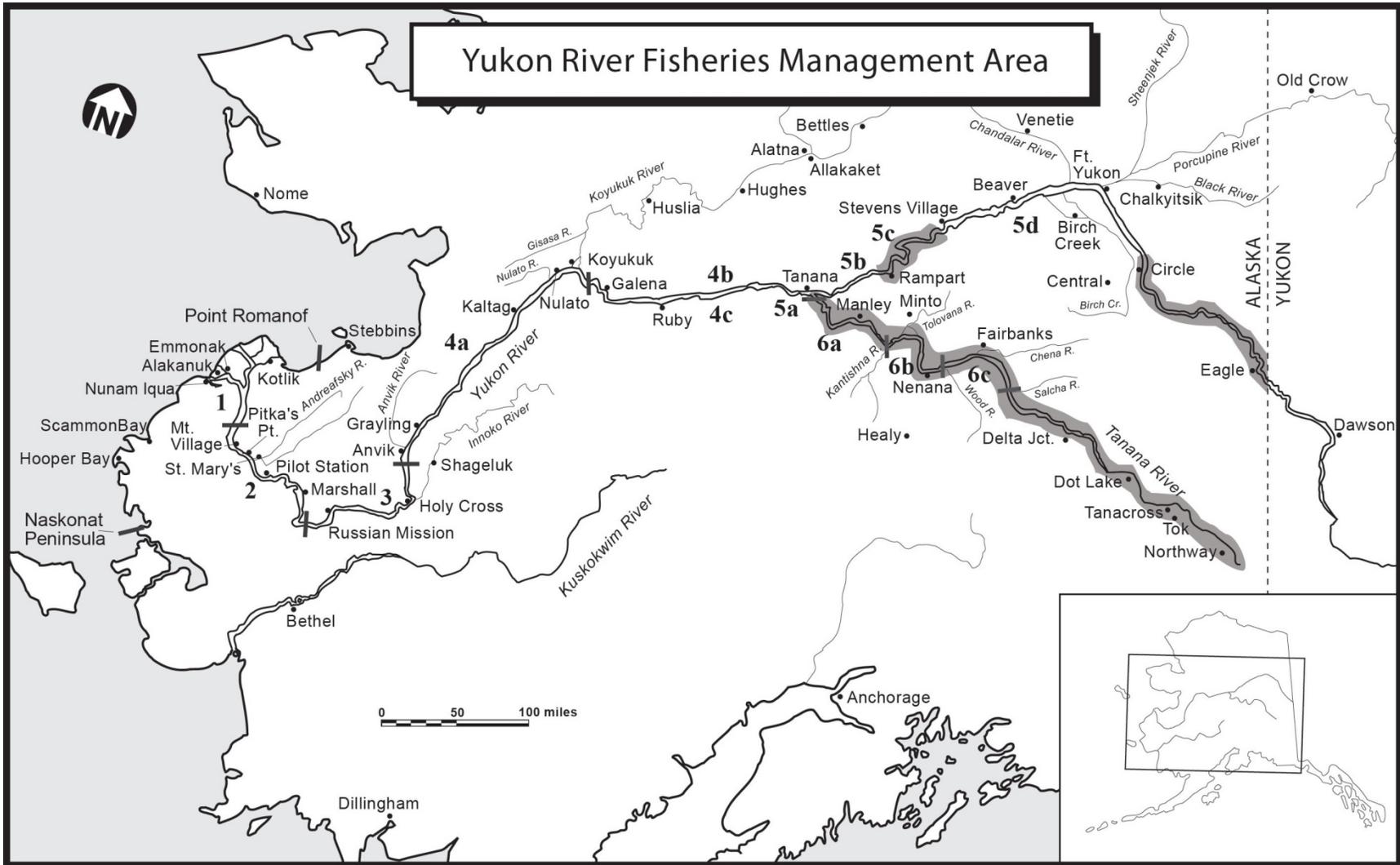


Figure 1.—Map of Alaska portion of Yukon River drainage showing communities and fishing districts. Subsistence and personal use permit areas are shaded.

5 AAC 99.015 JOINT BOARD NONSUBSISTENCE AREAS. (4) The Fairbanks Nonsubsistence Area is comprised of the following: within Unit 20(A) as defined by 5 AAC 92.450(20)(A) east of the Wood River drainage and south of the Rex Trail but including the upper Wood River drainage south of its confluence with Chicken Creek, within Unit 20(B) as defined by 5 AAC 92.450(20)(B) the North Star Borough and that portion of the Washington Creek drainage east of the Elliot Highway, within 20(D) as defined by 5 AAC 92.450(20)(D) west of the Tanana River between its confluence's with the Johnson and Delta Rivers, west of the west bank of the Johnson River, and north and west of the Volkmar drainage, including the Goodpaster River drainage, and within Unit 25(C) as defined by 5 AAC 92.450(25)(C) the Preacher and Beaver Creek drainages.

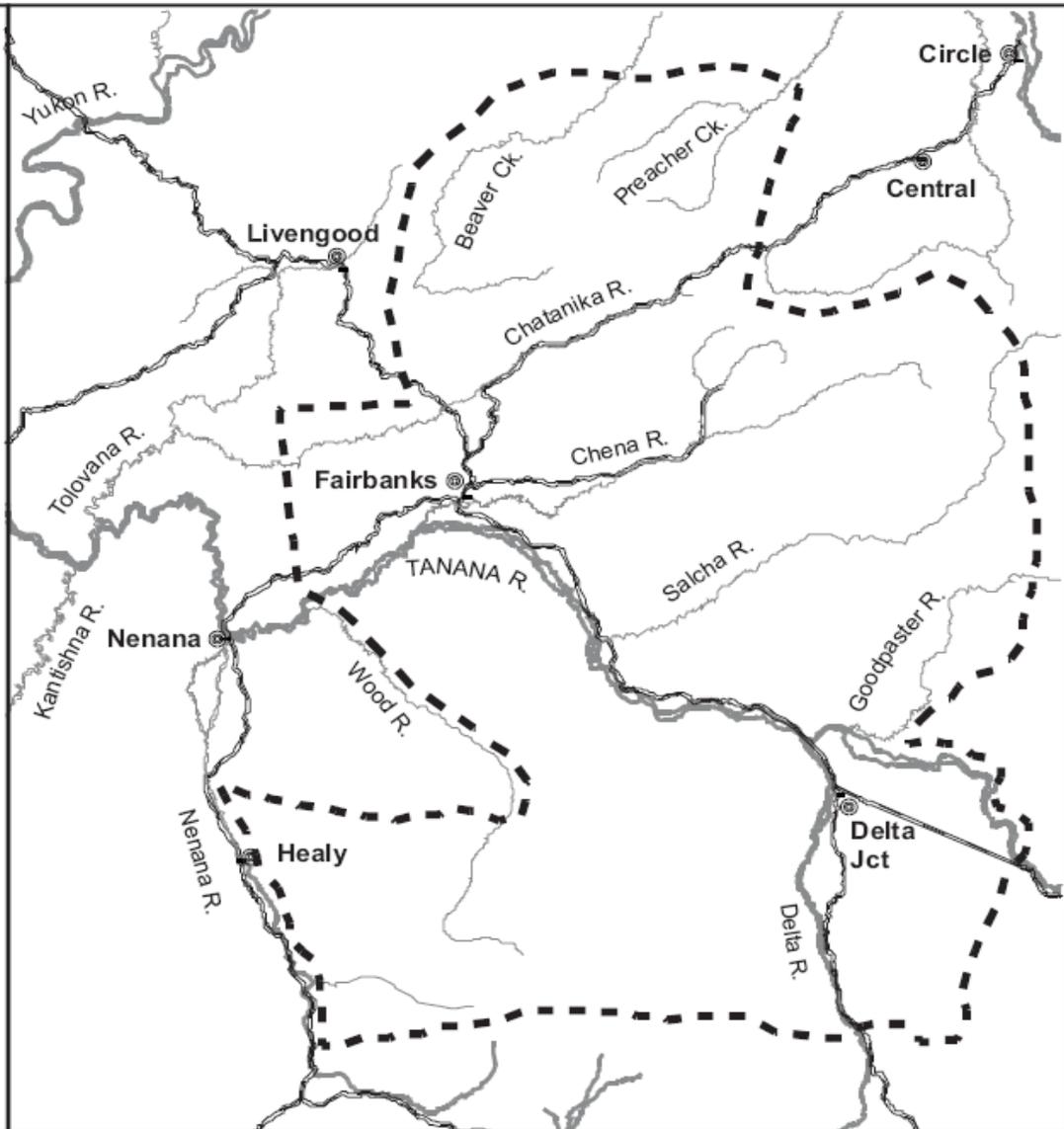
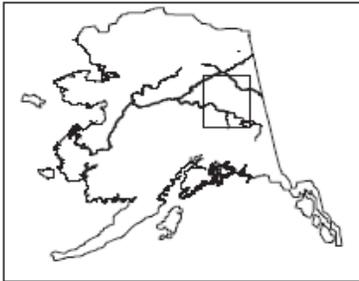


Figure 2.—Map of the Fairbanks nonsubsistence area.

## 2008 Yukon River Lamprey Harvest Survey

ALASKA DEPARTMENT OF FISH AND GAME  
DIVISION OF COMMERCIAL FISHERIES, FAIRBANKS  
Telephone (907) 459-7274, Fax (907) 459-7271



The Alaska Department of Fish and Game would like your help to better manage the lamprey fishery in the Yukon River. Please fill out and return this pre-paid postcard to help us understand the importance of lamprey harvests to your household. Thank you for your assistance.

1. DID YOU FISH FOR LAMPREY (EELS) IN NOVEMBER OR DECEMBER, 2008 (please circle):      YES      NO

2. PLEASE ESTIMATE THE AMOUNT OF LAMPREY CAUGHT AND DATE(S) OF HARVEST:

SUBSISTENCE \_\_\_\_\_ POUNDS      DATES: \_\_\_\_\_

COMMERCIAL \_\_\_\_\_ POUNDS      DATES: \_\_\_\_\_

3. PLEASE ESTIMATE THE AMOUNT OF SUBSISTENCE LAMPREY GIVEN AWAY AND/OR RECEIVED:

GIVEN AWAY \_\_\_\_\_ POUNDS      RECEIVED \_\_\_\_\_ POUNDS

4. CIRCLE THE COMMUNITY NEAREST TO WHERE YOU FISHED:    MOUNTAIN VILLAGE    PITKAS POINT

ST. MARYS      PILOT STATION      MARSHALL      RUSSIAN MISSION      HOLY CROSS

ANVIK      GRAYLING      OTHER \_\_\_\_\_      Comments? \_\_\_\_\_



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Note: Yukon Area postseason subsistence Arctic lamprey harvest survey postcards were mailed November 2008 to all households in the communities listed in Districts Y-2, Y-3, and Subdistrict 4-A communities of Anvik and Grayling. Surveys took place in these communities in September 2009, and asked about lamprey harvested in the winter of 2008.

Figure 3.—Supplemental postcard mailed to Arctic lamprey harvesting communities.

Date of Survey \_\_\_\_\_  
 Person Interviewed \_\_\_\_\_  
 Relation to HH \_\_\_\_\_  
 Interviewer \_\_\_\_\_

Community	HHID#
Head of Household	
Significant Other	
Mailing Address	Telephone#

**2009 Yukon Area Post-Season Subsistence Salmon Harvest Survey  
 CONFIDENTIAL INFORMATION**

**1. We would like to make sure we have the correct name and address for your household.**

Head of Household \_\_\_\_\_  
 Mailing Address \_\_\_\_\_ Telephone \_\_\_\_\_  
 Permanent Note \_\_\_\_\_  
 Significant Other \_\_\_\_\_ Permanent Note \_\_\_\_\_

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

**3. Did anyone in your household harvest salmon for subsistence use OR keep fish for subsistence use from commercial fishing?** Yes \_\_\_ No \_\_\_ (Salmon caught during commercial openings but retained for subsistence. Harvest includes catching or cutting salmon) IF YES, COMPLETE ALL OF PART I, otherwise go to PART II.

Adult household member declined to be interviewed. [ ] Reason given: \_\_\_\_\_

**PART I. HOUSEHOLDS THAT CAUGHT SALMON**

**4. May I have your salmon catch calendar?** Yes \_\_\_ No \_\_\_ Already mailed \_\_\_ (Entire harvest on calendar? \_\_\_)

**5. How many total salmon did you or your fishing group catch?**

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**6. How many households help catch these fish? \_\_\_\_\_ (Names) \_\_\_\_\_**

**\*7. Where did you harvest your salmon? How many total salmon did your household harvest for subsistence purposes?**

(Include only fish caught by this household, not the group, includes fish kept from commercial periods.)

Ocean 1 2 3 4A 4B 4C 5A 5B 5C 5D (Ft Yukon ↑ or ↓) Innoko Koyukuk Chandalar Porcupine Black

Area \_\_\_\_\_ CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

Area \_\_\_\_\_ CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

Total (2 areas) CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**8. What is your household's primary type of salmon fishing gear?** (In order of importance, 1= primary)

SET NET \_\_\_\_\_ DRIFT NET \_\_\_\_\_ FISH WHEEL \_\_\_\_\_ HOOK & LINE \_\_\_\_\_ DIPNET \_\_\_\_\_ OTHER \_\_\_\_\_

**9. How many subsistence fish were retained from commercial fishing?** ( \_\_\_ Did not commercial fish)

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**10. Did your household "lose" any salmon? (e.g. to bears, birds, flies, spoilage, diseased fish, etc.)**

(If fish was not fit for humans but was fed to dogs, then it was not "lost.")

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

Reason(s) for loss: \_\_\_\_\_

**11. Did your household share the salmon catch with any other households?** (names, species and numbers)

**\*\*12. How many salmon did you keep for your household's use?** (do not include fish given away or 'lost')

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

Figure 4.-Yukon Area postseason subsistence salmon harvest survey form, 2009.

**PART II. ALL HOUSEHOLDS**

**\*\*13. Was your household given any salmon? Yes \_\_\_ No \_\_\_** Code: S=Subsistence, C=Commercial, T=Test Fish

Code: \_\_\_\_\_ Fishermen/Project (Name) \_\_\_\_\_

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

Code: \_\_\_\_\_ Fishermen/Project (Name) \_\_\_\_\_

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**14. ALL HOUSEHOLDS: How many salmon does your household usually harvest OR receive to meet its subsistence needs?** (If household has no need for a species or usually does not harvest the species, indicate '0'. If needs were not met, ask about contributing factors.)

How many CHINOOK do you usually get? \_\_\_\_\_ Comment: \_\_\_\_\_

How many SUMMER CHUM do you usually get? \_\_\_\_\_ Comment: \_\_\_\_\_

How many FALL CHUM do you usually get? \_\_\_\_\_ Comment: \_\_\_\_\_

How many COHO do you usually get? \_\_\_\_\_ Comment: \_\_\_\_\_

**15. Did your household catch any other fish besides salmon? Yes \_\_\_\_\_ No \_\_\_\_\_**

(Harvest numbers should include from September/October of last year to now. Large Whitefish are 4 pounds or greater.)

LG WHITEFISH \_\_\_\_\_ SM WHITEFISH \_\_\_\_\_ SHEEFISH \_\_\_\_\_ BURBOT \_\_\_\_\_ PIKE \_\_\_\_\_ BLACKFISH \_\_\_\_\_

GRAYLING \_\_\_\_\_ SUCKERS \_\_\_\_\_ TROUT (Arctic Char) \_\_\_\_\_ EELS (Lamprey) \_\_\_\_\_ TOMCOD (Saffron) \_\_\_\_\_

**16. How many sockeye (red) salmon did your household catch?** \_\_\_\_\_ (Indicate '0' if household did not fish for sockeye)

**17. How many dogs (including puppies) does your household have?** \_\_\_\_\_ (if "none" go to question 21)

**18. Do you feed whole salmon to your dogs? Yes \_\_\_ No \_\_\_** Only Feed Scraps \_\_\_ (if "No" go to question 21)

**19. Were any of the salmon put up for the dogs from the commercial fishery? Yes \_\_\_\_\_ No \_\_\_\_\_**

**20. Estimate harvest of salmon put up for dogs this year by fishery** (numbers should represent whole fish, not scraps):

(Subsistence) CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

(Commercial) CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**21. Do you have any additional comments?** \_\_\_\_\_

THANK YOU! THIS INFORMATION IS USED TO DOCUMENT THE SUBSISTENCE SALMON HARVEST WITHIN THE YUKON RIVER DRAINAGE AND TO TRY TO ENSURE THERE WILL BE ENOUGH SALMON FOR THE FUTURE.

**Surveyor Comments:**

**Official Use - This area is to be filled in by Fish and Game.**

**HOUSEHOLD'S TOTAL SUBSISTENCE SALMON CATCH** (Totals from question \*7)

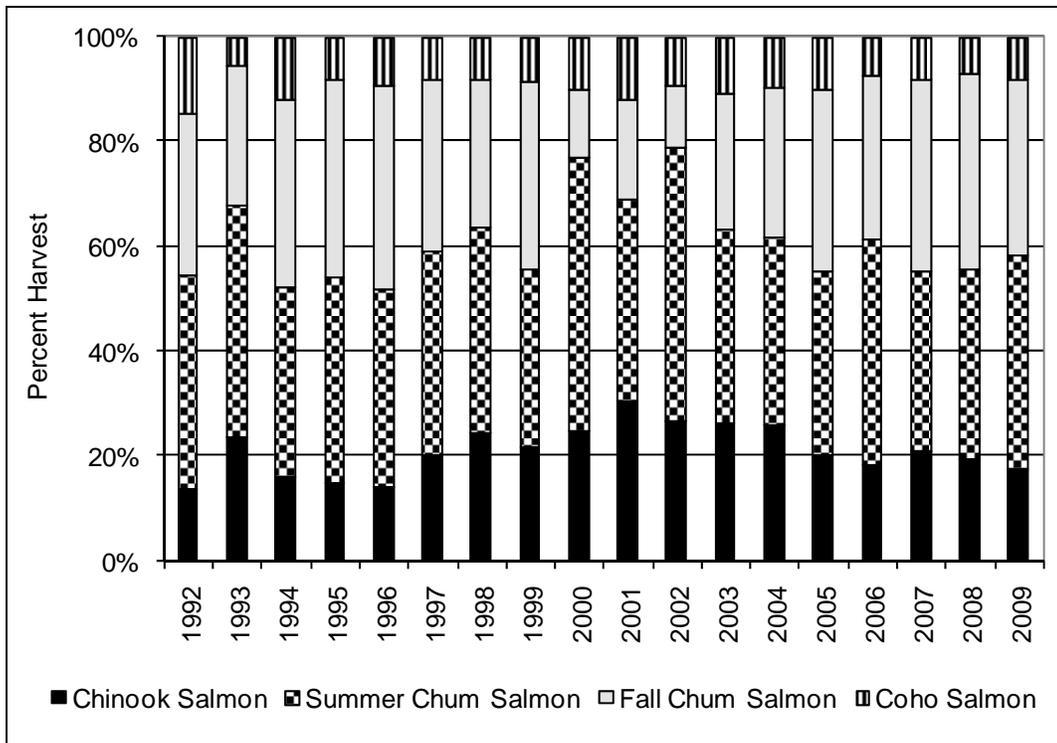
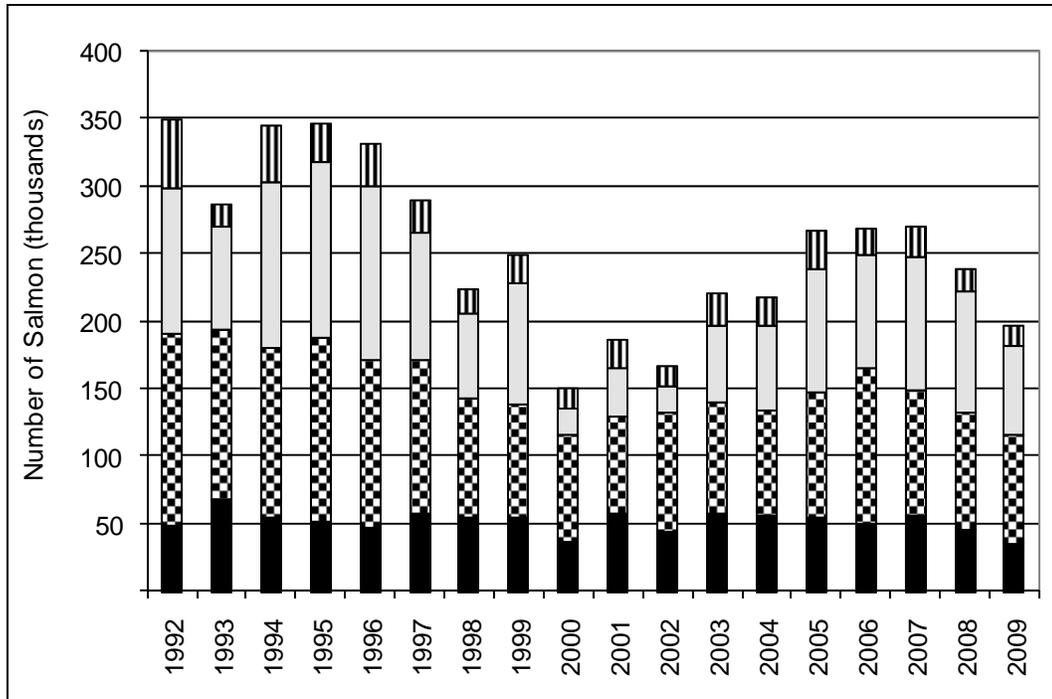
CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

**HOUSEHOLD'S TOTAL SUBSISTENCE SALMON USE** (Add totals from questions \*\*12 and \*\*13)

CHINOOK \_\_\_\_\_ SUMMER CHUM \_\_\_\_\_ FALL CHUM \_\_\_\_\_ COHO \_\_\_\_\_ PINK \_\_\_\_\_

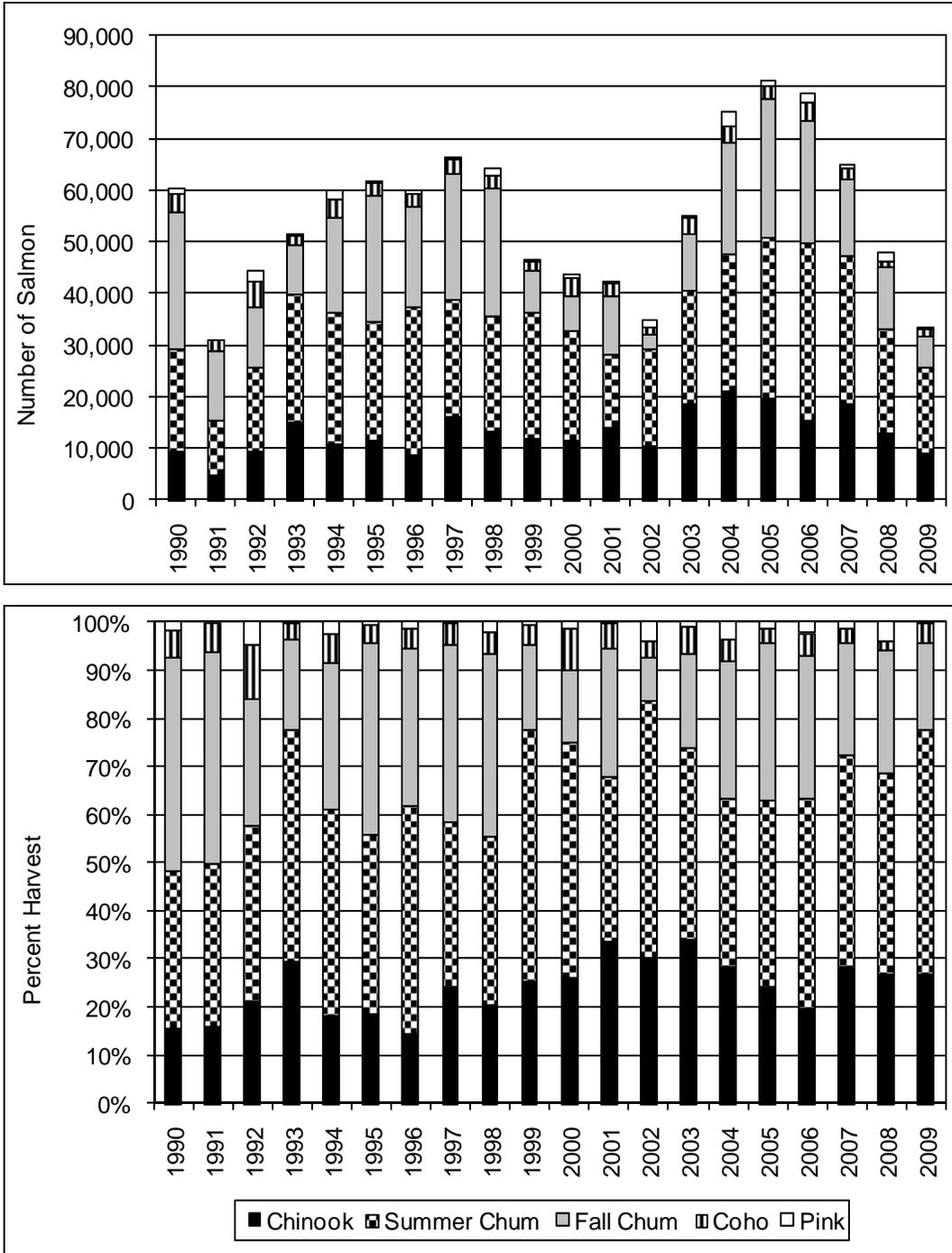
Complete Survey \_\_\_\_\_ Partial Survey \_\_\_\_\_ No Survey \_\_\_\_\_

Figure 4.-Page 2 of 2.



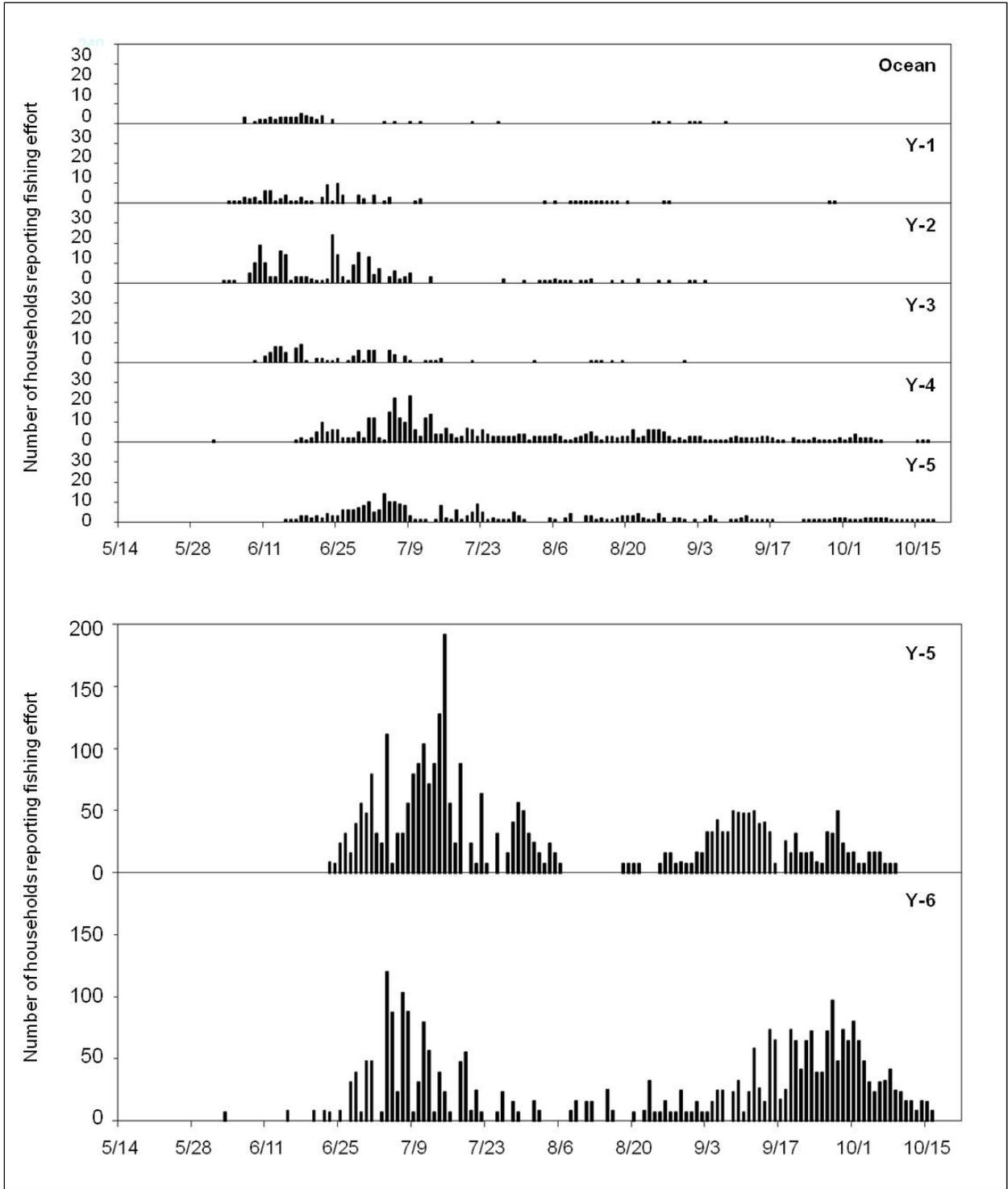
*Note:* Harvest of salmon species by number (upper panel) and proportion (lower panel). Totals include survey, permit, test fish and retained from commercial. Does not include salmon caught in the personal use fishery, or summer chum, fall chum, and coho salmon carcasses retained from the commercial fishery and used for subsistence. Does not include approximately 14,500 to 15,000 coho salmon obtained from Valdez Fisheries Development Association as part of Eagle's replacement subsistence salmon fishery in 2001 and 2003.

Figure 5.—Estimated total subsistence salmon harvest by species, Yukon Area, 1992–2009.



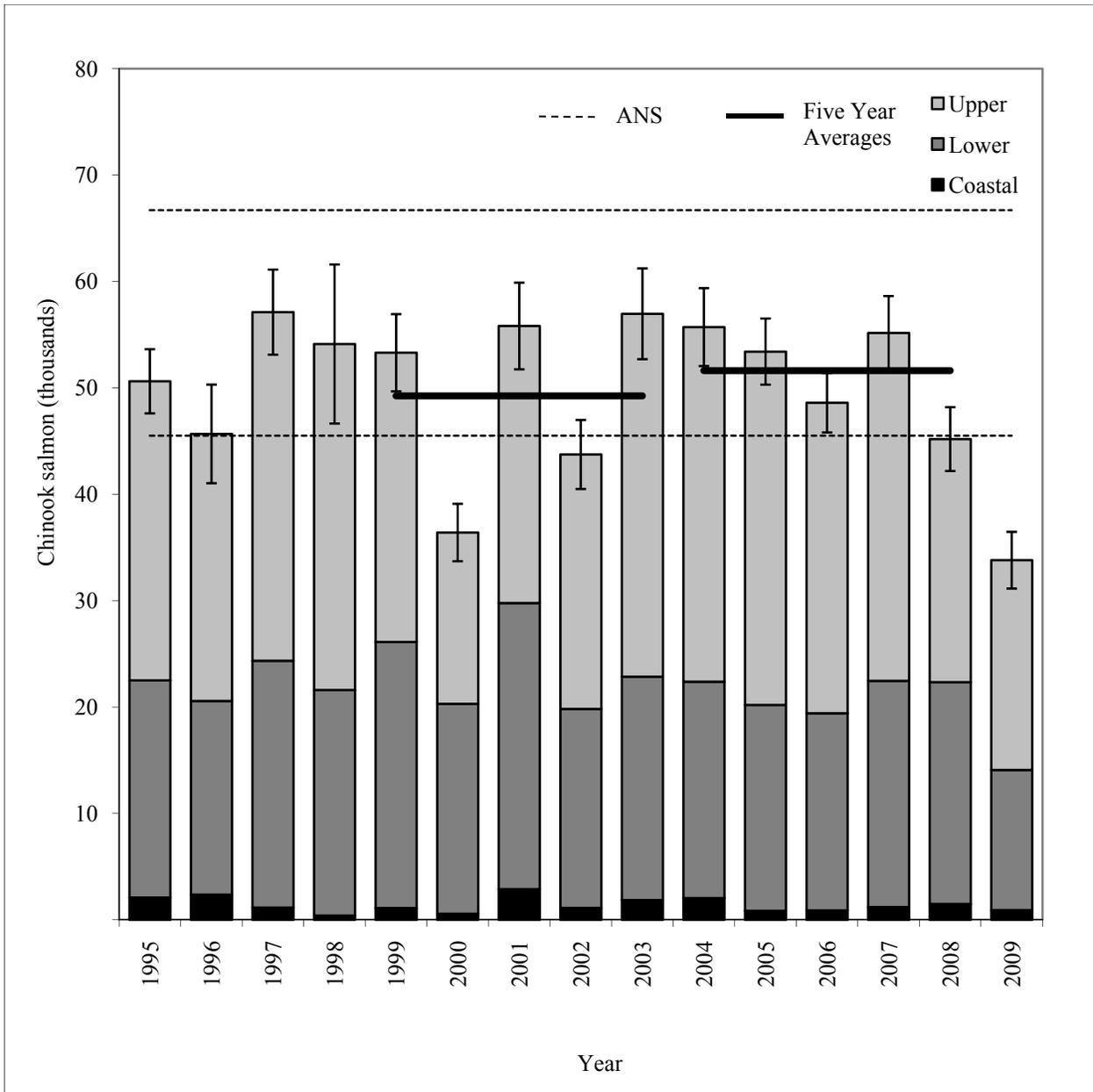
Note: Salmon harvest by number (upper panel) and proportion (lower panel).

Figure 6.—Subsistence salmon harvest reported on catch calendars by species from Districts 1–4 and a portion of District 5, Yukon Area, 1990–2009.



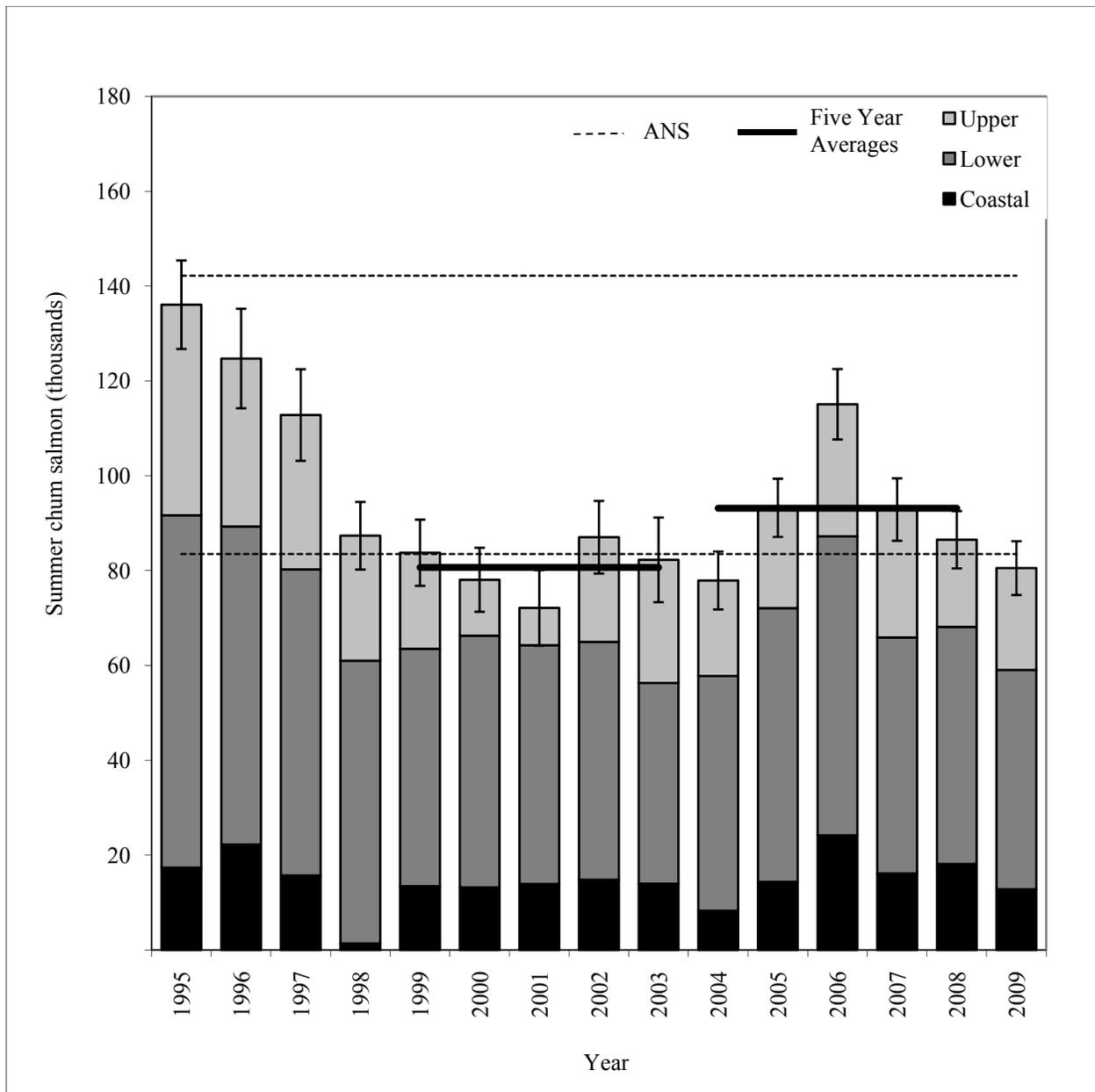
Note: Effort by day as recorded on returned harvest calendars (top), and subsistence salmon permits (bottom) Yukon Area 2009. District 5 contains calendars from surveyed communities and permit areas.

Figure 7.—Number of households reporting fishing effort by day and by district



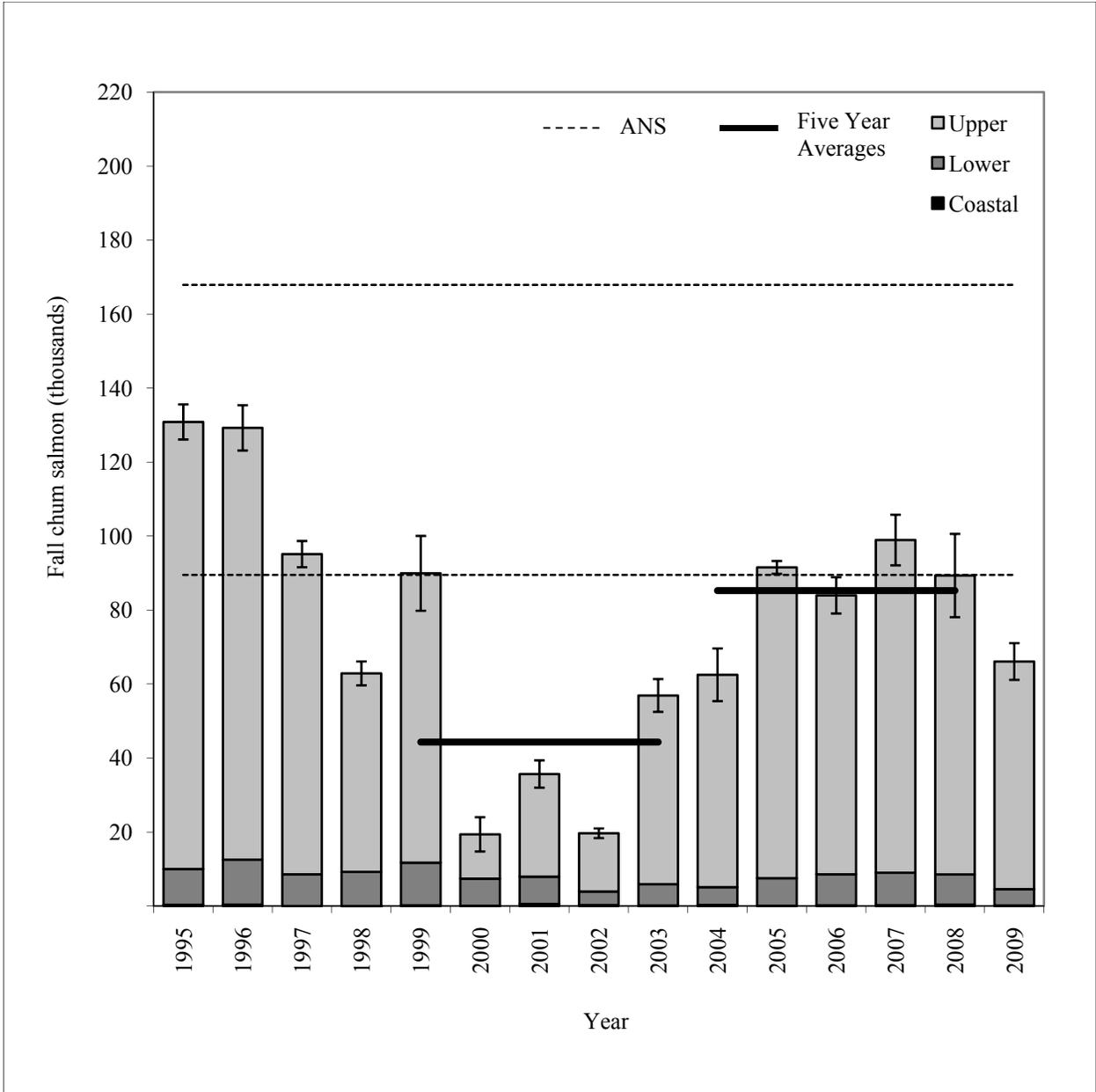
Note: Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 45,500 to 66,704 Chinook salmon.

Figure 8.—Estimated Chinook salmon subsistence harvest, Yukon Area, 1995–2009.



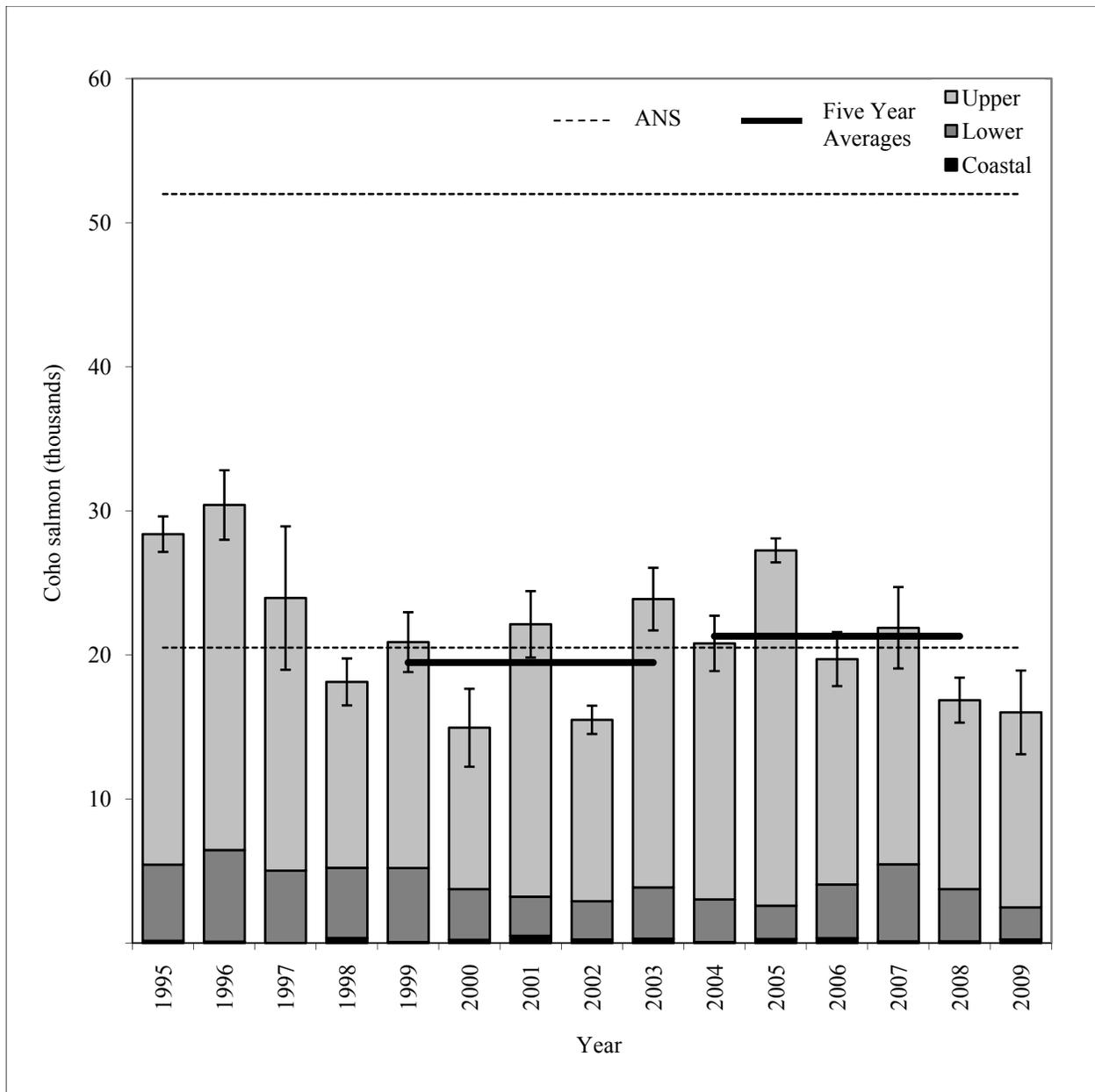
Note: Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 83,500 to 142,192 summer chum salmon. Does not include summer chum salmon carcasses retained from the commercial roe fishery (most significant in 1995 and 1996) and used for subsistence.

Figure 9.—Estimated summer chum salmon subsistence harvest, Yukon Area, 1995–2009.



*Note:* Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 89,500 to 167,900 fall chum salmon. Does not include fall chum salmon sold commercially for roe and carcasses returned to fishermen in District 6.

Figure 10.—Estimated fall chum salmon subsistence harvest, Yukon Area, 1995–2009.



*Note:* Harvest estimates and 95% confidence interval are provided. In 2001, the Alaska Board of Fisheries defined the Amount Necessary for Subsistence (ANS) as 20,500 to 51,980 coho salmon. Does not include carcasses returned to fishermen from coho salmon sold commercially for roe in District 6. Does not include approximately 14,500 to 15,000 coho salmon obtained from Valdez Fisheries Development Association as part of Eagle's replacement subsistence salmon fishery in 2003.

Figure 11.—Estimated coho salmon subsistence harvest, Yukon Area, 1995–2009.



## **APPENDIX A. 2009 HARVEST INFORMATION**

Appendix A1.—Estimated Chinook salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total N	n	Total	Est CI (95%) (+/-)
Hooper Bay	5	3	1.0	0.6	70	13	0.9	0.8	100	30	0.5	0.2	29	25	2.2	0.2	-	-	-	-	204	71	183	119
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	7.7	3.5	15	15	27.5	0.0	-	-	-	-	80	33	721	277
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0.8</i>	<i>0.5</i>	<i>94</i>	<i>20</i>	<i>0.7</i>	<i>0.6</i>	<i>140</i>	<i>40</i>	<i>2.6</i>	<i>1.0</i>	<i>44</i>	<i>40</i>	<i>10.8</i>	<i>0.1</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>904</i>	<i>301</i>
Nunam Iqua	1	0	-	-	12	10	3.7	0.7	8	6	5.7	1.5	10	10	10.4	0.0	-	-	-	-	31	26	200	29
Alakanuk	2	0	-	-	36	11	1.5	1.0	56	18	6.0	1.8	23	17	4.8	0.6	-	-	-	-	117	46	511	217
Emmonak	4	1	0.0	-	47	22	0.7	0.5	66	26	4.2	1.1	33	22	8.8	1.4	-	-	-	-	150	71	598	173
Kotlik	3	0	-	-	23	5	4.8	2.7	53	13	5.2	1.6	18	17	38.5	2.3	-	-	-	-	97	35	1,111	230
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>2.1</i>	<i>0.6</i>	<i>183</i>	<i>63</i>	<i>5.1</i>	<i>0.8</i>	<i>84</i>	<i>66</i>	<i>14.3</i>	<i>0.8</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>2,420</i>	<i>361</i>
Mountain Village	2	2	0.0	0.0	35	10	4.2	2.5	71	22	9.0	1.6	32	30	21.6	0.8	1	1	0.0	-	141	65	1,480	282
Pitkas Point	2	2	0.0	0.0	7	5	1.0	0.5	13	12	14.2	1.8	5	4	14.8	3.8	-	-	-	-	27	23	265	60
St. Mary's	1	1	106.0	-	21	3	0.0	0.0	73	21	16.5	4.2	24	19	25.8	2.8	-	-	-	-	119	44	1,929	613
Pilot Station	4	0	-	-	35	17	0.4	0.3	51	21	7.7	1.8	16	14	21.7	2.9	-	-	-	-	106	52	780	211
Marshall	4	1	0.0	-	15	5	14.2	9.0	41	10	13.6	6.5	14	14	30.7	0.0	-	-	-	-	74	30	1,201	585
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>11.8</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>3.4</i>	<i>1.4</i>	<i>249</i>	<i>86</i>	<i>12.0</i>	<i>1.7</i>	<i>91</i>	<i>81</i>	<i>23.8</i>	<i>1.0</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>214</i>	<i>5,655</i>	<i>920</i>
Russian Mission	6	6	0.2	0.0	14	4	10.0	8.5	38	13	13.5	5.7	9	9	35.9	0.0	-	-	-	-	67	32	978	484
Holy Cross	3	1	118.0	-	15	9	5.0	2.5	24	12	27.3	5.2	13	11	50.9	4.7	-	-	-	-	55	33	1,745	282
Shageluk	1	1	11.0	-	8	6	0.0	0.0	17	12	9.8	2.3	3	2	8.0	4.6	-	-	-	-	29	21	201	82
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>36.6</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>5.8</i>	<i>3.4</i>	<i>79</i>	<i>37</i>	<i>16.9</i>	<i>3.2</i>	<i>25</i>	<i>22</i>	<i>40.4</i>	<i>2.5</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>2,924</i>	<i>566</i>
Anvik	2	1	5.0	-	11	10	0.5	0.2	7	5	38.8	5.6	6	6	31.7	0.0	2	2	60.0	0.0	28	24	597	77
Grayling	2	2	27.5	0.0	5	2	6.0	4.6	33	8	24.1	2.4	5	4	50.3	9.1	1	1	0.0	-	46	17	1,132	187
Kaltag	2	0	-	-	15	3	9.3	8.3	43	10	36.5	8.9	5	5	40.0	0.0	-	-	-	-	65	18	1,970	812
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	24.0	8.5	3	3	61.0	0.0	-	-	-	-	80	22	1,551	951
Koyukuk	9	7	26.9	11.3	11	1	0.0	-	15	5	21.8	8.2	3	2	12.0	3.5	3	3	38.0	0.0	41	18	982	427
Galena	7	6	0.3	0.1	79	17	1.5	0.9	69	20	14.9	2.5	6	6	31.3	0.0	1	1	35.0	-	162	50	1,370	369
Ruby	-	-	-	-	40	11	0.3	0.2	14	5	8.2	2.4	1	1	7.0	-	2	2	204.5	0.0	57	19	542	68
Huslia	3	0	-	-	49	15	16.9	13.3	17	5	0.2	0.2	4	4	20.0	0.0	2	2	10.0	0.0	75	26	969	1,330
Hughes	-	-	-	-	14	11	0.5	0.2	6	5	2.4	1.0	3	3	26.7	0.0	-	-	-	-	23	19	101	13
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	2.3	0.0	3	3	26.3	0.0	47	18	90	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	5.0	-	-	-	-	-	-	-	-	-	7	5	10	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>12.9</i>	<i>4.2</i>	<i>296</i>	<i>100</i>	<i>4.0</i>	<i>2.3</i>	<i>271</i>	<i>84</i>	<i>20.3</i>	<i>2.4</i>	<i>39</i>	<i>37</i>	<i>31.3</i>	<i>1.2</i>	<i>14</i>	<i>14</i>	<i>55.5</i>	<i>0.0</i>	<i>651</i>	<i>253</i>	<i>9,314</i>	<i>1,923</i>

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Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)		
Tanana	7	4	0.0	0.0	43	20	1.0	0.7	28	10	21.6	5.3	9	6	113.0	47.8	11	11	116.8	0.0	98	51	2,950		894					
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	21.4	5.1	3	3	56.3	0.0	-	-	-	-	21	15	405		110					
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	3.7	1.8	-	-	-	-	-	-	-	-	16	12	15		14					
Beaver	1	1	30.0	-	13	11	6.0	1.8	8	7	24.3	3.8	5	4	42.8	6.4	-	-	-	-	27	23	516		97					
Fort Yukon	18	4	0.0	0.0	101	25	2.5	1.3	34	12	10.7	3.8	6	6	19.5	0.0	12	11	9.6	1.4	171	58	846		357					
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	40.0	35.5	3	3	10.0	0.0	-	-	-	-	58	15	622		1,026					
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0		0					
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.8</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>1.7</i>	<i>0.6</i>	<i>103</i>	<i>47</i>	<i>19.1</i>	<i>5.2</i>	<i>27</i>	<i>22</i>	<i>59.5</i>	<i>16.6</i>	<i>23</i>	<i>22</i>	<i>60.9</i>	<i>0.7</i>	<i>418</i>	<i>194</i>	<i>5,354</i>		<i>1,415</i>					
Survey Totals	111	52	9.0	1.1	882	315	2.8	0.8	1,025	357	12.8	1.0	310	268	24.6	1.5	38	37	57.3	0.4	2,366	1,029	26,571		2,662					

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A2.—Estimated summer chum salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Est CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	5	3	8.3	5.3	70	13	6.2	5.6	100	30	51.1	9.7	29	25	120.7	7.0	-	-	-	-	204	71	9,085	2,079
Scammon Bay	1	1	0.0	-	24	7	10.0	8.4	40	10	40.9	14.7	15	15	114.1	0.0	-	-	-	-	80	33	3,588	1,217
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>6.9</i>	<i>4.4</i>	<i>94</i>	<i>20</i>	<i>7.1</i>	<i>4.7</i>	<i>140</i>	<i>40</i>	<i>48.2</i>	<i>8.1</i>	<i>44</i>	<i>40</i>	<i>118.4</i>	<i>4.6</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>12,673</i>	<i>2,409</i>
Nunam Iqua	1	0	-	-	12	10	52.5	8.6	8	6	31.8	10.1	10	10	132.2	0.0	-	-	-	-	31	26	2,280	266
Alakanuk	2	0	-	-	36	11	40.9	17.6	56	18	28.6	8.2	23	17	80.2	7.3	-	-	-	-	117	46	5,001	1,598
Emmonak	4	1	0.0	-	47	22	3.2	2.3	66	26	46.9	13.2	33	22	124.0	12.2	-	-	-	-	150	71	7,338	1,888
Kotlik	3	0	-	-	23	5	68.0	49.8	53	13	50.8	15.6	18	17	124.1	6.0	-	-	-	-	97	35	6,699	2,865
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>32.3</i>	<i>11.2</i>	<i>183</i>	<i>63</i>	<i>41.8</i>	<i>7.0</i>	<i>84</i>	<i>66</i>	<i>113.0</i>	<i>5.4</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>21,318</i>	<i>3,794</i>
Mountain Village	2	2	0.0	0.0	35	10	21.4	9.1	71	22	49.6	9.7	32	30	91.7	3.2	1	1	0.0	-	141	65	7,204	1,495
Pitkas Point	2	2	0.0	0.0	7	5	6.6	3.1	13	12	42.6	4.1	5	4	78.8	9.2	-	-	-	-	27	23	994	144
St. Mary's	1	1	82.0	-	21	3	0.0	0.0	73	21	41.0	9.4	24	19	114.8	10.3	-	-	-	-	119	44	5,831	1,430
Pilot Station	4	0	-	-	35	17	14.7	7.4	51	21	37.4	6.2	16	15	67.7	3.4	-	-	-	-	106	53	3,641	839
Marshall	4	1	0.0	-	15	5	42.4	32.2	41	10	16.8	5.9	14	14	60.5	0.0	-	-	-	-	74	30	2,172	1,057
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>9.1</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>17.2</i>	<i>5.6</i>	<i>249</i>	<i>86</i>	<i>38.8</i>	<i>4.2</i>	<i>91</i>	<i>82</i>	<i>88.1</i>	<i>3.0</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>19,842</i>	<i>2,475</i>
Russian Mission	6	6	0.3	0.0	14	4	12.5	10.6	38	13	10.2	3.7	9	9	31.8	0.0	-	-	-	-	67	32	849	398
Holy Cross	3	1	0.0	-	15	9	0.0	0.0	24	12	3.0	1.2	13	11	9.4	1.1	-	-	-	-	55	33	194	64
Shageluk	1	1	30.0	-	8	6	0.0	0.0	17	12	3.5	1.3	3	2	4.5	2.6	-	-	-	-	29	21	103	47
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>3.2</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>4.7</i>	<i>4.0</i>	<i>79</i>	<i>37</i>	<i>6.5</i>	<i>1.8</i>	<i>25</i>	<i>22</i>	<i>16.8</i>	<i>0.7</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>1,146</i>	<i>406</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	7.4	3.7	6	6	5.5	0.0	2	2	25.0	0.0	28	24	135	51
Grayling	2	2	0.0	0.0	5	2	0.0	0.0	33	8	5.1	2.2	5	4	50.8	22.3	1	1	0.0	-	46	17	423	260
Kaltag	2	0	-	-	15	3	0.7	0.6	43	10	0.8	0.4	5	5	0.8	0.0	-	-	-	-	65	18	50	40
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	0.4	0.2	3	3	36.7	0.0	-	-	-	-	80	22	133	21
Koyukuk	9	7	0.0	0.0	11	1	0.0	-	15	5	1.6	1.3	3	2	0.0	0.0	3	3	328.0	0.0	41	18	1,378	52
Galena	7	6	2.0	0.8	79	17	0.0	0.0	69	20	14.2	8.8	6	6	71.3	0.0	1	1	300.0	-	162	50	1,718	1,191
Ruby	-	-	-	-	40	11	0.1	0.1	14	5	6.0	4.8	1	1	12.0	-	2	2	251.5	0.0	57	19	603	132
Huslia	3	0	-	-	49	15	16.7	13.9	17	5	30.0	25.2	4	4	156.3	0.0	2	2	250.0	0.0	75	26	2,554	1,641
Hughes	-	-	-	-	14	11	4.5	2.1	6	5	26.6	6.7	3	3	500.0	0.0	-	-	-	-	23	19	1,723	98
Allakaket	2	0	-	-	32	8	5.0	4.3	7	4	125.0	81.8	3	3	74.3	0.0	3	3	1152.0	0.0	47	18	4,924	1,206
Alatna	1	1	30.0	-	4	3	3.3	1.7	2	1	60.0	-	-	-	-	-	-	-	-	-	7	5	163	13
Bettles	3	1	2.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	6	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>2.1</i>	<i>0.2</i>	<i>296</i>	<i>100</i>	<i>3.7</i>	<i>2.4</i>	<i>271</i>	<i>84</i>	<i>11.2</i>	<i>3.5</i>	<i>39</i>	<i>37</i>	<i>81.8</i>	<i>2.9</i>	<i>14</i>	<i>14</i>	<i>413.8</i>	<i>0.0</i>	<i>651</i>	<i>253</i>	<i>13,810</i>	<i>2,381</i>

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Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)	
Tanana	7	4	0.0	0.0	43	20	0.0	0.0	28	10	0.0	0.0	9	6	1.8	0.7	11	11	422.5	0.0	98	51	4,665	12						
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.3	0.1	3	3	0.7	0.0	-	-	-	-	21	15	6	2						
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0	0						
Beaver	1	1	0.0	-	13	11	0.3	0.1	8	7	0.9	0.3	5	5	2.4	0.0	-	-	-	-	27	24	22	5						
Fort Yukon	18	4	0.0	0.0	101	25	0.0	0.0	34	12	1.7	1.3	6	6	0.0	0.0	12	11	18.2	5.2	171	58	275	152						
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	9.7	8.6	3	3	0.0	0.0	-	-	-	-	58	15	143	248						
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0	0						
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.0</i>	<i>0.0</i>	<i>103</i>	<i>47</i>	<i>2.0</i>	<i>1.2</i>	<i>27</i>	<i>23</i>	<i>1.2</i>	<i>0.2</i>	<i>23</i>	<i>22</i>	<i>211.6</i>	<i>2.7</i>	<i>418</i>	<i>195</i>	<i>5,111</i>	<i>291</i>						
Survey Totals	111	52	2.3	0.3	882	315	8.8	1.9	1,025	357	27.1	2.2	310	270	85.3	1.9	38	37	280.5	1.7	2,366	1,031	73,900	5,678						

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A3.–Estimated fall chum salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total	Est	CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	5	3	0.0	0.0	70	13	0.0	0.0	100	30	0.4	0.2	29	25	0.2	0.0	-	-	-	-	204	71	41	31
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	2.3	1.4	15	15	0.6	0.0	-	-	-	-	80	33	101	110
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0.0</i>	<i>0.0</i>	<i>94</i>	<i>20</i>	<i>0.0</i>	<i>0.0</i>	<i>140</i>	<i>40</i>	<i>0.9</i>	<i>0.4</i>	<i>44</i>	<i>40</i>	<i>0.3</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>142</i>	<i>114</i>
Nunam Iqua	1	0	-	-	12	10	1.0	0.4	8	6	2.0	0.7	10	10	1.2	0.0	-	-	-	-	31	26	41	16
Alakanuk	2	0	-	-	36	11	0.0	0.0	56	18	0.8	0.5	23	17	2.5	0.7	-	-	-	-	117	46	107	65
Emmonak	4	1	0.0	-	47	22	0.1	0.1	66	26	8.2	3.5	33	22	29.2	10.5	-	-	-	-	150	71	1,505	814
Kotlik	3	0	-	-	23	5	0.0	0.0	53	13	1.9	1.7	18	17	0.0	0.0	-	-	-	-	97	35	105	179
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>0.1</i>	<i>0.0</i>	<i>183</i>	<i>63</i>	<i>3.8</i>	<i>1.4</i>	<i>84</i>	<i>66</i>	<i>12.3</i>	<i>4.1</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>1,758</i>	<i>836</i>
Mountain Village	2	2	0.0	0.0	35	10	0.0	0.0	71	22	4.4	3.1	32	30	8.7	1.5	1	1	0.0	-	141	65	591	446
Pitkas Point	2	2	0.0	0.0	7	5	0.0	0.0	13	12	0.1	0.0	5	4	15.0	6.7	-	-	-	-	27	23	76	66
St. Mary's	1	1	0.0	-	21	3	0.0	0.0	73	21	0.6	0.4	24	19	2.5	0.7	-	-	-	-	119	44	106	61
Pilot Station	4	0	-	-	35	17	0.0	0.0	51	21	0.1	0.1	16	15	0.0	0.0	-	-	-	-	106	53	5	8
Marshall	4	1	0.0	-	15	5	0.0	0.0	41	10	0.6	0.5	14	14	11.8	0.0	-	-	-	-	74	30	190	42
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>0.0</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>0.0</i>	<i>0.0</i>	<i>249</i>	<i>86</i>	<i>1.6</i>	<i>0.9</i>	<i>91</i>	<i>82</i>	<i>6.4</i>	<i>0.7</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>968</i>	<i>457</i>
Russian Mission	6	6	0.0	0.0	14	4	1.8	1.5	38	13	3.7	3.0	9	9	4.4	0.0	-	-	-	-	67	32	205	227
Holy Cross	3	1	0.0	-	15	9	1.4	0.9	24	12	11.7	6.1	13	11	25.0	4.7	-	-	-	-	55	33	627	314
Shageluk	1	1	3.0	-	8	6	2.5	1.3	17	12	4.8	2.1	3	2	0.0	0.0	-	-	-	-	29	21	105	72
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>0.3</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>1.8</i>	<i>0.7</i>	<i>79</i>	<i>37</i>	<i>6.4</i>	<i>2.4</i>	<i>25</i>	<i>22</i>	<i>14.6</i>	<i>2.4</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>937</i>	<i>394</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	9.6	2.3	6	6	9.8	0.0	2	2	25.0	0.0	28	24	176	31
Grayling	2	2	1.0	0.0	5	2	0.0	0.0	33	8	0.0	0.0	5	4	97.5	37.9	1	1	0.0	-	46	17	490	371
Kaltag	2	0	-	-	15	3	0.0	0.0	43	10	4.0	1.9	5	5	4.4	0.0	-	-	-	-	65	18	200	168
Nulato	-	-	-	-	20	4	0.0	0.0	57	14	9.4	3.9	3	3	6.3	0.0	-	-	-	-	80	21	552	436
Koyukuk	9	7	1.4	0.7	11	1	0.0	-	15	5	0.0	0.0	3	2	8.0	1.7	3	3	128.7	0.0	41	18	578	21
Galena	7	6	0.0	0.0	79	17	0.0	0.0	69	20	39.0	29.4	6	6	102.5	0.0	1	1	1000.0	-	162	50	4,306	3,975
Ruby	-	-	-	-	40	11	0.0	0.0	14	5	9.6	5.0	1	1	0.0	-	2	1	0.0	-	57	18	134	136
Huslia	3	0	-	-	49	15	0.0	0.0	17	5	0.0	0.0	4	4	20.0	0.0	2	2	1.5	0.0	75	26	86	0
Hughes	-	-	-	-	14	11	3.4	1.6	6	5	15.0	3.9	3	3	50.3	0.0	-	-	-	-	23	19	288	62
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	0.0	0.0	3	3	182.7	0.0	47	18	572	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	0.0	-	-	-	-	-	-	-	-	-	7	5	0	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>0.6</i>	<i>0.3</i>	<i>296</i>	<i>100</i>	<i>0.2</i>	<i>0.1</i>	<i>271</i>	<i>83</i>	<i>13.6</i>	<i>7.5</i>	<i>39</i>	<i>37</i>	<i>37.4</i>	<i>4.9</i>	<i>14</i>	<i>13</i>	<i>141.9</i>	<i>0.0</i>	<i>651</i>	<i>251</i>	<i>7,382</i>	<i>4,022</i>

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Appendix A3.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)	
Tanana	7	4	0.3	0.2	43	20	0.0	0.0	28	10	3.0	2.4	9	6	20.7	6.0	11	11	1756.6	0.0	98	51	19,595		169					
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.0	0.0	3	3	200.0	0.0	-	-	-	-	21	15	600		0					
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0		0					
Beaver	1	1	0.0	-	13	11	0.0	0.0	8	7	15.0	5.3	5	5	0.0	0.0	-	-	-	-	27	24	120		83					
Fort Yukon	18	4	0.0	0.0	101	25	2.0	1.7	34	12	2.0	1.6	6	6	0.0	0.0	12	11	213.3	35.4	171	58	2,829		906					
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	100.0	88.6	3	3	283.3	0.0	-	-	-	-	58	15	2,373		2,565					
Chalkyitsik	4	1	0.0	-	18	16	0.2	0.1	4	3	10.0	5.0	1	0	-	-	-	-	-	-	27	20	45		41					
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.9</i>	<i>0.8</i>	<i>103</i>	<i>47</i>	<i>16.6</i>	<i>12.1</i>	<i>27</i>	<i>23</i>	<i>62.9</i>	<i>2.1</i>	<i>23</i>	<i>22</i>	<i>951.4</i>	<i>18.4</i>	<i>418</i>	<i>195</i>	<i>25,562</i>		<i>2,727</i>					
Survey Totals	111	52	0.2	0.1	882	315	0.4	0.2	1,025	356	6.9	2.4	310	270	16.5	1.3	38	36	628.1	11.2	2,366	1,029	36,749		4,969					

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A4.—Estimated coho salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	5	3	1.3	0.8	70	13	0.0	0.0	100	30	0.1	0.1	29	25	0.2	0.1	-	-	-	-	204	71	24	19
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	4.5	2.6	15	15	2.8	0.0	-	-	-	-	80	33	222	205
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>1.1</i>	<i>0.7</i>	<i>94</i>	<i>20</i>	<i>0.0</i>	<i>0.0</i>	<i>140</i>	<i>40</i>	<i>1.4</i>	<i>0.8</i>	<i>44</i>	<i>40</i>	<i>1.1</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>246</i>	<i>206</i>
Nunam Iqua	1	0	-	-	12	10	1.4	0.4	8	6	1.7	0.8	10	10	3.9	0.0	-	-	-	-	31	26	71	17
Alakanuk	2	0	-	-	36	11	0.4	0.3	56	18	1.4	0.9	23	17	3.8	1.5	-	-	-	-	117	46	185	126
Emmonak	4	1	0.0	-	47	22	0.0	0.0	66	26	0.4	0.2	33	22	8.9	5.1	-	-	-	-	150	71	318	329
Kotlik	3	0	-	-	23	5	0.0	0.0	53	13	1.9	1.7	18	17	0.1	0.0	-	-	-	-	97	35	107	179
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>0.3</i>	<i>0.1</i>	<i>183</i>	<i>63</i>	<i>1.2</i>	<i>0.6</i>	<i>84</i>	<i>66</i>	<i>5.0</i>	<i>2.0</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>681</i>	<i>395</i>
Mountain Village	2	2	0.0	0.0	35	10	0.0	0.0	71	22	1.3	0.8	32	30	3.4	0.4	1	1	0.0	-	141	65	203	110
Pitkas Point	2	2	0.0	0.0	7	5	0.0	0.0	13	12	0.1	0.0	5	4	8.8	3.9	-	-	-	-	27	23	45	38
St. Mary's	1	1	0.0	-	21	3	0.0	0.0	73	21	1.8	0.9	24	19	0.9	0.2	-	-	-	-	119	44	151	129
Pilot Station	4	0	-	-	35	17	0.0	0.0	51	21	0.0	0.0	16	15	0.0	0.0	-	-	-	-	106	53	0	0
Marshall	4	1	0.0	-	15	5	0.0	0.0	41	10	3.3	2.6	14	14	7.9	0.0	-	-	-	-	74	30	245	208
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>0.0</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>0.0</i>	<i>0.0</i>	<i>249</i>	<i>86</i>	<i>1.4</i>	<i>0.5</i>	<i>91</i>	<i>82</i>	<i>3.1</i>	<i>0.3</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>644</i>	<i>271</i>
Russian Mission	6	6	0.0	0.0	14	4	1.8	1.5	38	13	0.3	0.2	9	9	6.7	0.0	-	-	-	-	67	32	96	45
Holy Cross	3	1	0.0	-	15	9	0.0	0.0	24	12	2.3	1.6	13	11	5.1	0.9	-	-	-	-	55	33	120	78
Shageluk	1	1	60.0	-	8	6	0.0	0.0	17	12	2.7	1.0	3	2	0.0	0.0	-	-	-	-	29	21	105	33
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>6.0</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>0.7</i>	<i>0.6</i>	<i>79</i>	<i>37</i>	<i>1.4</i>	<i>0.5</i>	<i>25</i>	<i>22</i>	<i>5.0</i>	<i>0.5</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>321</i>	<i>96</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	3.0	1.6	6	6	15.2	0.0	2	2	12.5	0.0	28	24	137	22
Grayling	2	2	0.0	0.0	5	2	0.0	0.0	33	8	3.4	2.2	5	4	41.3	16.3	1	1	0.0	-	46	17	318	214
Kaltag	2	0	-	-	15	3	0.0	0.0	43	10	0.9	0.5	5	5	0.0	0.0	-	-	-	-	65	18	40	46
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	1.3	1.1	3	3	31.7	0.0	-	-	-	-	80	22	171	128
Koyukuk	9	7	0.0	0.0	11	1	0.0	-	15	5	0.0	0.0	3	2	0.0	0.0	3	3	48.3	0.0	41	18	198	0
Galena	7	6	0.0	0.0	79	17	0.0	0.0	69	20	26.0	21.0	6	6	87.0	0.0	1	1	40.0	-	162	50	2,353	2,845
Ruby	-	-	-	-	40	11	0.0	0.0	14	5	1.0	0.5	1	1	0.0	-	2	2	150.0	0.0	57	19	314	14
Huslia	3	0	-	-	49	15	0.0	0.0	17	5	0.0	0.0	4	4	77.5	0.0	2	2	0.0	0.0	75	26	323	0
Hughes	-	-	-	-	14	11	4.1	1.9	6	5	4.0	1.6	3	3	2.7	0.0	-	-	-	-	23	19	89	55
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	0.0	0.0	3	3	13.7	0.0	47	18	43	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	0.0	-	-	-	-	-	-	-	-	-	7	5	0	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>0.0</i>	<i>0.0</i>	<i>296</i>	<i>100</i>	<i>0.2</i>	<i>0.1</i>	<i>271</i>	<i>84</i>	<i>7.7</i>	<i>5.4</i>	<i>39</i>	<i>37</i>	<i>31.6</i>	<i>2.1</i>	<i>14</i>	<i>14</i>	<i>39.4</i>	<i>0.0</i>	<i>651</i>	<i>253</i>	<i>3,986</i>	<i>2,857</i>

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Appendix A4.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (+/-)	
Tanana	7	4	0.0	0.0	43	20	0.0	0.0	28	10	0.0	0.0	9	6	0.0	0.0	11	11	215.7	0.0	98	51	2,373							0
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.0	0.0	3	3	0.0	0.0	-	-	-	-	21	15	0							0
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0							0
Beaver	1	1	0.0	-	13	11	0.0	0.0	8	7	0.0	0.0	5	5	0.0	0.0	-	-	-	-	27	24	0							0
Fort Yukon	18	4	0.0	0.0	101	25	0.0	0.0	34	12	0.0	0.0	6	6	0.0	0.0	12	11	0.2	0.1	171	58	2							1
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	0.0	0.0	3	3	0.0	0.0	-	-	-	-	58	15	0							0
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0							0
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.0</i>	<i>0.0</i>	<i>103</i>	<i>47</i>	<i>0.0</i>	<i>0.0</i>	<i>27</i>	<i>23</i>	<i>0.0</i>	<i>0.0</i>	<i>23</i>	<i>22</i>	<i>103.3</i>	<i>0.0</i>	<i>418</i>	<i>195</i>	<i>2,375</i>							<i>1</i>
Survey Totals	111	52	0.7	0.0	882	315	0.1	0.0	1,025	357	2.9	1.4	310	270	6.8	0.6	38	37	77.0	0.0	2,366	1,031	8,253							2,906

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A5.—Estimated Chinook salmon subsistence use in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total	Est	CI (95%)	
																					N	n	Total	(+/-)
Hooper Bay	5	3	1.0	0.6	70	13	0.9	0.8	100	30	0.5	0.2	29	25	1.8	0.1	-	-	-	-	204	71	170	119
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	6.9	2.9	15	15	26.9	0.0	-	-	-	-	80	33	679	230
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0.8</i>	<i>0.5</i>	<i>94</i>	<i>20</i>	<i>0.7</i>	<i>0.6</i>	<i>140</i>	<i>40</i>	<i>2.3</i>	<i>0.8</i>	<i>44</i>	<i>40</i>	<i>10.4</i>	<i>0.1</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>849</i>	<i>259</i>
Nunam Iqua	1	0	-	-	12	10	2.0	0.4	8	6	5.7	1.5	10	10	8.0	0.0	-	-	-	-	31	26	154	26
Alakanuk	2	0	-	-	36	11	0.7	0.3	56	18	5.6	1.8	23	17	4.5	0.6	-	-	-	-	117	46	452	207
Emmonak	4	1	0.0	-	47	22	0.7	0.5	66	26	2.9	0.7	33	22	7.9	1.4	-	-	-	-	150	71	482	140
Kotlik	3	0	-	-	23	5	4.8	2.7	53	13	3.5	1.2	18	17	28.2	1.4	-	-	-	-	97	35	832	186
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>1.6</i>	<i>0.6</i>	<i>183</i>	<i>63</i>	<i>4.0</i>	<i>0.7</i>	<i>84</i>	<i>66</i>	<i>11.3</i>	<i>0.7</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>1,920</i>	<i>313</i>
Mountain Village	2	2	0.0	0.0	35	10	3.7	2.5	71	22	7.9	1.3	32	30	17.9	0.6	1	1	0.0	-	141	65	1,262	255
Pitkas Point	2	2	0.0	0.0	7	5	1.0	0.5	13	12	11.3	1.5	5	4	14.8	3.8	-	-	-	-	27	23	228	53
St. Mary's	1	1	106.0	-	21	3	0.0	0.0	73	21	14.3	3.6	24	19	23.7	2.4	-	-	-	-	119	44	1,721	528
Pilot Station	4	0	-	-	35	17	0.4	0.3	51	21	6.3	1.4	16	15	15.9	1.5	-	-	-	-	106	53	612	150
Marshall	4	1	0.0	-	15	5	14.0	8.8	41	10	8.7	4.2	14	14	27.0	0.0	-	-	-	-	74	30	945	423
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>11.8</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>3.2</i>	<i>1.4</i>	<i>249</i>	<i>86</i>	<i>9.8</i>	<i>1.3</i>	<i>91</i>	<i>82</i>	<i>20.3</i>	<i>0.8</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>4,768</i>	<i>740</i>
Russian Mission	6	6	0.2	0.0	14	4	8.0	6.8	38	13	11.9	4.9	9	9	32.1	0.0	-	-	-	-	67	32	855	409
Holy Cross	3	1	118.0	-	15	9	5.0	2.5	24	12	23.0	4.9	13	11	36.0	3.6	-	-	-	-	55	33	1,449	259
Shageluk	1	1	11.0	-	8	6	0.0	0.0	17	12	7.6	2.0	3	2	8.0	4.6	-	-	-	-	29	21	164	73
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>36.6</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>5.1</i>	<i>2.7</i>	<i>79</i>	<i>37</i>	<i>14.4</i>	<i>2.8</i>	<i>25</i>	<i>22</i>	<i>31.2</i>	<i>2.0</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>2,468</i>	<i>490</i>
Anvik	2	1	2.0	-	11	10	0.2	0.1	7	5	38.8	5.6	6	6	28.3	0.0	2	2	60.0	0.0	28	24	568	77
Grayling	2	2	15.5	0.0	5	2	6.0	4.6	33	7	23.1	3.4	5	4	33.5	8.8	1	1	0.0	-	46	16	992	241
Kaltag	2	0	-	-	15	3	9.3	8.3	43	10	36.0	8.8	5	5	39.2	0.0	-	-	-	-	65	18	1,944	809
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	22.3	7.9	3	3	59.0	0.0	-	-	-	-	80	22	1,446	880
Koyukuk	9	7	13.1	5.5	11	1	0.0	-	15	5	20.8	7.5	3	2	12.0	3.5	3	3	26.3	0.0	41	18	745	331
Galena	7	6	0.0	0.0	79	17	1.5	0.9	69	20	12.4	1.9	6	6	22.7	0.0	1	1	35.0	-	162	50	1,139	289
Ruby	-	-	-	-	40	11	0.3	0.2	14	5	7.2	2.1	1	1	7.0	-	2	2	185.0	0.0	57	19	489	61
Huslia	3	0	-	-	49	15	5.7	4.4	17	5	0.2	0.2	4	4	12.3	0.0	2	2	10.0	0.0	75	26	368	443
Hughes	-	-	-	-	14	11	0.4	0.2	6	5	2.4	1.0	3	3	9.0	0.0	-	-	-	-	23	19	46	12
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	2.3	0.0	3	3	17.0	0.0	47	18	61	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	5.0	-	-	-	-	-	-	-	-	-	7	5	10	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>6.4</i>	<i>2.0</i>	<i>296</i>	<i>100</i>	<i>2.1</i>	<i>0.9</i>	<i>271</i>	<i>83</i>	<i>19.0</i>	<i>2.3</i>	<i>39</i>	<i>37</i>	<i>24.9</i>	<i>1.2</i>	<i>14</i>	<i>14</i>	<i>48.2</i>	<i>0.0</i>	<i>651</i>	<i>252</i>	<i>7,808</i>	<i>1,373</i>

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Community	Unknown				Does Not								Combined											
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Est CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Tanana	7	4	0.0	0.0	43	20	1.0	0.7	28	10	17.1	4.7	9	6	33.3	7.1	11	11	88.8	0.0	98	51	1,799	295
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	12.6	2.2	3	3	39.7	0.0	-	-	-	-	21	15	257	47
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	2.3	1.2	-	-	-	-	-	-	-	-	16	12	9	9
Beaver	1	1	30.0	-	13	11	6.0	1.8	8	7	12.1	2.8	5	4	42.8	6.4	-	-	-	-	27	23	419	88
Fort Yukon	18	4	0.0	0.0	101	25	1.4	1.1	34	12	5.3	1.8	6	6	9.7	0.0	12	9	4.9	1.5	171	56	441	243
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	20.0	17.7	3	3	6.7	0.0	-	-	-	-	58	15	316	513
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0	0
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.8</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>1.2</i>	<i>0.5</i>	<i>103</i>	<i>47</i>	<i>11.5</i>	<i>2.8</i>	<i>27</i>	<i>22</i>	<i>27.3</i>	<i>2.7</i>	<i>23</i>	<i>20</i>	<i>45.0</i>	<i>0.8</i>	<i>418</i>	<i>192</i>	<i>3,241</i>	<i>647</i>
Survey Totals	111	52	7.3	0.5	882	315	1.9	0.4	1,025	356	10.7	0.8	310	269	18.5	0.4	38	35	45.0	0.5	2,366	1,027	21,054	1,805

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A6.—Estimated summer chum salmon subsistence use in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined			
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	Total		Est	CI (95%)
																					N	n	Total	(+/-)
Hooper Bay	5	3	8.3	5.3	70	13	6.2	5.6	100	30	50.6	9.5	29	25	89.7	4.8	-	-	-	-	204	71	8,136	2,035
Scammon Bay	1	1	0.0	-	24	7	10.0	8.4	40	10	40.9	14.7	15	15	99.9	0.0	-	-	-	-	80	33	3,375	1,217
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>6.9</i>	<i>4.4</i>	<i>94</i>	<i>20</i>	<i>7.1</i>	<i>4.7</i>	<i>140</i>	<i>40</i>	<i>47.9</i>	<i>8.0</i>	<i>44</i>	<i>40</i>	<i>93.2</i>	<i>3.1</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>11,511</i>	<i>2,371</i>
Nunam Iqua	1	0	-	-	12	10	37.0	8.6	8	6	24.5	9.5	10	10	109.4	0.0	-	-	-	-	31	26	1,792	260
Alakanuk	2	0	-	-	36	11	31.8	15.2	56	18	24.8	7.1	23	17	71.8	7.3	-	-	-	-	117	46	4,261	1,385
Emmonak	4	1	0.0	-	47	22	3.2	2.3	66	26	29.5	7.8	33	22	116.6	11.7	-	-	-	-	150	71	5,946	1,275
Kotlik	3	0	-	-	23	5	68.0	49.8	53	13	50.8	15.6	18	17	93.6	5.1	-	-	-	-	97	35	6,134	2,862
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>28.0</i>	<i>10.8</i>	<i>183</i>	<i>63</i>	<i>34.0</i>	<i>5.7</i>	<i>84</i>	<i>66</i>	<i>98.6</i>	<i>5.1</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>18,133</i>	<i>3,436</i>
Mountain Village	2	2	0.0	0.0	35	10	21.3	9.1	71	22	41.7	7.9	32	30	85.5	2.9	1	1	0.0	-	141	65	6,443	1,274
Pitkas Point	2	2	0.0	0.0	7	5	6.6	3.1	13	12	37.8	3.4	5	4	78.8	9.2	-	-	-	-	27	23	931	132
St. Mary's	1	1	82.0	-	21	3	0.0	0.0	73	21	30.8	6.8	24	19	111.0	10.2	-	-	-	-	119	44	4,992	1,088
Pilot Station	4	0	-	-	35	17	14.7	7.4	51	21	36.8	6.1	16	15	58.5	3.1	-	-	-	-	106	53	3,457	829
Marshall	4	1	0.0	-	15	5	42.4	32.2	41	10	12.5	3.9	14	14	57.1	0.0	-	-	-	-	74	30	1,948	997
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>9.1</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>17.2</i>	<i>5.6</i>	<i>249</i>	<i>86</i>	<i>32.5</i>	<i>3.3</i>	<i>91</i>	<i>82</i>	<i>82.7</i>	<i>3.0</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>17,771</i>	<i>2,123</i>
Russian Mission	6	6	0.3	0.0	14	4	12.0	10.1	38	13	6.9	3.2	9	9	29.7	0.0	-	-	-	-	67	32	700	367
Holy Cross	3	1	0.0	-	15	9	0.0	0.0	24	12	2.7	1.2	13	11	4.3	0.7	-	-	-	-	55	33	120	58
Shageluk	1	1	30.0	-	8	6	0.0	0.0	17	12	3.5	1.3	3	2	4.5	2.6	-	-	-	-	29	21	103	47
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>3.2</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>4.5</i>	<i>3.8</i>	<i>79</i>	<i>37</i>	<i>4.9</i>	<i>1.6</i>	<i>25</i>	<i>22</i>	<i>13.4</i>	<i>0.5</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>923</i>	<i>374</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	7.4	3.7	6	6	5.5	0.0	2	2	25.0	0.0	28	24	135	51
Grayling	2	2	0.0	0.0	5	2	0.0	0.0	33	7	5.0	2.6	5	4	25.8	11.1	1	1	0.0	-	46	16	294	198
Kaltag	2	0	-	-	15	3	0.7	0.6	43	10	0.8	0.4	5	5	0.8	0.0	-	-	-	-	65	18	50	40
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	0.4	0.2	3	3	36.7	0.0	-	-	-	-	80	22	133	21
Koyukuk	9	7	0.0	0.0	11	1	0.0	-	15	5	1.6	1.3	3	2	0.0	0.0	3	3	328.0	0.0	41	18	1,378	52
Galena	7	6	0.0	0.0	79	17	0.0	0.0	69	20	14.2	8.8	6	6	69.0	0.0	1	1	0.0	-	162	50	1,390	1,191
Ruby	-	-	-	-	40	11	0.1	0.1	14	5	6.0	4.8	1	1	12.0	-	2	2	251.5	0.0	57	19	603	132
Huslia	3	0	-	-	49	15	16.0	13.3	17	5	10.0	8.4	4	4	132.5	0.0	2	2	250.0	0.0	75	26	2,067	1,365
Hughes	-	-	-	-	14	11	4.5	2.1	6	5	19.4	5.1	3	3	333.3	0.0	-	-	-	-	23	19	1,180	83
Allakaket	2	0	-	-	32	8	1.3	1.1	7	4	125.0	81.8	3	3	25.0	0.0	3	3	1152.0	0.0	47	18	4,644	1,175
Alatna	1	1	30.0	-	4	3	3.3	1.7	2	1	10.0	-	-	-	-	-	-	-	-	-	7	5	63	13
Bettles	3	1	2.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	6	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>1.5</i>	<i>0.0</i>	<i>296</i>	<i>100</i>	<i>3.2</i>	<i>2.3</i>	<i>271</i>	<i>83</i>	<i>9.4</i>	<i>3.2</i>	<i>39</i>	<i>37</i>	<i>59.1</i>	<i>1.4</i>	<i>14</i>	<i>14</i>	<i>392.4</i>	<i>0.0</i>	<i>651</i>	<i>252</i>	<i>11,943</i>	<i>2,175</i>

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Appendix A6.–Page 2 of 2.

Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (95%)	(+/-)
Tanana	7	4	0.0	0.0	43	20	0.0	0.0	28	10	0.0	0.0	9	6	1.2	0.7	11	11	402.5	0.0	98	51	4,438	12						
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.2	0.1	3	3	0.7	0.0	-	-	-	-	21	15	4	2						
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0	0						
Beaver	1	1	0.0	-	13	11	0.3	0.1	8	7	0.0	0.0	5	5	2.4	0.0	-	-	-	-	27	24	16	3						
Fort Yukon	18	4	0.0	0.0	101	25	0.0	0.0	34	12	0.0	0.0	6	6	0.0	0.0	12	11	18.2	5.2	171	58	218	123						
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	0.0	0.0	3	3	0.0	0.0	-	-	-	-	58	15	0	0						
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0	0						
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.0</i>	<i>0.0</i>	<i>103</i>	<i>47</i>	<i>0.0</i>	<i>0.0</i>	<i>27</i>	<i>23</i>	<i>0.9</i>	<i>0.2</i>	<i>23</i>	<i>22</i>	<i>202.0</i>	<i>2.7</i>	<i>418</i>	<i>195</i>	<i>4,676</i>	<i>124</i>						
Survey Totals	111	52	2.1	0.3	882	315	8.0	1.9	1,025	356	23.4	1.9	310	270	73.1	1.7	38	37	266.8	1.7	2,366	1,030	64,957	5,179						

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95% confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A7.—Estimated fall chum salmon subsistence use in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Est	CI (95%)
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	5	3	0.0	0.0	70	13	0.0	0.0	100	30	0.4	0.2	29	25	0.2	0.0	-	-	-	-	204	71	41	31
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	2.3	1.4	15	15	0.0	0.0	-	-	-	-	80	33	92	110
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>0.0</i>	<i>0.0</i>	<i>94</i>	<i>20</i>	<i>0.0</i>	<i>0.0</i>	<i>140</i>	<i>40</i>	<i>0.9</i>	<i>0.4</i>	<i>44</i>	<i>40</i>	<i>0.1</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>133</i>	<i>114</i>
Nunam Iqua	1	0	-	-	12	10	1.0	0.4	8	6	2.0	0.7	10	10	1.2	0.0	-	-	-	-	31	26	41	16
Alakanuk	2	0	-	-	36	11	0.0	0.0	56	18	0.3	0.2	23	17	2.5	0.7	-	-	-	-	117	46	75	42
Emmonak	4	1	0.0	-	47	22	0.1	0.1	66	26	2.6	1.2	33	22	26.6	9.7	-	-	-	-	150	71	1,056	650
Kotlik	3	0	-	-	23	5	0.0	0.0	53	13	1.9	1.7	18	17	0.0	0.0	-	-	-	-	97	35	105	179
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>0.1</i>	<i>0.0</i>	<i>183</i>	<i>63</i>	<i>1.7</i>	<i>0.7</i>	<i>84</i>	<i>66</i>	<i>11.3</i>	<i>3.8</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>1,277</i>	<i>676</i>
Mountain Village	2	2	0.0	0.0	35	10	0.0	0.0	71	22	4.0	3.1	32	30	8.2	1.5	1	1	0.0	-	141	65	543	445
Pitkas Point	2	2	0.0	0.0	7	5	0.0	0.0	13	12	0.0	0.0	5	4	15.0	6.7	-	-	-	-	27	23	75	66
St. Mary's	1	1	0.0	-	21	3	0.0	0.0	73	21	0.6	0.4	24	19	2.5	0.7	-	-	-	-	119	44	106	61
Pilot Station	4	0	-	-	35	17	0.0	0.0	51	21	0.1	0.1	16	15	0.0	0.0	-	-	-	-	106	53	5	8
Marshall	4	1	0.0	-	15	5	0.0	0.0	41	10	0.4	0.3	14	14	11.8	0.0	-	-	-	-	74	30	181	28
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>0.0</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>0.0</i>	<i>0.0</i>	<i>249</i>	<i>86</i>	<i>1.4</i>	<i>0.9</i>	<i>91</i>	<i>82</i>	<i>6.2</i>	<i>0.7</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>910</i>	<i>455</i>
Russian Mission	6	6	0.0	0.0	14	4	1.8	1.5	38	13	3.7	3.0	9	9	4.4	0.0	-	-	-	-	67	32	205	227
Holy Cross	3	1	0.0	-	15	9	1.4	0.9	24	12	11.7	6.1	13	11	22.5	4.7	-	-	-	-	55	33	595	314
Shageluk	1	1	3.0	-	8	6	2.5	1.3	17	12	4.8	2.1	3	2	0.0	0.0	-	-	-	-	29	21	105	72
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>0.3</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>1.8</i>	<i>0.7</i>	<i>79</i>	<i>37</i>	<i>6.4</i>	<i>2.4</i>	<i>25</i>	<i>22</i>	<i>13.3</i>	<i>2.4</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>905</i>	<i>394</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	9.6	2.3	6	6	7.5	0.0	2	2	25.0	0.0	28	24	162	31
Grayling	2	2	1.0	0.0	5	2	0.0	0.0	33	8	0.0	0.0	5	4	97.5	37.9	1	1	0.0	-	46	17	490	371
Kaltag	2	0	-	-	15	3	0.0	0.0	43	10	4.0	1.9	5	5	4.4	0.0	-	-	-	-	65	18	200	168
Nulato	-	-	-	-	20	4	0.0	0.0	57	14	9.4	3.9	3	3	6.3	0.0	-	-	-	-	80	21	552	436
Koyukuk	9	7	1.4	0.7	11	1	0.0	-	15	5	0.0	0.0	3	2	8.0	1.7	3	3	128.7	0.0	41	18	578	21
Galena	7	6	0.0	0.0	79	17	0.0	0.0	69	20	39.0	29.4	6	6	87.5	0.0	1	1	500.0	-	162	50	3,716	3,975
Ruby	-	-	-	-	40	11	0.0	0.0	14	5	9.6	5.0	1	1	0.0	-	2	1	0.0	-	57	18	134	136
Huslia	3	0	-	-	49	15	0.0	0.0	17	5	0.0	0.0	4	4	20.0	0.0	2	2	1.5	0.0	75	26	86	0
Hughes	-	-	-	-	14	11	3.4	1.6	6	5	10.6	2.7	3	3	50.3	0.0	-	-	-	-	23	19	262	53
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	0.0	0.0	3	3	182.7	0.0	47	18	572	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	0.0	-	-	-	-	-	-	-	-	-	7	5	0	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>0.6</i>	<i>0.3</i>	<i>296</i>	<i>100</i>	<i>0.2</i>	<i>0.1</i>	<i>271</i>	<i>83</i>	<i>13.5</i>	<i>7.5</i>	<i>39</i>	<i>37</i>	<i>34.7</i>	<i>4.9</i>	<i>14</i>	<i>13</i>	<i>106.2</i>	<i>0.0</i>	<i>651</i>	<i>251</i>	<i>6,752</i>	<i>4,022</i>

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Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total		Est CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Tanana	7	4	0.3	0.2	43	20	0.0	0.0	28	10	1.0	0.8	9	6	4.3	1.8	11	11	1661.2	0.0	98	51	18,342	55
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.0	0.0	3	3	200.0	0.0	-	-	-	-	21	15	600	0
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0	0
Beaver	1	1	0.0	-	13	11	0.0	0.0	8	7	15.0	5.3	5	5	0.0	0.0	-	-	-	-	27	24	120	83
Fort Yukon	18	4	0.0	0.0	101	25	2.0	1.7	34	12	2.0	1.6	6	6	0.0	0.0	12	11	162.5	26.6	171	58	2,221	723
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	100.0	88.6	3	3	283.3	0.0	-	-	-	-	58	15	2,373	2,565
Chalkyitsik	4	1	0.0	-	18	16	0.2	0.1	4	3	10.0	5.0	1	0	-	-	-	-	-	-	27	20	45	41
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.9</i>	<i>0.8</i>	<i>103</i>	<i>47</i>	<i>16.1</i>	<i>12.1</i>	<i>27</i>	<i>23</i>	<i>57.3</i>	<i>0.6</i>	<i>23</i>	<i>22</i>	<i>879.3</i>	<i>13.9</i>	<i>418</i>	<i>195</i>	<i>23,701</i>	<i>2,667</i>
Survey Totals	111	52	0.2	0.1	882	315	0.4	0.2	1,025	356	6.4	2.4	310	270	15.2	1.2	38	36	571.3	8.4	2,366	1,029	33,678	4,912

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95 % confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A8.—Estimated coho salmon subsistence use in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2009.

Community	Does Not																Combined							
	Unknown				Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Total	Est	CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	(+/-)
Hooper Bay	5	3	1.3	0.8	70	13	0.0	0.0	100	30	0.1	0.1	29	25	0.1	0.0	-	-	-	-	204	71	20	18
Scammon Bay	1	1	0.0	-	24	7	0.0	0.0	40	10	4.5	2.6	15	15	2.8	0.0	-	-	-	-	80	33	222	205
<i>Coastal District</i>	<i>6</i>	<i>4</i>	<i>1.1</i>	<i>0.7</i>	<i>94</i>	<i>20</i>	<i>0.0</i>	<i>0.0</i>	<i>140</i>	<i>40</i>	<i>1.4</i>	<i>0.8</i>	<i>44</i>	<i>40</i>	<i>1.0</i>	<i>0.0</i>	-	-	-	-	<i>284</i>	<i>104</i>	<i>242</i>	<i>206</i>
Nunam Iqua	1	0	-	-	12	10	1.0	0.4	8	6	1.2	0.6	10	10	3.9	0.0	-	-	-	-	31	26	62	14
Alakanuk	2	0	-	-	36	11	0.2	0.2	56	18	0.4	0.2	23	17	3.8	1.5	-	-	-	-	117	46	121	73
Emmonak	4	1	0.0	-	47	22	0.0	0.0	66	26	0.4	0.2	33	22	8.9	5.1	-	-	-	-	150	71	318	329
Kotlik	3	0	-	-	23	5	0.0	0.0	53	13	1.9	1.7	18	17	0.1	0.0	-	-	-	-	97	35	107	179
<i>District 1</i>	<i>10</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>118</i>	<i>48</i>	<i>0.2</i>	<i>0.1</i>	<i>183</i>	<i>63</i>	<i>0.9</i>	<i>0.5</i>	<i>84</i>	<i>66</i>	<i>5.0</i>	<i>2.0</i>	-	-	-	-	<i>395</i>	<i>178</i>	<i>608</i>	<i>382</i>
Mountain Village	2	2	0.0	0.0	35	10	0.0	0.0	71	22	1.2	0.7	32	30	3.2	0.3	1	1	0.0	-	141	65	190	99
Pitkas Point	2	2	0.0	0.0	7	5	0.0	0.0	13	12	0.0	0.0	5	4	8.8	3.9	-	-	-	-	27	23	44	38
St. Mary's	1	1	0.0	-	21	3	0.0	0.0	73	21	1.3	0.7	24	19	0.9	0.2	-	-	-	-	119	44	117	103
Pilot Station	4	0	-	-	35	17	0.0	0.0	51	21	0.0	0.0	16	15	0.0	0.0	-	-	-	-	106	53	0	0
Marshall	4	1	0.0	-	15	5	0.0	0.0	41	10	1.7	1.3	14	14	7.9	0.0	-	-	-	-	74	30	180	104
<i>District 2</i>	<i>13</i>	<i>6</i>	<i>0.0</i>	<i>0.0</i>	<i>113</i>	<i>40</i>	<i>0.0</i>	<i>0.0</i>	<i>249</i>	<i>86</i>	<i>1.0</i>	<i>0.4</i>	<i>91</i>	<i>82</i>	<i>3.1</i>	<i>0.3</i>	<i>1</i>	<i>1</i>	<i>0.0</i>	<i>-</i>	<i>467</i>	<i>215</i>	<i>531</i>	<i>181</i>
Russian Mission	6	6	0.0	0.0	14	4	1.8	1.5	38	13	0.3	0.2	9	9	6.7	0.0	-	-	-	-	67	32	96	45
Holy Cross	3	1	0.0	-	15	9	0.0	0.0	24	12	2.3	1.6	13	11	3.4	0.8	-	-	-	-	55	33	98	78
Shageluk	1	1	60.0	-	8	6	0.0	0.0	17	12	2.7	1.0	3	2	0.0	0.0	-	-	-	-	29	21	105	33
<i>District 3</i>	<i>10</i>	<i>8</i>	<i>6.0</i>	<i>0.0</i>	<i>37</i>	<i>19</i>	<i>0.7</i>	<i>0.6</i>	<i>79</i>	<i>37</i>	<i>1.4</i>	<i>0.5</i>	<i>25</i>	<i>22</i>	<i>4.1</i>	<i>0.4</i>	-	-	-	-	<i>151</i>	<i>86</i>	<i>299</i>	<i>95</i>
Anvik	2	1	0.0	-	11	10	0.0	0.0	7	5	3.0	1.6	6	6	10.2	0.0	2	2	12.5	0.0	28	24	107	22
Grayling	2	2	0.0	0.0	5	2	0.0	0.0	33	8	3.4	2.2	5	4	41.3	16.3	1	1	0.0	-	46	17	318	214
Kaltag	2	0	-	-	15	3	0.0	0.0	43	10	0.9	0.5	5	5	0.0	0.0	-	-	-	-	65	18	40	46
Nulato	-	-	-	-	20	4	0.0	0.0	57	15	1.3	1.1	3	3	31.7	0.0	-	-	-	-	80	22	171	128
Koyukuk	9	7	0.0	0.0	11	1	0.0	-	15	5	0.0	0.0	3	2	0.0	0.0	3	3	48.3	0.0	41	18	198	0
Galena	7	6	0.0	0.0	79	17	0.0	0.0	69	20	25.8	21.0	6	6	81.7	0.0	1	1	40.0	-	162	50	2,310	2,846
Ruby	-	-	-	-	40	11	0.0	0.0	14	5	1.0	0.5	1	1	0.0	-	2	2	150.0	0.0	57	19	314	14
Huslia	3	0	-	-	49	15	0.0	0.0	17	5	0.0	0.0	4	4	77.5	0.0	2	2	0.0	0.0	75	26	323	0
Hughes	-	-	-	-	14	11	4.1	1.9	6	5	2.0	0.8	3	3	2.7	0.0	-	-	-	-	23	19	77	53
Allakaket	2	0	-	-	32	8	0.0	0.0	7	4	0.0	0.0	3	3	0.0	0.0	3	3	13.7	0.0	47	18	43	0
Alatna	1	1	0.0	-	4	3	0.0	0.0	2	1	0.0	-	-	-	-	-	-	-	-	-	7	5	0	0
Bettles	3	1	0.0	-	16	15	0.0	0.0	1	1	0.0	-	-	-	-	-	-	-	-	-	20	17	0	0
<i>District 4</i>	<i>31</i>	<i>18</i>	<i>0.0</i>	<i>0.0</i>	<i>296</i>	<i>100</i>	<i>0.2</i>	<i>0.1</i>	<i>271</i>	<i>84</i>	<i>7.6</i>	<i>5.4</i>	<i>39</i>	<i>37</i>	<i>30.0</i>	<i>2.1</i>	<i>14</i>	<i>14</i>	<i>39.4</i>	<i>0.0</i>	<i>651</i>	<i>253</i>	<i>3,901</i>	<i>2,858</i>

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Community	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined									
	N		n		Mean		SE		N		n		Mean		SE		N		n		Mean		SE		Total		Est		CI (95%)	
	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Mean	SE	N	n	Total	Est	CI (+/-)	
Tanana	7	4	0.0	0.0	43	20	0.0	0.0	28	10	0.0	0.0	9	6	0.0	0.0	11	11	215.7	0.0	98	51	2,373							0
Stevens Village	2	1	0.0	-	5	2	0.0	0.0	11	9	0.0	0.0	3	3	0.0	0.0	-	-	-	-	21	15	0							0
Birch Creek	6	4	0.0	0.0	6	5	0.0	0.0	4	3	0.0	0.0	-	-	-	-	-	-	-	-	16	12	0							0
Beaver	1	1	0.0	-	13	11	0.0	0.0	8	7	0.0	0.0	5	5	0.0	0.0	-	-	-	-	27	24	0							0
Fort Yukon	18	4	0.0	0.0	101	25	0.0	0.0	34	12	0.0	0.0	6	6	0.0	0.0	12	11	0.2	0.1	171	58	2							1
Venetie	3	0	-	-	38	9	0.0	0.0	14	3	0.0	0.0	3	3	0.0	0.0	-	-	-	-	58	15	0							0
Chalkyitsik	4	1	0.0	-	18	16	0.0	0.0	4	3	0.0	0.0	1	0	-	-	-	-	-	-	27	20	0							0
<i>District 5</i>	<i>41</i>	<i>15</i>	<i>0.0</i>	<i>0.0</i>	<i>224</i>	<i>88</i>	<i>0.0</i>	<i>0.0</i>	<i>103</i>	<i>47</i>	<i>0.0</i>	<i>0.0</i>	<i>27</i>	<i>23</i>	<i>0.0</i>	<i>0.0</i>	<i>23</i>	<i>22</i>	<i>103.3</i>	<i>0.0</i>	<i>418</i>	<i>195</i>	<i>2,375</i>							<i>1</i>
Survey Totals	111	52	0.7	0.0	882	315	0.1	0.0	1,025	357	2.7	1.4	310	270	6.5	0.6	38	37	77.0	0.0	2,366	1,031	7,956							2,898

Note: The total number of households (N), the number of households contacted (n), standard error (SE), and includes 95 % confidence interval, CI (95%). Dashes indicate indefinable values.

Appendix A9.—Estimated number of salmon given away by subsistence fishermen to other subsistence households and corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community			Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
	Total Households	Households Contacted <sup>a</sup>	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	69	45	31	2,948	1,982	583	957	167	273	3,743
Scammon Bay	80	33	56	25	325	228	3	6	6	6	390
<i>Coastal District</i>	<i>284</i>	<i>102</i>	<i>101</i>	<i>39</i>	<i>3,273</i>	<i>1,995</i>	<i>586</i>	<i>957</i>	<i>173</i>	<i>273</i>	<i>4,133</i>
Nunam Iqua	31	27	6	4	234	112	29	15	1	1	270
Alakanuk	117	46	34	28	568	416	30	21	10	12	642
Emmonak	150	70	42	42	411	331	18	19	0	0	471
Kotlik	97	36	98	49	311	182	0	0	8	9	417
<i>District 1</i>	<i>395</i>	<i>179</i>	<i>180</i>	<i>70</i>	<i>1,524</i>	<i>573</i>	<i>77</i>	<i>32</i>	<i>19</i>	<i>15</i>	<i>1,800</i>
Mountain Village	141	64	136	92	423	400	0	0	7	12	566
Pitkas Point	27	22	14	5	12	6	0	0	0	0	26
St. Mary's	119	44	428	264	948	836	64	63	9	9	1,449
Pilot Station	106	52	25	23	386	283	0	0	0	0	411
Marshall	74	30	82	51	53	63	3	5	0	0	138
<i>District 2</i>	<i>467</i>	<i>212</i>	<i>685</i>	<i>286</i>	<i>1,822</i>	<i>971</i>	<i>67</i>	<i>63</i>	<i>16</i>	<i>15</i>	<i>2,590</i>
Russian Mission	67	32	108	41	172	127	26	25	22	25	328
Holy Cross	55	31	219	99	63	70	18	20	0	0	300
Shageluk	29	20	21	14	3	4	37	30	19	19	80
<i>District 3</i>	<i>151</i>	<i>83</i>	<i>348</i>	<i>108</i>	<i>238</i>	<i>146</i>	<i>81</i>	<i>44</i>	<i>41</i>	<i>32</i>	<i>708</i>
Anvik	28	24	63	19	12	5	19	8	6	3	100
Grayling	46	16	47	82	0	0	0	0	0	0	47
Kaltag	65	18	10	12	0	0	0	0	0	0	10
Nulato	80	22	38	28	20	0	8	13	15	0	81
Koyukuk	41	18	21	33	0	0	0	0	0	0	21
Galena	162	48	75	39	200	0	114	99	5	0	394
Ruby	57	18	63	49	112	117	0	0	60	88	235
Huslia	75	25	159	82	4	6	69	90	0	0	232
Hughes	23	19	7	3	43	35	26	21	12	10	88
Allakaket	47	18	33	42	188	42	0	0	0	0	221
Alatna	7	5	4	0	0	0	8	8	4	0	16
Bettles	20	17	2	1	0	0	0	0	0	0	2
<i>District 4</i>	<i>651</i>	<i>248</i>	<i>522</i>	<i>147</i>	<i>579</i>	<i>129</i>	<i>244</i>	<i>137</i>	<i>102</i>	<i>89</i>	<i>1,447</i>

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Community	Total Households	Households Contacted <sup>a</sup>	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Tanana	98	50	166	58	263	337	125	137	0	0	554
Stevens Village	21	14	2	2	0	0	20	0	0	0	22
Birch Creek	16	12	4	3	0	0	7	7	0	0	11
Beaver	27	24	81	13	6	0	0	0	0	0	87
Fort Yukon	171	56	369	186	72	58	374	273	0	0	815
Venetie	58	13	63	58	0	0	11	0	143	253	217
Chalkyitsik	27	19	30	3	0	0	12	10	0	0	42
<i>District 5</i>	<i>418</i>	<i>188</i>	<i>715</i>	<i>204</i>	<i>341</i>	<i>342</i>	<i>549</i>	<i>306</i>	<i>143</i>	<i>253</i>	<i>1,748</i>
Survey Totals	2,366	1,012	2,551	403	7,777	2,325	1,604	1,017	494	385	12,426

<sup>a</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Appendix A10.—Estimated number of salmon given away by commercial fishermen to subsistence households and corresponding confidence intervals (CI) for surveyed communities, Yukon Area, 2009.

Community	Total Households	Households Contacted <sup>a</sup>	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
			Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total	CI (95%) (+/-)	Estimated Total
Hooper Bay	204	71	0	0	0	0	0	0	0	0	0
Scammon Bay	80	33	0	0	0	0	0	0	0	0	0
<i>Coastal District</i>	<i>284</i>	<i>104</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Nunam Iqua	31	27	2	2	1	1	0	1	1	1	4
Alakanuk	117	46	3	3	0	0	0	0	0	0	3
Emmonak	150	71	8	12	0	0	0	0	0	0	8
Kotlik	97	35	0	0	0	0	0	0	0	0	0
<i>District 1</i>	<i>395</i>	<i>179</i>	<i>13</i>	<i>12</i>	<i>1</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>1</i>	<i>15</i>
Mountain Village	141	64	54	47	0	0	0	0	0	0	54
Pitkas Point	27	22	72	32	1	1	0	0	0	0	73
St. Mary's	119	44	71	53	0	0	0	0	0	0	71
Pilot Station	106	52	0	0	0	0	6	3	0	0	6
Marshall	74	30	15	0	0	0	0	0	0	0	15
<i>District 2</i>	<i>467</i>	<i>212</i>	<i>212</i>	<i>78</i>	<i>1</i>	<i>1</i>	<i>6</i>	<i>3</i>	<i>0</i>	<i>0</i>	<i>219</i>
Russian Mission	67	32	0	0	0	0	0	0	0	0	0
Holy Cross	55	31	0	0	0	0	0	0	0	0	0
Shageluk	29	21	0	0	0	0	0	0	0	0	0
<i>District 3</i>	<i>151</i>	<i>84</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Anvik	28	24	18	19	2,474	318	0	0	0	0	2,492
Grayling	46	17	0	0	825	548	0	0	0	0	825
Kaltag	65	18	0	0	0	0	0	0	0	0	0
Nulato	80	22	0	0	0	0	0	0	0	0	0
Koyukuk	41	18	0	0	0	0	0	0	0	0	0
Galena	162	48	0	0	0	0	0	0	1	0	1
Ruby	57	18	0	0	0	0	0	0	0	0	0
Huslia	75	21	0	0	0	0	0	0	0	0	0
Hughes	23	19	0	0	0	0	0	0	0	0	0
Allakaket	47	18	0	0	0	0	0	0	0	0	0
Alatna	7	5	0	0	0	0	0	0	0	0	0
Bettles	20	17	0	0	0	0	0	0	0	0	0
<i>District 4</i>	<i>651</i>	<i>245</i>	<i>18</i>	<i>19</i>	<i>3,299</i>	<i>634</i>	<i>0</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>3,318</i>

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Community			Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Total Salmon
	Total	Households	Estimated	CI (95%)	Estimated	CI (95%)	Estimated	CI (95%)	Estimated	CI (95%)	Estimated
	Households	Contacted <sup>a</sup>	Total	(+/-)	Total	(+/-)	Total	(+/-)	Total	(+/-)	Total
Tanana	98	50	0	0	0	0	0	0	0	0	0
Stevens Village	21	15	0	0	0	0	0	0	0	0	0
Birch Creek	16	12	0	0	0	0	0	0	0	0	0
Beaver	27	24	0	0	0	0	0	0	0	0	0
Fort Yukon	171	56	0	0	0	0	0	0	0	0	0
Venetie	58	13	0	0	0	0	0	0	0	0	0
Chalkyitsik	27	19	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>418</i>	<i>189</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>
Survey Totals	2,366	1,013	243	82	3,301	634	6	3	2	1	3,552

<sup>a</sup> The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted for a given species.

Appendix A11.—Estimated number of salmon provided to communities for subsistence use by test fish programs, Yukon Area, 2009.

Yukon River Test Fishery Sites	Community where fish were distributed	Chinook Salmon	Summer Chum Salmon	Fall Chum Salmon	Coho Salmon	Total Salmon
Lower Yukon Test Fish Gillnet (LYTF) <sup>a</sup>	Alakanuk	123	151	9	9	292
	Emmonak <sup>b</sup>	1,036	1,700	84	83	2,903
	Hooper Bay	2	110	0	0	112
	Kotlik	546	829	66	74	1,515
	Scammon Bay	1	14	16	0	31
LYTF Project Subtotal:		<i>1,708</i>	<i>2,804</i>	<i>175</i>	<i>166</i>	<i>4,853</i>
Mountain Village Test Fish Drift Gillnet	Mountain Village	2	0	335	210	547
Pilot Station Sonar Test Fish Drift Gillnet	Pilot Station	507	1,247	260	203	2,217
Eagle Sonar Test Fish Gillnet	Eagle	16	0	4	0	20
Test Fish Totals		2,233	4,051	774	579	7,637

<sup>a</sup> Includes both set and drift gillnet test fish catches.

<sup>b</sup> Includes salmon caught by the Lower Yukon mesh size study.

Appendix A12.–Salmon reported lost in surveyed communities due to sick fish, weather, predators, and unknown causes, Yukon Area, 2009.

Reasons Given For Salmon Lost	Chinook Salmon		Summer Chum Salmon		Fall Chum Salmon		Coho Salmon		Pink Salmon		Total Reported Salmon Lost		
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
<i>LOST DUE TO SICK FISH</i>													
<i>Ichthyophonus h.</i>	8	13.6%	6	1.4%	0	0.0%	0	0.0%	0	0.0%	14	2.8%	
Cuts, bruises, rotten	6	10.2%	17	4.0%	0	0.0%	0	0.0%	0	0.0%	23	4.6%	
Worms, pus, parasites	10	16.9%	21	5.0%	12	52.2%	0	0.0%	0	0.0%	43	8.6%	
<i>Subtotal</i>	<i>24</i>	<i>40.7%</i>	<i>44</i>	<i>10.5%</i>	<i>12</i>	<i>52.2%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>80</i>	<i>15.9%</i>	
<i>LOST DUE TO WEATHER / SPOILAGE</i>													
Spoilage, loss of freezer	12	20.3%	35	8.3%	1	4.3%	0	0.0%	0	0.0%	48	9.6%	
Rain/Bad Weather	9	15.3%	0	0.0%	10	43.5%	0	0.0%	0	0.0%	19	3.8%	
Insects	0	0.0%	16	3.8%	0	0.0%	0	0.0%	0	0.0%	16	3.2%	
<i>Subtotal</i>	<i>21</i>	<i>35.6%</i>	<i>51</i>	<i>12.1%</i>	<i>11</i>	<i>47.8%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>83</i>	<i>16.5%</i>	
<i>LOST DUE TO ANIMALS</i>													
Bears	8	13.6%	180	42.9%	0	0.0%	0	0.0%	0	0.0%	188	37.5%	
Birds	2	3.4%	25	6.0%	0	0.0%	0	0.0%	0	0.0%	27	5.4%	
<i>Subtotal</i>	<i>10</i>	<i>16.9%</i>	<i>205</i>	<i>48.8%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>215</i>	<i>42.8%</i>	
<i>LOST UNKNOWN</i>	<i>Subtotal</i>	<i>4</i>	<i>6.8%</i>	<i>120</i>	<i>28.6%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>0</i>	<i>0.0%</i>	<i>124</i>	<i>24.7%</i>
<i>SALMON REPORTED LOST</i>	<i>Total</i>	<i>59</i>		<i>420</i>		<i>23</i>		<i>0</i>		<i>0</i>		<i>502</i>	
<i>Use of Lost salmon</i>													
Salmon Fed to Dogs <sup>a</sup>	9	1.8%	23	4.6%	0	0.0%	0	0.0%	0	0.0%	32	6.4%	
Salmon Lost to Humans and Dogs <sup>b</sup>	50	10.0%	397	79.1%	23	4.6%	0	0.0%	0	0.0%	470	93.6%	
Total Salmon Lost <sup>c</sup>	59	11.8%	420	83.7%	23	4.6%	0	0.0%	0	0.0%	502	100.0%	

<sup>a</sup> Salmon unfit for human consumption, but reported retained for dog food.

<sup>b</sup> Salmon lost and unfit for human consumptions and for dog food.

<sup>c</sup> A total of 74 surveyed households reported losing salmon.

Appendix A13.—Subsistence salmon fishing period reductions and gear restrictions, Yukon Area, 2009.

	District 1 <sup>a</sup>	District 2	District 3 <sup>b</sup>	Subdistrict 4-A <sup>b</sup>	Subdistrict 4-B/4-C	Subdistricts 5-A, B, C	Subdistrict 5-D Lower <sup>c</sup>	Subdistrict 5-D Upper <sup>d</sup>
6/8	18-hr Period							
6/9	all mesh							
6/10	Closed	18-hr Period						
6/11	18-hr Period	all mesh						
6/12	all mesh	Closed						
6/13	Closed	Closed						
6/14	Closed	18-hr Period	18-hr Period					
6/15	1st Pulse	all mesh	all mesh					
6/16	Closure	Closed	Closed					
6/17	Closed	1st Pulse	18-hr Period	24-hr Period				
6/18	1st Pulse	Closure	all mesh	Close 6 p.m.				
6/19	Closure	Closed	Closed	Closed				
6/20	Closed	Closed	Closed	Closed				
6/21	Closed	1st Pulse	1st Pulse	24-hr Period				
6/22	18-hr Period	Closure	Closure	Close 6 p.m.				
6/23	6" mesh	Closed	Closed	Closed				
6/24	Closed	18-hr Period	1st Pulse	1st Pulse	24-hr Period			
6/25	18-hr Period	6" mesh	Closure	Closure	Close 6 p.m.			
6/26	6" mesh	Closed	Closed	Closed	Closed			
6/27	Closed	Closed	Closed	Closed	Closed			
6/28	Closed	18-hr Period	18-hr Period	1st Pulse	24-hr Period			
6/29	18-hr Period	6" mesh	6" mesh	Closure	Close 6 p.m.			
6/30	6" mesh	Closed	Closed	Closed	Closed	24-hr Period		
7/1	Closed	18-hr Period	18-hr Period	24-hr Period	1st Pulse	Close 6 p.m.		
7/2	18-hr Period	6" mesh	all mesh	Close 6 p.m.	Closure	Closed		
7/3	all mesh	Closed	Closed	Closed	Closed	24-hr Period		
7/4	Closed	Closed	Closed	Closed	1st Pulse	Close 6 p.m.		
7/5	Closed	18-hr Period	18-hr Period	36-hr Period	Closure	Closed		
7/6	18-hr Period	all mesh	all mesh		Closed	Closed	84-hr Period	
7/7	all mesh	Closed	Closed	Close 6 a.m.	Closed	1st Pulse		
7/8	Closed	18-hr Period	18-hr Period	24-hr Period	24-hr Period	Closure		
7/9	18-hr Period	all mesh	all mesh	Close 6 p.m.	Close 6 p.m.	Closed	Close 6 a.m.	
7/10	all mesh	Closed	Closed	Closed	Closed	1st Pulse	Closed	
7/11	Closed	Closed	Closed	Closed	Closed	Closure	Closed	
7/12	Closed	18-hr Period	18-hr Period	24-hr Period	24-hr Period	Closed		
7/13	18-hr Period	all mesh	all mesh	Close 6 p.m.	Close 6 p.m.	Closed	1st Pulse	84-hr Period
7/14	all mesh	Open 9 a.m.	Open	Closed	Closed	24-hr Period		
7/15	Closed	Open	7 days/week	24-hr Period	24-hr Period	Close 6 p.m.	Closure	
7/16	Open	Closed 3 a.m.		Close 6 p.m.	Close 6 p.m.	Closed		Close 6 a.m.
7/17	7 days/week	Open		Closed	Closed	24-hr Period	Closed	Closed
7/18		7 days/week		Closed	Closed	Close 6 p.m.	Closed	Closed
7/19				Open	24-hr Period	Closed		
7/20				7 days/week	Close 6 p.m.	Closed	84-hr Period	1st Pulse
7/21					Open	24-hr Period		
7/22					7 days/week	Close 6 p.m.		Closure
7/23						Closed	Close 6 a.m.	
7/24						24-hr Period	Closed	Closed
7/25						Close 6 p.m.	Closed	Closed
7/26						Closed	Open 6 p.m.	Open 6 p.m.
7/27						Closed	open	open

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	District 1 <sup>a</sup>	District 2	District 3 <sup>b</sup>	District 4 <sup>b</sup>	Subdistricts 5-A, B, C	Subdistrict 5-D Lower <sup>c</sup>	Subdistrict 5-D Upper <sup>d</sup>
8/15	Open	Open	Open	Normal Closed	120-hr period	Open	Open
8/16	7 days/week	7 days/week	7 days/week	Open 6 p.m.	Close 6 p.m.	7 days/week	7 days/week
8/17	Open	Open	Open	Open	Normal Closed	Open	Open
8/18	Close 6 p.m.	Open	Open	120-hr period	Open 6 p.m.	Open	Open
8/19	Closed	Open	Open	Open	Open	Open	Open
8/20	24-hr period	Close 6 p.m.	Close 6 p.m.	Open	120-hr period	Open	Open
8/21	Close 6 p.m.	Closed	Closed	Close 6 p.m.	Open	Normal	Normal
8/22	Closed	Closed	Closed	Normal Closed	Open	Open	Open
8/23	Closed	24-hr period	24-hr period	Open 6 p.m.	Close 6 p.m.	7 days/week	7 days/week
8/24	24-hr period	Close 6 p.m.	Close 6 p.m.	Open	Normal Closed	Open	Open
8/25	Close 6 p.m.	Closed	Closed	120-hr period	Open 6 p.m.	Open	Open
8/26	Closed	24-hr period	24-hr period	Open	Open	Open	Open
8/27	24-hr period	Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	120-hr period	Open	Open
8/28	Close 6 p.m.	Closed	Closed	Closed	Open	Open	Open
8/29	Closed	Closed	Closed	Closed	Open	Open	Open
8/30	Closed	24-hr period	24-hr period	32-hr period	Close 6 p.m.	Open	Open
8/31	24-hr period	Close 6 p.m.	Close 6 p.m.	Close 6 p.m.	Normal Closed	Open	Open
9/1	Close 6 p.m.	Closed	Closed	Closed	32-hr period	Open	Open
9/2	Closed	Closed	Closed	32-hr period	Close 6 p.m.	Open	Open
9/3	Open 6 p.m.	Open 6 p.m.	Open 6 p.m.	Close 6 p.m.	Closed	Open	Open
9/4	Open	Open	Open	Closed	32-hr period	Open	Open
9/5	Close midnight	Open	Open	Closed	Close 6 p.m.	Open	Open
9/6	Closed	7 days/week	7 days/week	32-hr period	Closed	Close 8 p.m.	Open
9/7	16-hr open 6 a.m.	Open	Open	Close 6 p.m.	Closed	Closed	Open
9/8	Closed	Open	Open	Closed	32-hr period	Closed	Open
9/9	15-hr open 6 a.m.	Open	Open	Open 10 a.m.	Close 6 p.m.	Open 8 a.m.	Open
9/10	Closed	Open	Open	Open	Closed	Open	Open
9/11	Open 7 a.m.	Open	Open	Open	32-hr period	108-hr period	Open
9/12	Open	Open	Open	7 days/week	Close 6 p.m.	Open	Open
9/13	Open	Open	Open	Open	Closed	Close 8 p.m.	Open
9/14	7 days/week	Open	Open	Open	Closed	Closed	Open
9/15	Open	Open	Open	Open	Open 6 p.m.	Closed	Close 8 p.m.
9/16	Open	Open	Open	Open	Open	Open 8 a.m.	Closed
9/17	Open	Open	Open	Open	120-hr period	Open	Closed
9/18	Open	Open	Open	Open	Open	108-hr period	Open 8 a.m.
9/19	Open	Open	Open	Open	Open	Open	Open
9/20	Open	Open	Open	Open	Close 6 p.m.	Close 8 p.m.	108-hr period
9/21	Open	Open	Open	Open	Normal Closed	Closed	Open
9/22	Open	Open	Open	Open	Open 6 p.m.	Closed	Close 8 p.m.
9/23	Open	Open	Open	Open	Open	Open 8 a.m.	Closed
9/24	Open	Open	Open	Open	Open	Open	Closed
9/25	Open	Open	Open	Open	7 days/week	Open	Open 8 a.m.
9/26	Open	Open	Open	Open	Open	7 days/week	Open
9/27	Open	Open	Open	Open	Open	Open	Open
9/28	Open	Open	Open	Open	Open	Open	7 days/week

Note: Shaded areas indicate fishery closures and gear restrictions implemented in-season. Unshaded fishing period closures follow regulations by district.

<sup>a</sup> The Coastal District remained open for subsistence fishing 24 hours per day, 7 days per week. Mesh size was restricted to 6-inch or smaller mesh from June 8 to July 15, 2009.

<sup>b</sup> The Innoko and Koyukuk River drainages remained open 7 days per week with no fishing restrictions.

<sup>c</sup> Sub-district 5 D was managed as upper and lower subdistricts, located above and below 22-mile slough upstream to Ft. Yukon

<sup>d</sup> District 6 fisheries were managed separately based on in-river escapement monitoring projects on the Tanana River and tributaries.

### Appendix A14.– Household groups and selection.

Household Harvest Group	Harvest Level	Survey Coverage
Unknown	Unknown	100%
Do Not Fish	0	30% (50% <sup>a</sup> , 100% <sup>b</sup> )
Light	1-100	30% (50% <sup>a</sup> , 100% <sup>b</sup> )
Medium	101-500	100%
Heavy	>500	100%

*Note:* Harvest level is the total number of Chinook, summer chum, fall chum and coho salmon combined harvest. Households are categorized into groups based on their average harvest from the most recent 2 years of harvest in the previous 5 years.

<sup>a</sup> Emmonak, Holy Cross, Pilot Station, and Tanana.

<sup>b</sup> Communities with fewer than 40 households.

## **APPENDIX B. HISTORICAL INFORMATION**

Appendix B1.—Chinook salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 1999–2009.

Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003 2004-2008		
											2009 Average	Average	
Hooper Bay	173	114	2,150	282	722	1,042	157	376	430	388	183	688	479
Scammon Bay	938	449	732	840	1,128	996	691	507	768	1,104	722	817	813
Coastal District Total	1,111	563	2,882	1,122	1,850	2,038	848	883	1,198	1,492	905	1,420	1,292
Nunam Iqua	855	684	550	393	925	647	338	371	907	163	200	681	485
Alakanuk	1,236	1,109	973	1,773	1,707	1,317	860	690	1,257	1,238	634	1,360	1,072
Emmonak	3,337	2,205	2,473	1,751	2,763	2,768	1,730	2,311	2,326	2,696	1,634	2,506	2,366
Kotlik	1,420	1,893	3,093	1,686	937	1,148	2,130	1,750	1,569	2,066	1,657	1,806	1,733
<i>District 1 Subtotal</i>	<i>6,848</i>	<i>5,891</i>	<i>7,089</i>	<i>5,603</i>	<i>6,332</i>	<i>5,880</i>	<i>5,058</i>	<i>5,122</i>	<i>6,059</i>	<i>6,163</i>	<i>4,125</i>	<i>6,353</i>	<i>5,656</i>
Mountain Village	2,162	1,715	1,864	1,523	2,174	2,362	2,383	1,659	2,077	1,645	1,482	1,888	2,025
Pitkas Point	632	753	651	566	633	609	618	274	320	544	265	647	473
St. Mary's	2,150	1,810	3,815	2,045	1,916	2,357	2,693	2,233	3,573	1,756	1,929	2,347	2,522
Pilot Station	2,715	2,378	2,614	2,530	2,886	2,406	1,658	1,976	2,028	1,597	1,258	2,625	1,933
Marshall	2,780	3,279	4,498	2,290	2,059	1,990	1,804	1,897	2,555	3,284	1,201	2,981	2,306
<i>District 2 Subtotal</i>	<i>10,439</i>	<i>9,935</i>	<i>13,442</i>	<i>8,954</i>	<i>9,668</i>	<i>9,724</i>	<i>9,156</i>	<i>8,039</i>	<i>10,553</i>	<i>8,826</i>	<i>6,135</i>	<i>10,488</i>	<i>9,260</i>
Russian Mission	2,722	1,860	3,428	1,887	2,057	2,337	1,894	1,851	1,301	2	978	2,391	1,477
Holy Cross	4,581	1,249	2,711	1,813	2,395	1,993	2,817	3,165	2,902	2,509	1,745	2,550	2,677
Shageluk	412	805	222	439	550	418	420	358	448	397	201	486	408
<i>District 3 Subtotal</i>	<i>7,715</i>	<i>3,914</i>	<i>6,361</i>	<i>4,139</i>	<i>5,002</i>	<i>4,748</i>	<i>5,131</i>	<i>5,374</i>	<i>4,651</i>	<i>5,855</i>	<i>2,924</i>	<i>5,532</i>	<i>4,981</i>
Lower Yukon River Total	25,002	19,740	26,892	18,696	21,002	20,352	19,345	18,535	21,263	20,844	13,184	22,583	20,099
Anvik	776	205	608	708	1,286	1,588	1,206	958	1,321	1,433	796	717	1,301
Grayling	2,476	839	1,077	2,249	1,613	1,869	1,878	1,702	1,500	1,761	1,133	1,651	1,742
Kaltag	2,051	1,074	1,506	1,435	1,838	1,656	3,367	2,833	1,456	2,403	1,970	1,581	2,343
Nulato	1,799	1,083	2,127	1,773	2,531	5,199	2,749	2,707	2,431	1,250	1,551	1,863	2,867
Koyukuk	506	175	449	323	860	400	396	835	811	513	982	463	591
Galena	2,539	788	1,755	1,522	3,112	3,296	2,864	2,380	2,511	2,232	1,370	1,943	2,657
Ruby/Kokrines	777	1,577	2,033	954	631	1,620	1,193	304	1,594	637	542	1,194	1,070
<i>District 4 Subtotal</i> <i>(Excluding Koyukuk River)</i>	<i>10,924</i>	<i>5,741</i>	<i>9,555</i>	<i>8,964</i>	<i>11,871</i>	<i>15,628</i>	<i>13,653</i>	<i>11,719</i>	<i>11,624</i>	<i>10,229</i>	<i>8,344</i>	<i>9,411</i>	<i>12,571</i>
Huslia	90	424	377	222	469	285	207	258	146	255	969	316	230
Hughes	105	50	144	67	113	291	33	8	8	61	101	96	80
Allakaket	108	41	76	200	306	65	68	23	53	58	90	146	53
Alatna	10	8	0	3	12	0	0	14	0	16	10	7	6
Bettles	1	0	0	0	0	0	3	0	0	0	0	0	1
<i>Koyukuk River Subtotal</i>	<i>314</i>	<i>523</i>	<i>597</i>	<i>492</i>	<i>900</i>	<i>641</i>	<i>311</i>	<i>303</i>	<i>207</i>	<i>390</i>	<i>1,170</i>	<i>565</i>	<i>370</i>
District 4 Total	11,238	6,264	10,152	9,456	12,771	16,269	13,964	12,022	11,831	10,619	9,514	9,976	12,941

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Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											2009	Average	Average	
Tanana	3,388	2,895	4,112	2,379	5,332	2,689	3,729	3,794	5,498	3,981	2,950	3,621	3,938	
Rampart <sup>a</sup>	2,018	847	1,857	852	1,411	287	411	429	250	136	528	1,397	303	
Fairbanks <sup>b</sup>	851	1,342	1,125	1,767	1,932	1,997	2,584	2,184	2,492	1,898	1,509	1,403	2,231	
Stevens Village	1,214	466	1,111	1,334	1,121	2,394	1,570	1,245	610	753	405	1,049	1,314	
Birch Creek	24	72	0	67	78	82	131	174	113	32	15	48	106	
Beaver	473	196	1,368	702	1,156	858	957	830	1,244	546	516	779	887	
Fort Yukon	2,539	988	2,361	2,348	4,004	4,430	3,591	3,144	4,076	1,991	846	2,448	3,446	
Circle	524	627	447	1,533	895	565	1,283	694	1,057	519	372	805	824	
Central	91	26	84	58	144	83	175	130	334	48	167	81	154	
Eagle	2,558	1,087	1,033	1,910	2,081	1,512	2,566	2,303	1,999	1,068	446	1,734	1,890	
Other <sup>c</sup>	488	205	40	348	862	357	315	330	472	362	541	389	367	
<i>District 5 Subtotal (Excluding Chandalar and Black Rivers)</i>	<i>14,168</i>	<i>8,751</i>	<i>13,538</i>	<i>13,298</i>	<i>19,016</i>	<i>15,254</i>	<i>17,312</i>	<i>15,257</i>	<i>18,145</i>	<i>11,334</i>	<i>8,295</i>	<i>13,754</i>	<i>15,460</i>	
Venetie	127	103	28	77	125	352	59	667	1,002	292	622	84	441	
Chalkyitsik	35	0	0	26	50	60	53	0	0	0	0	15	33	
<i>Chandalar/Black River Subtotal</i>	<i>162</i>	<i>103</i>	<i>28</i>	<i>103</i>	<i>175</i>	<i>412</i>	<i>112</i>	<i>667</i>	<i>1,002</i>	<i>292</i>	<i>622</i>	<i>99</i>	<i>474</i>	
District 5 Total	14,330	8,854	13,566	13,401	19,191	15,666	17,424	15,924	19,147	11,626	8,917	13,868	15,957	
Manley	136	58	534	336	213	239	289	361	333	106	345	255	266	
Minto	317	0	197	19	317	35	35	31	82	12	0	170	39	
Nenana	975	541	1,405	509	1,193	633	533	712	893	322	458	925	619	
Fairbanks <sup>d</sup>	195	360	191	159	392	449	971	125	409	108	396	259	412	
Other <sup>e</sup>	1	24	0	44	30	32	0	0	0	57	86	20	18	
District 6 Tanana River Total	1,624	983	2,327	1,067	2,145	1,388	1,828	1,229	1,717	605	1,285	1,629	1,353	
Upper Yukon River Total	27,192	16,101	26,045	23,924	34,107	33,323	33,216	29,175	32,695	22,850	19,716	25,474	30,252	
Alaska, Yukon River Total <sup>f</sup>	52,194	35,841	52,937	42,620	55,109	53,675	52,561	47,710	53,958	43,694	32,900	47,740	50,320	
Alaska, Yukon Area Total	53,305	36,404	55,819	43,742	56,959	55,713	53,409	48,593	55,156	45,186	33,805	49,246	51,611	

Note: Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

<sup>b</sup> Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

<sup>c</sup> Other permit holders who fished in District 5 but did not reside in the communities listed.

<sup>d</sup> Harvest by Fairbanks subsistence permit holders who fished in the Tanana River. Does not include harvest by personal use permit holders.

<sup>e</sup> Other permit holders who fished in District 6 but did not reside in the communities listed.

<sup>f</sup> Does not include the Coastal District.

Appendix B2.—Summer chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 1999–2009.

Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											Average	Average	Average	Average
Hooper Bay	10,146	9,301	12,593	9,780	10,658	3,242	9,771	19,468	12,234	12,007	9,195	10,496	11,344	
Scammon Bay	3,315	3,876	1,323	5,016	3,310	5,020	4,586	4,703	3,887	6,113	3,602	3,368	4,862	
<b>Coastal District Total</b>	<b>13,461</b>	<b>13,177</b>	<b>13,916</b>	<b>14,796</b>	<b>13,968</b>	<b>8,262</b>	<b>14,357</b>	<b>24,171</b>	<b>16,121</b>	<b>18,120</b>	<b>12,797</b>	<b>13,838</b>	<b>16,206</b>	
Nunam Iqua	1,343	3,309	1,942	1,897	2,561	2,698	2,794	2,903	2,325	1,949	2,280	2,210	2,534	
Alakanuk	3,808	6,259	5,992	7,637	5,287	6,555	5,687	7,790	7,611	6,881	5,152	5,797	6,905	
Emmonak	10,310	8,338	8,242	8,458	7,644	8,618	12,594	11,899	9,256	9,646	9,038	8,598	10,403	
Kotlik	4,708	6,173	6,595	6,115	4,209	2,749	6,620	5,289	5,017	4,291	7,528	5,560	4,793	
<i>District 1 Subtotal</i>	<i>20,169</i>	<i>24,079</i>	<i>22,771</i>	<i>24,107</i>	<i>19,701</i>	<i>20,620</i>	<i>27,695</i>	<i>27,881</i>	<i>24,209</i>	<i>22,767</i>	<i>23,998</i>	<i>22,165</i>	<i>24,634</i>	
Mountain Village	10,059	7,074	8,484	6,657	6,497	10,676	8,861	13,119	8,104	7,559	7,204	7,754	9,664	
Pitkas Point	849	1,728	862	639	800	717	1,023	680	515	1,246	994	976	836	
St. Mary's	6,752	8,094	10,026	7,284	4,521	6,994	6,877	7,394	8,107	6,451	5,831	7,335	7,165	
Pilot Station	5,265	5,223	5,329	6,490	4,163	5,779	4,333	6,070	3,711	6,012	4,888	5,294	5,181	
Marshall	1,212	3,212	1,602	2,484	792	1,765	3,183	4,392	3,070	3,023	2,172	1,860	3,087	
<i>District 2 Subtotal</i>	<i>24,137</i>	<i>25,331</i>	<i>26,303</i>	<i>23,554</i>	<i>16,773</i>	<i>25,931</i>	<i>24,277</i>	<i>31,655</i>	<i>23,507</i>	<i>24,291</i>	<i>21,089</i>	<i>23,220</i>	<i>25,932</i>	
Russian Mission	616	1,318	165	395	171	884	925	1,328	759	2,400	849	533	1,259	
Holy Cross	264	569	460	155	214	276	760	825	320	441	194	332	524	
Shageluk	4,868	1,800	684	1,956	5,473	1,798	4,081	1,381	977	130	103	2,956	1,673	
<i>District 3 Subtotal</i>	<i>5,748</i>	<i>3,687</i>	<i>1,309</i>	<i>2,506</i>	<i>5,858</i>	<i>2,958</i>	<i>5,766</i>	<i>3,534</i>	<i>2,056</i>	<i>2,971</i>	<i>1,146</i>	<i>3,313</i>	<i>4,034</i>	
<b>Lower Yukon River Total</b>	<b>50,054</b>	<b>53,097</b>	<b>50,383</b>	<b>50,167</b>	<b>42,332</b>	<b>49,509</b>	<b>57,738</b>	<b>63,070</b>	<b>49,772</b>	<b>50,029</b>	<b>46,233</b>	<b>50,925</b>	<b>52,484</b>	
Anvik	848	425	94	1,089	844	248	529	387	5,250	340	277	660	1,351	
Grayling	4,126	474	92	1,311	1,072	1,129	783	644	641	660	1,429	1,415	771	
Kaltag	625	169	10	234	1,028	213	680	159	109	916	50	413	415	
Nulato	1,945	377	208	269	180	198	634	838	356	468	133	596	499	
Koyukuk	197	204	118	426	1,339	329	537	394	995	1,104	1,378	457	672	
Galena	1,688	820	53	712	289	782	1,013	1,205	571	758	1,718	712	866	
Ruby/Kokrines	1,697	1,233	1,025	1,406	876	2,010	967	1,714	416	655	603	1,247	1,152	
<i>District 4 Subtotal</i> <i>(Excluding Koyukuk River)</i>	<i>11,126</i>	<i>3,702</i>	<i>1,600</i>	<i>5,447</i>	<i>5,628</i>	<i>4,909</i>	<i>5,143</i>	<i>5,341</i>	<i>8,338</i>	<i>4,901</i>	<i>5,588</i>	<i>5,501</i>	<i>5,726</i>	
Huslia	1,192	745	833	3,178	6,187	3,844	2,433	1,122	3,243	4,377	2,554	2,427	3,004	
Hughes	577	1,079	551	1,089	1,265	3,823	2,230	3,254	1,213	944	1,723	912	2,293	
Allakaket	2,245	1,520	1,604	6,242	4,383	2,367	2,535	5,170	3,451	3,229	4,924	3,199	3,350	
Alatna	99	0	0	15	50	16	5	110	11	66	163	33	42	
Bettles	100	0	0	0	0	0	4	0	0	0	6	20	1	
<i>Koyukuk River Subtotal</i>	<i>4,213</i>	<i>3,344</i>	<i>2,988</i>	<i>10,524</i>	<i>11,885</i>	<i>10,050</i>	<i>7,207</i>	<i>9,656</i>	<i>7,918</i>	<i>8,616</i>	<i>9,370</i>	<i>6,591</i>	<i>8,689</i>	
<b>District 4 Total</b>	<b>15,339</b>	<b>7,046</b>	<b>4,588</b>	<b>15,971</b>	<b>17,513</b>	<b>14,959</b>	<b>12,350</b>	<b>14,997</b>	<b>16,256</b>	<b>13,517</b>	<b>14,958</b>	<b>12,091</b>	<b>14,416</b>	

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Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											2009	Average	Average	Average
Tanana	1,214	2,848	1,407	3,321	3,075	1,490	4,832	5,474	5,229	2,877	4,665	2,373	3,980	
Rampart <sup>a</sup>	60	47	0	14	9	103	315	135	25	27	112	26	121	
Fairbanks <sup>b</sup>	346	275	165	295	89	280	780	1,341	529	119	44	234	610	
Stevens Village	26	50	0	12	0	108	442	972	254	163	6	18	388	
Beaver	91	7	328	77	7	2	68	117	41	27	22	102	51	
Fort Yukon	0	0	289	1,832	2,176	1,187	67	2,165	2,365	230	275	859	1,203	
Circle	60	109	6	5	85	52	3	58	200	5	0	53	64	
Central	0	1	0	0	0	0	5	2	0	0	2	0	1	
Eagle	271	121	555	24	104	171	235	989	15	14	0	215	285	
Other <sup>c</sup>	42	51	0	17	0	3	53	117	81	25	29	22	56	
<i>District 5 Subtotal</i>	<i>2,110</i>	<i>3,509</i>	<i>2,750</i>	<i>5,597</i>	<i>5,545</i>	<i>3,396</i>	<i>6,800</i>	<i>11,370</i>	<i>8,739</i>	<i>3,487</i>	<i>5,155</i>	<i>3,902</i>	<i>6,758</i>	
<i>(Excluding Chandalar and Black Rivers)</i>														
Venetie	166	0	106	13	0	15	0	475	107	50	143	57	129	
Chalkyitsik	0	132	0	0	0	0	0	0	0	0	0	26	0	
<i>Chandalar/Black River</i>	<i>166</i>	<i>132</i>	<i>106</i>	<i>13</i>	<i>0</i>	<i>15</i>	<i>0</i>	<i>475</i>	<i>107</i>	<i>50</i>	<i>143</i>	<i>83</i>	<i>129</i>	
<i>Subtotal</i>														
District 5 Total	2,276	3,641	2,856	5,610	5,545	3,411	6,800	11,845	8,846	3,537	5,298	3,986	6,888	
Manley	272	240	338	93	65	296	163	89	140	144	367	202	166	
Minto	173	3	19	10	625	7	21	460	82	9	1	166	116	
Nenana	1,894	775	19	360	2,193	1,171	1,771	388	1,419	753	506	1,048	1,100	
Fairbanks <sup>d</sup>	315	90	36	47	31	308	45	73	255	94	372	104	155	
Other <sup>e</sup>	0	3	0	2	0	11	14	0	0	311	7	1	67	
District 6 Tanana R. Total	2,654	1,111	412	512	2,914	1,793	2,014	1,010	1,896	1,311	1,253	1,521	1,605	
Upper Yukon River Total	20,269	11,798	7,856	22,093	25,972	20,163	21,164	27,852	26,998	18,365	21,509	17,598	22,908	
Alaska, Yukon River Total <sup>f</sup>	70,323	64,895	58,239	72,260	68,304	69,672	78,902	90,922	76,770	68,394	67,742	66,804	76,932	
Alaska, Yukon Area Total	83,784	78,072	72,155	87,056	82,272	77,934	93,259	115,093	92,891	86,514	80,539	80,668	93,138	

Note: Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

<sup>b</sup> Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

<sup>c</sup> Other permit holders who fished in District 5 but did not reside in the communities listed.

<sup>d</sup> Harvests by Fairbanks subsistence permit holders who fished in the Tanana River. Does not include harvest by personal use permit holders.

<sup>e</sup> Other permit holders who fished in District 6 but did not reside in the communities listed.

<sup>f</sup> Does not include the Coastal District.

Appendix B3.–Fall chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 1999–2009.

Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											2009	Average	Average	Average
Hooper Bay	0	78	364	44	40	264	1	146	64	329	41	105	161	
Scammon Bay	204	11	195	240	106	56	69	41	170	57	117	151	79	
Coastal District Total	204	89	559	284	146	320	70	187	234	386	158	256	239	
Nunam Iqua	115	105	176	284	127	49	310	735	152	59	41	161	261	
Alakanuk	558	505	1,032	222	348	953	627	624	1,348	423	116	533	795	
Emmonak	1,849	1,165	1,272	1,261	1,257	785	1,436	2,056	2,360	1,670	1,589	1,361	1,661	
Kotlik	3,980	3,519	957	114	407	280	516	487	530	671	171	1,795	497	
<i>District 1 Subtotal</i>	<i>6,502</i>	<i>5,294</i>	<i>3,437</i>	<i>1,881</i>	<i>2,139</i>	<i>2,067</i>	<i>2,889</i>	<i>3,902</i>	<i>4,390</i>	<i>2,823</i>	<i>1,917</i>	<i>3,851</i>	<i>3,214</i>	
Mountain Village	1,968	313	470	478	873	918	1,290	2,398	1,073	926	926	820	1,321	
Pitkas Point	53	5	34	16	49	0	6	5	44	101	76	31	31	
St. Mary's	722	255	227	103	762	104	490	417	825	830	106	414	533	
Pilot Station	1,155	852	1,522	680	823	1,108	838	785	741	917	265	1,006	878	
Marshall	696	0	1,003	341	394	291	633	410	789	748	190	487	574	
<i>District 2 Subtotal</i>	<i>4,594</i>	<i>1,425</i>	<i>3,256</i>	<i>1,618</i>	<i>2,901</i>	<i>2,421</i>	<i>3,257</i>	<i>4,015</i>	<i>3,472</i>	<i>3,522</i>	<i>1,563</i>	<i>2,759</i>	<i>3,337</i>	
Russian Mission	100	37	76	164	615	172	667	251	530	578	205	198	440	
Holy Cross	239	523	624	0	9	76	582	224	248	920	627	279	410	
Shageluk	76	38	0	0	114	50	55	5	147	323	105	46	116	
<i>District 3 Subtotal</i>	<i>415</i>	<i>598</i>	<i>700</i>	<i>164</i>	<i>738</i>	<i>298</i>	<i>1,304</i>	<i>480</i>	<i>925</i>	<i>1,821</i>	<i>937</i>	<i>523</i>	<i>966</i>	
Lower Yukon River Total	11,511	7,317	7,393	3,663	5,778	4,786	7,450	8,397	8,787	8,166	4,417	7,132	7,517	
Anvik	126	175	29	401	179	398	497	118	429	317	176	182	352	
Grayling	1,370	284	314	52	441	267	1,009	691	317	1,012	490	492	659	
Kaltag	764	190	607	314	725	687	1,089	823	910	620	200	520	826	
Nulato	2,338	0	151	0	1,341	1,246	421	751	1,345	729	552	766	898	
Koyukuk	1,544	239	517	255	835	344	803	1,147	927	1,177	578	678	880	
Galena	1,932	564	420	349	1,510	1,587	2,695	1,632	1,471	1,364	4,306	955	1,750	
Ruby/Kokrines	907	64	581	78	2,331	1,064	559	227	1,959	657	134	792	893	
<i>District 4 Subtotal (Excluding Koyukuk R)</i>	<i>8,981</i>	<i>1,516</i>	<i>2,619</i>	<i>1,449</i>	<i>7,362</i>	<i>5,593</i>	<i>7,073</i>	<i>5,389</i>	<i>7,358</i>	<i>5,876</i>	<i>6,436</i>	<i>4,385</i>	<i>6,258</i>	
Huslia	89	35	683	0	1,786	1,139	1,614	313	272	64	86	519	680	
Hughes	84	157	0	0	497	97	111	240	0	127	288	148	115	
Allakaket	20	36	50	100	105	968	557	393	939	1,345	572	62	840	
Alatna	0	15	0	0	0	0	0	0	7	0	0	3	1	
Bettles	0	0	0	0	0	0	50	0	0	0	0	0	10	
<i>Koyukuk River Subtotal</i>	<i>193</i>	<i>243</i>	<i>733</i>	<i>100</i>	<i>2,388</i>	<i>2,204</i>	<i>2,332</i>	<i>946</i>	<i>1,218</i>	<i>1,536</i>	<i>946</i>	<i>731</i>	<i>1,647</i>	
District 4 Total	9,174	1,759	3,352	1,549	9,750	7,797	9,405	6,335	8,576	7,412	7,382	5,117	7,905	

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Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003	2004-2008	
											2009 Average	Average	
Tanana	22,305	9,384	9,779	6,255	14,308	23,118	20,545	23,167	21,596	17,478	19,595	12,406	21,181
Rampart <sup>a</sup>	4,324	0	183	0	365	0	358	250	250	1,000	1,000	974	372
Fairbanks <sup>b</sup>	681	8	0	0	105	43	1,682	5,269	2,126	659	229	159	1,956
Stevens Village	20	10	20	0	857	1,080	246	50	199	643	770	181	444
Beaver	16	0	21	1	192	48	179	0	354	13	120	46	119
Ft. Yukon	9,702	355	2,209	3,523	7,963	7,302	8,088	5,178	8,264	14,252	2,829	4,750	8,617
Circle	2,722	0	2,588	74	499	1,022	918	664	1,286	3,198	110	1,177	1,418
Central	0	0	0	0	0	0	36	0	0	0	0	0	7
Eagle	11,292	32	2,714	339	2,871	5,482	17,356	16,786	18,676	15,269	10,941	3,450	14,714
Other <sup>c</sup>	65	1	0	100	0	13	117	44	46	3,183	71	33	681
<i>District 5 Subtotal</i>	<i>51,127</i>	<i>9,790</i>	<i>17,514</i>	<i>10,292</i>	<i>27,160</i>	<i>38,108</i>	<i>49,525</i>	<i>51,408</i>	<i>52,797</i>	<i>55,695</i>	<i>35,665</i>	<i>23,177</i>	<i>49,507</i>
<i>(Excluding Chandalar and Black Rivers)</i>													
Venetie	2,011	130	3,286	680	770	2,083	1,801	520	721	1,563	2,373	1,375	1,338
Chalkyitsik	442	0	73	4	340	479	337	215	213	0	45	172	249
<i>Chandalar/Black River Subtotal</i>	<i>2,453</i>	<i>130</i>	<i>3,359</i>	<i>684</i>	<i>1,110</i>	<i>2,562</i>	<i>2,138</i>	<i>735</i>	<i>934</i>	<i>1,563</i>	<i>2,418</i>	<i>1,547</i>	<i>1,586</i>
District 5 Total	53,580	9,920	20,873	10,976	28,270	40,670	51,663	52,143	53,731	57,258	38,083	24,724	51,093
Manley	5,172	0	1,230	947	1,303	1,504	2,985	3,374	3,419	2,490	4,126	1,730	2,754
Minto	781	2	251	100	675	0	600	242	155	28	0	362	205
Nenana	5,619	8	999	1,070	7,802	5,367	10,594	10,530	21,863	6,585	7,623	3,100	10,988
Fairbanks <sup>d</sup>	1,630	0	191	229	1,949	1,024	6,691	1,311	3,325	340	3,460	800	2,538
Other <sup>e</sup>	2,269	300	855	856	1,257	1,058	2,076	1,468	1,131	6,692	870	1,107	2,485
<i>District 6 Tanana R. Total</i>	<i>15,471</i>	<i>310</i>	<i>3,526</i>	<i>3,202</i>	<i>12,986</i>	<i>8,953</i>	<i>22,946</i>	<i>16,925</i>	<i>29,893</i>	<i>16,135</i>	<i>16,079</i>	<i>7,099</i>	<i>18,970</i>
Upper Yukon River Total	78,225	11,989	27,751	15,727	51,006	57,420	84,014	75,403	92,200	80,805	61,544	36,940	77,968
Alaska, Yukon River Total <sup>f</sup>	89,736	19,306	35,144	19,390	56,784	62,206	91,464	83,800	100,987	88,971	65,961	44,072	85,486
Alaska, Yukon Area Total	89,940	19,395	35,703	19,674	56,930	62,526	91,534	83,987	101,221	89,357	66,119	44,328	85,725

Note: Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

<sup>b</sup> Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

<sup>c</sup> Other permit holders who fished in District 5 but did not reside in the communities listed.

<sup>d</sup> Harvests by Fairbanks subsistence permit holders who fished in the Tanana River. Does not include harvest by personal use permit holders.

<sup>e</sup> Other permits holders who fished in District 6 but did not reside in the communities listed.

<sup>f</sup> Does not include the Coastal District.

Appendix B4.–Coho salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fish projects, Yukon Area, 1999–2009.

Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											2009	Average	Average	Average
Hooper Bay	68	218	439	125	244	9	0	175	26	66	24	219	55	
Scammon Bay	0	4	63	123	48	54	279	160	84	50	222	48	125	
<b>Coastal District Total</b>	<b>68</b>	<b>222</b>	<b>502</b>	<b>248</b>	<b>292</b>	<b>63</b>	<b>279</b>	<b>335</b>	<b>110</b>	<b>116</b>	<b>246</b>	<b>266</b>	<b>181</b>	
Nunam Iqua	51	5	32	56	117	79	241	392	92	24	71	52	166	
Alakanuk	108	84	414	183	193	207	322	101	857	157	194	196	329	
Emmonak	525	191	342	514	547	296	191	450	1,032	717	401	424	537	
Kotlik	1,046	787	486	542	403	593	222	234	284	313	181	653	329	
<i>District 1 Subtotal</i>	<i>1,730</i>	<i>1,067</i>	<i>1,274</i>	<i>1,295</i>	<i>1,260</i>	<i>1,175</i>	<i>976</i>	<i>1,177</i>	<i>2,265</i>	<i>1,211</i>	<i>847</i>	<i>1,325</i>	<i>1,361</i>	
Mountain Village	665	376	423	361	745	521	246	1,856	1,027	518	413	514	834	
Pitkas Point	302	139	112	47	130	0	30	16	38	130	45	146	43	
St. Mary's	536	117	610	209	276	258	252	171	97	591	151	350	274	
Pilot Station	249	1,708	222	230	371	296	241	225	263	268	203	556	259	
Marshall	1,041	11	73	386	64	425	341	191	922	490	245	315	474	
<i>District 2 Subtotal</i>	<i>2,793</i>	<i>2,351</i>	<i>1,440</i>	<i>1,233</i>	<i>1,586</i>	<i>1,500</i>	<i>1,110</i>	<i>2,459</i>	<i>2,347</i>	<i>1,997</i>	<i>1,057</i>	<i>1,881</i>	<i>1,883</i>	
Russian Mission	542	24	0	115	178	151	133	19	259	372	96	172	187	
Holy Cross	62	70	0	0	498	27	84	16	213	38	120	126	76	
Shageluk	6	0	0	0	35	106	0	48	267	0	105	8	84	
<i>District 3 Subtotal</i>	<i>610</i>	<i>94</i>	<i>0</i>	<i>115</i>	<i>711</i>	<i>284</i>	<i>217</i>	<i>83</i>	<i>739</i>	<i>410</i>	<i>321</i>	<i>306</i>	<i>347</i>	
<b>Lower Yukon River Total</b>	<b>5,133</b>	<b>3,512</b>	<b>2,714</b>	<b>2,643</b>	<b>3,557</b>	<b>2,959</b>	<b>2,303</b>	<b>3,719</b>	<b>5,351</b>	<b>3,618</b>	<b>2,225</b>	<b>3,512</b>	<b>3,590</b>	
Anvik	282	0	13	0	12	288	406	0	807	40	137	61	308	
Grayling	201	372	144	30	559	233	234	224	271	25	318	261	197	
Kaltag	333	110	533	212	463	138	307	106	204	45	40	330	160	
Nulato	170	60	258	78	928	203	60	214	130	195	171	299	160	
Koyukuk	295	138	80	249	1,155	166	37	330	189	84	198	383	161	
Galena	123	71	142	169	1,507	1,307	607	137	425	558	2,353	402	607	
Ruby/Kokrines	620	173	871	69	648	1,540	361	11	168	291	314	476	474	
<i>District 4 Subtotal</i> <i>(Excluding Koyukuk River)</i>	<i>2,024</i>	<i>924</i>	<i>2,041</i>	<i>807</i>	<i>5,272</i>	<i>3,875</i>	<i>2,012</i>	<i>1,022</i>	<i>2,194</i>	<i>1,238</i>	<i>3,531</i>	<i>2,214</i>	<i>2,068</i>	
Huslia	15	132	83	60	375	764	734	105	592	100	323	133	459	
Hughes	10	12	117	100	20	110	20	150	100	0	89	52	76	
Allakaket	0	0	25	56	99	17	205	25	66	152	43	36	93	
Alatna	0	0	0	0	7	0	0	0	0	0	0	1	0	
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	
<i>Koyukuk River Subtotal</i>	<i>25</i>	<i>144</i>	<i>225</i>	<i>216</i>	<i>501</i>	<i>891</i>	<i>959</i>	<i>280</i>	<i>758</i>	<i>252</i>	<i>455</i>	<i>222</i>	<i>628</i>	
<b>District 4 Total</b>	<b>2,049</b>	<b>1,068</b>	<b>2,266</b>	<b>1,023</b>	<b>5,773</b>	<b>4,766</b>	<b>2,971</b>	<b>1,302</b>	<b>2,952</b>	<b>1,490</b>	<b>3,986</b>	<b>2,436</b>	<b>2,696</b>	

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Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	1999-2003		2004-2008	
											2009 Average	2009	Average	Average
Tanana	3,989	4,826	6,675	2,032	3,480	1,049	1,616	3,619	2,369	1,511	2,373	4,200	2,033	
Rampart <sup>a</sup>	126	0	0	0	0	0	10	0	50	0	0	25	12	
Fairbanks <sup>b</sup>	0	2	11	0	120	91	10	79	26	7	13	27	43	
Stevens Village	0	0	2	0	0	100	0	0	0	0	90	0	20	
Beaver	0	0	0	17	0	0	0	0	354	6	0	3	72	
Fort Yukon <sup>c</sup>	124	129	972	14	0	19	394	35	567	1,618	2	248	527	
Circle	0	0	0	0	244	100	100	22	0	0	13	49	44	
Central	0	0	0	0	0	0	1	0	0	0	0	0	0	
Eagle	0	0	0	1	0	14	15	0	0	0	0	0	6	
Other <sup>c</sup>	2	30	0	0	25	0	13	0	0	61	7	11	15	
<i>District 5 Subtotal</i> <i>(Excluding Chandalar and Black Rivers)</i>	<i>4,241</i>	<i>4,987</i>	<i>7,660</i>	<i>2,064</i>	<i>3,869</i>	<i>1,373</i>	<i>2,159</i>	<i>3,755</i>	<i>3,366</i>	<i>3,203</i>	<i>2,498</i>	<i>4,564</i>	<i>2,771</i>	
Venetie	0	0	10	12	11	5	0	24	0	0	0	7	6	
Chalkyitsik	0	0	4	0	7	45	0	0	0	0	0	2	9	
<i>Chandalar/Black River</i> <i>Subtotal</i>	<i>0</i>	<i>0</i>	<i>14</i>	<i>12</i>	<i>18</i>	<i>50</i>	<i>0</i>	<i>24</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>9</i>	<i>15</i>	
<i>District 5 Total</i>	<i>4,241</i>	<i>4,987</i>	<i>7,674</i>	<i>2,076</i>	<i>3,887</i>	<i>1,423</i>	<i>2,159</i>	<i>3,779</i>	<i>3,366</i>	<i>3,203</i>	<i>2,498</i>	<i>4,573</i>	<i>2,786</i>	
Manley	3,244	2,180	2,637	1,617	886	1,384	2,510	1,671	1,126	1,901	2,308	2,113	1,718	
Minto	0	3	0	250	423	5	0	14	155	0	0	135	35	
Nenana	4,023	1,767	4,443	3,574	5,431	6,494	12,395	7,032	4,487	2,775	3,475	3,848	6,637	
Fairbanks <sup>d</sup>	868	0	68	1,024	1,049	1,435	3,032	745	609	230	577	602	1,210	
Other <sup>e</sup>	1,259	1,200	1,818	3,034	2,574	2,266	1,601	1,109	1,468	3,522	691	1,977	1,993	
<i>District 6 Tanana River Total</i>	<i>9,394</i>	<i>5,150</i>	<i>8,966</i>	<i>9,499</i>	<i>10,363</i>	<i>11,584</i>	<i>19,538</i>	<i>10,571</i>	<i>7,845</i>	<i>8,428</i>	<i>7,051</i>	<i>8,674</i>	<i>11,593</i>	
Upper Yukon Area Total	15,684	11,205	18,906	12,598	20,023	17,773	24,668	15,652	14,163	13,121	13,535	15,683	17,075	
Alaska, Yukon River Total <sup>f</sup>	20,817	14,717	21,620	15,241	23,580	20,732	26,971	19,371	19,514	16,739	15,760	19,195	20,665	
Alaska, Yukon Area Total	20,885	14,939	22,122	15,489	23,872	20,795	27,250	19,706	19,624	16,855	16,006	19,461	20,846	

Note: Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Rampart area harvest as reported from subsistence fishing permits established by the Alaska Board of Fisheries (BOF) in 2004.

<sup>b</sup> Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

<sup>c</sup> Other permit holders who fished in District 5 but did not reside in the communities listed.

<sup>d</sup> Harvests by Fairbanks subsistence permit holders who fished in the Tanana River. Does not include harvest by personal use permit holders.

<sup>e</sup> Other permits holders who fished in District 6 but did not reside in the communities listed.

<sup>f</sup> Does not include the Coastal District.

Appendix B5.—Personal use salmon harvests taken under authority of a permit, Tanana River drainage, 1987–2009.

Subdistrict 6-C Personal Use Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
1987	132 <sup>a</sup>	-	60 <sup>b</sup>	-	-	3,316	2,465
1988	208	162	120	317	1,182	2,074	1,125
1989	175	160	112	397	991	1,770	731
1990	152	144	102	442	918	1,353	1,120
1991 <sup>c</sup>	-	-	-	-	-	-	-
1992 <sup>c</sup>	-	-	-	-	-	-	-
1993	133	131	79	426	674	163	0
1994 <sup>c</sup>	-	-	-	-	-	-	-
1995	139	138	91	399	780	863	417
1996	129	125	73	215	905	356	198
1997	112	109	61	313	391	284	350
1998	103	101	52	357	84	2	9
1999 <sup>d</sup>	103	103	67	331	382	261	147
2000	70	69	16	75	30	1	0
2001	54	51	24	122	146	10	34
2002	57	55	29	126	175	3	20
2003	67	67	32	204	148	394	549
2004	68	66	35	201	231	230	233
2005	63	59	27	138	152	133	107
2006	60	60	35	89	262	333	279
2007	65	63	32	136	184	173	135
2008	51	50	25	126	138	181	50
2009	57	57	22	127	308	71	65
Five Year Average							
2004-2008	61	60	31	138	193	210	161
Ten Year Average							
1999-2008	66	64	32	155	185	172	155

Subdistrict 6-A Personal Use Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
1987	no permits issued						
1988	1	1	0	0	0	0	0
1989	1	1	1	0	4	0	0
1990	1	1	0	0	0	0	0
1991	no permits issued						
1992	no permits issued						
1993	no permits issued						
1994	no permits issued						
1995	no permits issued						
1996	no permits issued						
1997 <sup>e</sup>	no permits issued						
1988-1990							
Average	1	1	0	0	1	0	0

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Subdistrict 6-B Personal Use Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
1987	no permits issued						
1988	1	1	1	306	60	40	22
1989	1	1	1	56	220	0	0
1990	4	4	3	9	12	40	35
1991	no permits issued						
1992	no permits issued						
1993	no permits issued						
1994	no permits issued						
1995	no permits issued						
1996	no permits issued						
1997 <sup>e</sup>	no permits issued						
1988-1990							
Average	2	2	2	124	97	27	19

*Note:* A personal use salmon fishery in the Upper Tanana River existed in regulations from 1987 until July 1, 1991. No permits were ever issued for this fishery. Permit harvest numbers from 2006 and 2007 are preliminary. Does not include personal use Tanana River whitefish/sucker permits.

<sup>a</sup> Includes 60 former subsistence fishermen who were reissued personal use permits to fish for fall chum salmon.

<sup>b</sup> Some fishing families used both subsistence and personal use permits.

<sup>c</sup> From July 1, 1990 through 1992, and in 1994, the regulations did not provide for a personal use fishery in this area.

<sup>d</sup> Does not include 4 whitefish and sucker fishery permit holders, 2 of which fished, who reported a total harvest of 1 fall chum and 6 coho salmon in 1999.

<sup>e</sup> After 1997 the regulations did not provide for a personal use fishery in this area.

Appendix B6.—Subsistence salmon harvests taken under authority of a permit in portions of District 5, Yukon Area, 1999–2009.

Yukon River "Bridge" Area Subsistence Salmon Fishery <sup>a</sup>							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			Coho
				Chinook	Summer Chum	Fall Chum	
1999	66	64	47	1,653	356	701	2
2000	56	52	33	1,607	324	8	32
2001	65	62	38	1,819	176	0	13
2002	60	58	45	2,285	320	100	0
2003	86	80	62	2,670	89	104	145
2004	69	67	51	2,032	164	43	91
2005	76	72	57	1,847	643	17	9
2006	68	66	53	1,952	1,063	4,855	79
2007	85	80	51	1,707	177	626	26
2008	73	68	44	1,434	130	705	7
2009	68	66	38	1,248	28	996	106
Five Year Average 2004-2008	74	71	51	1,794	435	1,249	42
Ten Year Average 1999-2008	70	67	48	1,901	344	716	40

Yukon River "Rampart Village" Area Subsistence Salmon Fishery <sup>b</sup>							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			Coho
				Chinook	Summer Chum	Fall Chum	
2004	14	11	9	832	249	0	0
2005	22	19	17	1,721	663	2,023	10
2006	19	19	16	1,083	647	318	0
2007	23	19	15	1,744	495	2,050	50
2008	18	18	15	1,049	43	1,000	0
2009	25	24	20	1,404	159	1,070	4
Five Year Average 2004-2008	20	18	15	1,306	376	1,077	11

Upper Yukon River "Circle-Eagle" Area Subsistence Salmon Fishery <sup>c</sup>							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			Coho
				Chinook	Summer Chum	Fall Chum	
1999	119	116	71	3,404	364	14,079	0
2000	121	118	47	1,806	233	33	0
2001	98	93	33	1,688	561	5,322	0
2002	94	87	42	3,877	29	418	1
2003	95	85	58	3,406	189	3,374	0
2004	89	83	50	2,304	223	6,517	114
2005	89	81	55	4,004	241	18,427	130
2006	85	82	59	3,302	1,034	17,866	22
2007	78	71	51	3,548	218	20,005	0
2008 <sup>d</sup>	96	87	50	1,808	19	18,496	0
2009 <sup>d</sup>	73	70	34	1,092	2	11,051	13
Five Year Average 2004-2008	87	81	53	2,993	347	16,262	53
Ten Year Average 1999-2008	96	90	52	2,915	311	10,454	27

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*Note:* Data from 1974 to 1998 are available in a previous report (Busher et al. 2009). Prior to 1988 reported harvest was expanded for unreturned permits. Beginning in 1988, reported harvest was not expanded. Permit harvest numbers from 2006 and 2007 are preliminary.

- <sup>a</sup> That portion of the Yukon River drainage from Hess Creek to Dall River.
- <sup>b</sup> That portion of the Yukon River drainage from Garnet Island to Hess Creek. Permits were not required in this area until 2004.
- <sup>c</sup> That portion of the Yukon River drainage from the upstream mouth of Twenty-Two Mile Slough (downstream of Circle) to the United States/Canadian border.
- <sup>d</sup> Beginning in 2008, permits were issued for sub-area SEU to discern harvest taken upriver of the Eagle sonar site. Three households in 2008 and 5 household in 2009 were issued duplicate SE and SEU permits. One household in 2009 reported fishing in both the SE and SEU areas. These duplicate permits are included in the permit numbers.

Appendix B7.–Subsistence salmon harvests taken under authority of a permit, Tanana River drainage, 1999–2009.

Subdistrict 6-A Subsistence Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
1999	24	24	14	137	525	5,712	3,464
2000	24	24	12	80	240	0	2,441
2001	26	24	14	398	327	1,541	3,319
2002	24	23	20	542	101	1,341	2,246
2003	23	21	13	276	65	2,445	2,514
2004	23	23	12	339	308	2,148	2,004
2005	24	22	15	424	168	4,317	2,659
2006	24	24	18	503	114	3,694	2,283
2007	22	22	14	333	144	3,779	2,121
2008	38	35	19	115	241	2,583	2,002
2009	28	27	19	543	422	4,649	2,680
Five Year Average							
2004-2008	26	25	16	343	195	3,304	2,214
Ten Year Average							
1999-2008	25	24	15	315	223	2,756	2,505

Subdistrict 6-B Subsistence Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest <sup>a</sup>			
				Chinook	Summer Chum	Fall Chum	Coho
1999	83	79	47	1,487	2,129	9,757	5,930
2000	81	79	33	903	869	210	2,709
2001	87	81	44	1,511	74	1,983	5,646
2002	62	60	25	525	711	2,193	8,032
2003	77	72	40	1,839	2,849	10,537	7,849
2004	60	56	30	1,049	1,485	6,805	9,580
2005	70	67	29	1,404	1,846	15,367	9,659
2006	78	76	42	423	885	13,047	7,897
2007	79	75	39	1,139	1,752	12,478	4,521
2008	73	71	35	486	854	7,815	4,009
2009	69	68	37	730	830	9,112	4,064
Five Year Average							
2004-2008	72	69	35	900	1,364	11,102	7,133
Ten Year Average							
1999-2008	75	72	36	1,077	1,345	8,019	6,583

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Upper Tanana River Drainage Subsistence Salmon Fishery							
Year	Number of Permits Issued	Number of Permits Returned	Number Reporting Harvest	Reported Harvest			
				Chinook	Summer Chum	Fall Chum	Coho
1999	29	29	13	0	0	2	0
2000	41	36	16	0	2	100	0
2001	57	50	22	0	0	2	1
2002	32	31	16	0	0	25	0
2003	38	32	17	30	0	4	0
2004	35	30	14	0	0	0	0
2005	29	24	13	0	0	15	0
2006	23	22	17	0	0	10	0
2007	34	33	17	0	0	41	5
2008	58	50	19	0	0	17	6
2009	42	40	17	0	0	84	0
Five Year Average							
2004-2008	36	32	16	0	0	17	2
Ten Year Average							
1999-2008	38	34	16	3	0	22	1

*Note:* Data from 1988 to 1998 are available in a previous report (Busher et al. 2009). Prior to 1988 reported harvest was expanded for unreturned permits. Beginning in 1988, reported harvest was not expanded. From 1973 to 1994, a Subdistrict 6-C Subsistence Salmon fishery occurred until regulations were repealed within the Fairbanks Nonsubsistence Area in 1994. Permit harvest numbers from 2006 and 2007 are preliminary.

<sup>a</sup> Includes small numbers of salmon harvested and reported on the Tolovana River drainage (Subdistrict 6-B) subsistence pike permit, established in 1993.

Appendix B8.—Reported number of salmon distributed from test fish projects, Yukon Area, 1999–2009.

Chinook Salmon																
Year	Set Gillnet	Drift Gillnet Test Fish Projects										Test Fish Wheel Projects			Total	
	Test Fish	Lower	Offshore	Mountain	Pilot	Russian					Kantishna	Nenana	Tanana			
	Lower Yukon	Yukon	Test <sup>a</sup>	Village	Station	Marshall	Marshall <sup>b</sup>	Mission <sup>b</sup>	Kaltag	Rampart	Eagle					
1999	1,656	-	-	1	359	773	-	-	1	-	-	-	0	0	0	2,790
2000	1,344	-	-	0	450	1,024	11	23	0	-	-	0	0	0	0	2,852
2001	1,379	535	-	0	561	-	27	11	0	-	-	0	0	-	-	2,513
2002	1,268	253	-	0	545	-	8	18	0	-	-	0	0	0	0	2,092
2003	<sup>c</sup>	374	-	0	846	-	-	33	0	0	-	0	0	0	0	1,253
2004	<sup>c</sup>	1,158	-	0	665	-	-	20	0	-	-	0	0	0	0	1,843
2005	<sup>c</sup>	1,430	-	0	699	-	-	-	0	-	179	0	0	0	0	2,308
2006	<sup>c</sup>	1,367	-	0	366	362	-	-	0	-	20	0	38	0	0	2,153
2007	<sup>c</sup>	1,240	-	1	448	262	-	-	2	-	12	-	-	-	-	1,965
2008	<sup>c</sup>	2,189 <sup>d</sup>	-	0	389	693	-	-	0	-	6	-	-	-	-	3,277
2009	<sup>c</sup>	1,705	3	2	507	-	-	-	-	-	16	-	-	-	-	2,233
Five Year Average																
2004 to 2008	-	1,515	-	0	513	439	-	-	0	-	47	0	13	0	0	2,309

Summer Chum Salmon																
Year	Set Gillnet	Drift Gillnet Test Fish Projects										Test Fish Wheel Projects			Total	
	Test Fish	Lower	Offshore	Mountain	Pilot	Russian					Kantishna	Nenana	Tanana			
	Lower Yukon	Yukon	Test <sup>a</sup>	Village	Station	Marshall	Marshall <sup>b</sup>	Mission <sup>b</sup>	Kaltag	Rampart	Eagle					
1999	2,717	-	-	0	1,636	181	-	-	0	-	-	-	0	0	0	4,534
2000	2,499	-	-	0	2,141	335	0	0	0	-	-	5	0	0	0	4,980
2001	211	1,787	-	0	1,696	-	1	2	0	-	-	0	0	-	-	3,697
2002	199	2,209	-	0	2,174	-	10	0	0	-	-	0	0	0	0	4,592
2003	<sup>c</sup>	1,801	-	0	2,060	-	-	5	0	0	-	0	0	0	0	3,866
2004	<sup>c</sup>	868	-	0	1,848	-	-	29	0	-	-	0	0	0	0	2,745
2005	<sup>c</sup>	1,765	-	0	1,612	-	-	-	0	-	2	0	0	0	0	3,379
2006	<sup>c</sup>	2,192	-	0	1,175	238	-	-	0	-	15	0	0	0	0	3,620
2007	<sup>c</sup>	933	-	200	1,100	126	-	-	0	-	0	-	-	-	-	2,359
2008	<sup>c</sup>	2,593 <sup>d</sup>	-	0	1,338	345	-	-	0	-	0	-	-	-	-	4,276
2009	<sup>c</sup>	2,680	124	0	1,247	-	-	-	-	-	0	-	-	-	-	4,051
Five Year Average																
2004 to 2008	-	1,839	-	40	1,415	236	-	29	0	-	3	0	0	0	0	3,276

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Fall Chum Salmon															
Year	Set Gillnet	Drift Gillnet Test Fish Projects										Test Fish Wheel Projects			Total
	Test Fish	Lower	Offshore	Mountain	Pilot	Russian					Kantishna	Nenana	Tanana		
	Lower Yukon	Yukon	Test <sup>a</sup>	Village	Station	Marshall	Marshall <sup>b</sup>	Mission <sup>b</sup>	Kaltag	Rampart	Eagle				
1999	4,061	-	-	1,008	968	0	-	-	483	-	-	-	0	0	6,520
2000	2,921	-	-	269	834	0	0	0	190	-	-	0	0	4,214	
2001	-	1,694	-	339	1,492	-	0	0	494	-	-	0	0	4,019	
2002	-	1,050	-	175	680	-	0	0	314	-	-	0	0	2,219	
2003	-	1,247	-	328	823	-	-	0	457	873	-	0	0	3,728	
2004	-	635	-	425	726	-	-	0	592	-	-	0	0	2,378	
2005	-	1,118	-	758	821	-	-	-	744	-	0	0	0	3,441	
2006	-	880	-	621	664	0	-	-	672	-	0	0	159	2,996	
2007	-	1,219	-	567	703	0	-	-	536	-	3	-	-	3,028	
2008	-	878	-	494	756	0	-	-	461	-	3	-	-	2,592	
2009	-	159	16	335	260	-	-	-	-	-	4	-	-	774	
Five Year Average															
2004 to 2008	-	815	-	573	734	0	-	0	601	-	2	0	53	2,887	

Coho Salmon															
Year	Set Gillnet	Drift Gillnet Test Fish Projects										Test Fish Wheel Projects			Total
	Test Fish	Lower	Offshore	Mountain	Pilot	Russian					Kantishna	Nenana	Tanana		
	Lower Yukon	Yukon	Test <sup>a</sup>	Village	Station	Marshall	Marshall <sup>b</sup>	Mission <sup>b</sup>	Kaltag	Rampart	Eagle				
1999	649	-	-	2	180	0	-	-	70	-	-	-	0	0	901
2000	949	-	-	313	1,705	0	0	0	110	-	-	322	0	3,399	
2001	-	492	-	302	180	-	0	0	251	-	-	0	0	1,225	
2002	-	374	-	155	225	-	0	0	158	-	-	0	0	912	
2003	-	635	-	362	371	-	-	0	23	0	-	0	0	1,391	
2004	-	152	-	285	236	-	-	0	128	-	-	0	0	801	
2005	-	112	-	107	241	-	-	-	120	-	0	0	0	580	
2006	-	144	-	204	193	0	-	-	37	-	0	0	389	967	
2007	-	466	-	434	231	0	-	-	133	-	0	-	-	1,264	
2008	-	235	-	209	116	0	-	-	45	-	0	-	-	605	
2009	-	166	0	210	203	-	-	-	-	-	0	-	-	579	
Five Year Average															
2004 to 2008	-	213	-	248	203	0	-	0	93	-	0	0	130	843	

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*Note:* Dashes indicate test fish project was not in operation. Does not include salmon that were accounted for by using the survey or permit methods Test fish data from 1992 to 1998 are available in a previous report (Busher et al. 2009). A test fish wheel project was operated in Manley in 1999, but no salmon were harvested.

- <sup>a</sup> Offshore Test Fishery Feasibility Study took place near the communities of Hooper Bay and Scammon Bay. Of the salmon distributed, 1 Chinook, 14 summer chum, and 16 fall chum salmon were given to Scammon Bay.
- <sup>b</sup> Chinook salmon radio telemetry project.
- <sup>c</sup> Salmon caught in the Lower Yukon “set” gillnet test fishery are included with Lower Yukon “drift” gillnet totals.
- <sup>d</sup> Includes 202 Chinook and 254 summer chum salmon caught in the 2008 Emmonak Chinook salmon mesh size study.

Appendix B9.—Estimated pink salmon subsistence harvest by residents of surveyed communities, with community and district totals, Yukon Area, 1999–2009.

Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Estimated Total		
												Even Years Average	Odd Years Average	All Years Average
Hooper Bay	99	902	32	5,475	473	5,418	860	1,433	113	1,013	957	2,848	315	1,582
Scammon Bay	527	96	362	417	997	2,508	1,645	1,381	1,435	2,766	1,186	1,434	993	1,213
<i>Coastal District</i>	<i>626</i>	<i>998</i>	<i>394</i>	<i>5,892</i>	<i>1,470</i>	<i>7,926</i>	<i>2,505</i>	<i>2,814</i>	<i>1,548</i>	<i>3,779</i>	<i>2,143</i>	<i>4,282</i>	<i>1,309</i>	<i>2,795</i>
Nunam Iqua	0	0	0	10	5	32	132	555	170	757	61	271	61	166
Alakanuk	0	38	0	130	0	233	49	115	32	494	24	202	16	109
Emmonak	17	0	9	39	4	32	54	225	51	641	5	187	27	107
Kotlik	15	263	0	849	198	318	155	219	129	1,161	42	562	99	331
<i>District 1</i>	<i>32</i>	<i>301</i>	<i>9</i>	<i>1,028</i>	<i>207</i>	<i>615</i>	<i>390</i>	<i>1,114</i>	<i>382</i>	<i>3,053</i>	<i>132</i>	<i>1,222</i>	<i>204</i>	<i>713</i>
Mountain Village	0	61	0	745	117	891	78	616	87	500	6	563	56	309
Pitkas Point	12	114	0	35	0	0	2	44	66	15	0	42	16	29
St. Mary's	1	54	0	7	0	137	144	236	32	367	5	160	35	98
Pilot Station	8	6	0	22	0	5	0	1	0	34	3	14	2	8
Marshall	0	0	0	473	0	105	6	3	0	26	0	121	1	61
<i>District 2</i>	<i>21</i>	<i>235</i>	<i>0</i>	<i>1,282</i>	<i>117</i>	<i>1,138</i>	<i>230</i>	<i>900</i>	<i>185</i>	<i>942</i>	<i>14</i>	<i>899</i>	<i>111</i>	<i>505</i>
Russian Mission	0	8	0	0	0	6	0	8	3	436	0	92	1	46
Holy Cross	0	20	0	0	0	0	0	17	0	20	0	11	0	6
Shageluk	0	0	0	0	130	0	0	0	0	0	9	0	26	13
<i>District 3</i>	<i>0</i>	<i>28</i>	<i>0</i>	<i>0</i>	<i>130</i>	<i>6</i>	<i>0</i>	<i>25</i>	<i>3</i>	<i>456</i>	<i>9</i>	<i>103</i>	<i>27</i>	<i>65</i>
Anvik	0	30	0	0	240	0	0	0	0	23	2	11	48	29
Grayling	1	0	0	30	3	0	3	0	0	200	0	46	1	24
Kaltag	1	0	0	0	0	10	4	0	0	383	0	79	1	40
Nulato	0	0	0	50	0	0	0	1	0	35	0	17	0	9
Koyukuk	0	0	0	4	0	0	0	0	0	67	0	14	0	7
Galena	0	0	0	50	0	0	0	0	0	31	0	16	0	8
Ruby	0	1	0	87	0	2	0	0	0	184	0	55	0	27
Huslia	0	0	0	0	0	0	0	0	0	100	0	20	0	10
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 4</i>	<i>2</i>	<i>31</i>	<i>0</i>	<i>221</i>	<i>243</i>	<i>12</i>	<i>7</i>	<i>1</i>	<i>0</i>	<i>1,023</i>	<i>2</i>	<i>258</i>	<i>50</i>	<i>154</i>

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Community	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Estimated Total		
												Even Years Average	Odd Years Average	All Years Average
Tanana	0	0	0	0	0	0	0	0	0	80	0	16	0	8
Stevens Village	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Fort Yukon	0	0	0	0	0	0	0	0	0	196	0	39	0	20
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
<i>District 5</i>	<i>0</i>	<i>276</i>	<i>0</i>	<i>55</i>	<i>0</i>	<i>28</i>								
Survey Totals	681	1,593	403	8,423	2,167	9,697	3,132	4,854	2,118	9,529	2,300	6,819	1,700	4,260
CI (95%)	621	559	416	4,091	964	2,829	1,521	990	739	1,818	1,184	-	-	-

Note: Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Annual 95% confidence interval, CI (95%).

Appendix B10.—Households with dogs, number of dogs, and salmon fed to dogs, as estimated in surveyed communities or reported in permit areas, Yukon Area, 1999–2009.

Districts Survey or Permit and Year	Number of Households with Dogs	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
1999						
Coastal District Survey	163	276	135	0	0	135
District 1 Survey	252	451	254	20	25	299
District 2 Survey	312	982	778	52	1,277	2,107
District 3 Survey	95	374	4,153	50	240	4,443
District 4 Survey	481	1,502	15,546	3,399	1,513	20,458
District 5 Survey	273	1,233	1,436	36,006	3,844	41,286
District 5 Permit <sup>a</sup>	141	739	-	-	-	11,013
District 6 Permit	107	1,321	-	-	-	13,256
Totals	1,824	6,878	22,302	39,527	6,899	92,997
2000						
Coastal District Survey	215	451	0	0	0	0
District 1 Survey	247	552	1,240	741	0	1,981
District 2 Survey	307	941	467	30	30	527
District 3 Survey	111	374	419	150	70	639
District 4 Survey	441	1,318	4,237	846	329	5,412
District 5 Survey	236	811	1,263	5,972	1,791	9,026
District 5 Permit <sup>a, b</sup>	67	568	-	-	-	317
District 6 Permit <sup>b</sup>	70	1,327	-	-	-	3,082
Totals	1,694	6,342	7,626	7,739	2,220	20,984
2001						
Coastal District Survey	234	495	0	0	0	0
District 1 Survey	318	609	223	100	0	323
District 2 Survey	331	926	255	210	80	545
District 3 Survey	114	610	873	111	25	1,009
District 4 Survey	553	2,074	4,571	2,014	1,263	7,848
District 5 Survey	293	1,026	1,649	10,629	5,976	18,254
District 5 Permit <sup>a, b</sup>	121	583	-	-	-	8,065
District 6 Permit <sup>b</sup>	130	1,266	-	-	-	7,506
Totals	2,094	7,589	7,571	13,064	7,344	43,550
2002						
Coastal District Survey	207	399	0	0	67	67
District 1 Survey	282	655	14	59	30	103
District 2 Survey	327	847	410	38	379	827
District 3 Survey	88	312	620	0	0	620
District 4 Survey	437	1,502	8,286	848	697	9,831
District 5 Survey	197	677	2,256	6,324	1,393	9,973
District 5 Permit <sup>a, b</sup>	81	546	-	-	-	689
District 6 Permit <sup>b</sup>	111	806	-	-	-	11,722
Totals	1,730	5,744	11,586	7,269	2,566	33,832

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Districts Survey or Permit and Year	Number of Households with Dogs	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
2003						
Coastal District Survey	132	365	0	0	0	0
District 1 Survey	239	483	115	0	38	153
District 2 Survey	236	729	635	0	58	693
District 3 Survey	87	298	3,650	0	0	3,650
District 4 Survey	384	1,728	15,648	4,118	3,271	23,037
District 5 Survey	221	864	3,268	19,267	2,862	25,397
District 5 Permit <sup>a, b</sup>	59	672	-	-	-	1,614
District 6 Permit <sup>b</sup>	161	866	-	-	-	12,717
Totals	1,519	6,005	23,316	23,385	6,229	67,261
2004						
Coastal District Survey	151	300	13	0	0	13
District 1 Survey	235	505	534	21	0	555
District 2 Survey	270	630	1,114	62	376	1,552
District 3 Survey	97	272	1,228	0	0	1,228
District 4 Survey	421	1,424	12,608	3,382	3,232	19,222
District 5 Survey	241	853	2,134	31,266	1,103	34,503
District 5 Permit <sup>a, b</sup>	60	644	-	-	-	3,428
District 6 Permit <sup>b</sup>	149	1,003	-	-	-	18,261
Totals	1,624	5,631	17,631	34,731	4,711	78,762
2005						
Coastal District Survey	190	375	0	0	0	0
District 1 Survey	262	482	302	46	34	382
District 2 Survey	281	563	1,315	137	104	1,556
District 3 Survey	78	214	2,288	342	70	2,700
District 4 Survey	364	1,325	5,993	3,236	1,464	10,693
District 5 Survey	277	1,229	4,566	24,982	1,498	31,046
District 5 Permit <sup>a, b</sup>	59	609	-	-	-	8,316
District 6 Permit <sup>b</sup>	143	1,175	-	-	-	27,179
Totals	1,654	5,972	14,464	28,743	3,170	81,872
2006						
Coastal District Survey	197	397	0	37	63	100
District 1 Survey	272	457	270	147	0	417
District 2 Survey	294	612	373	355	318	1,046
District 3 Survey	109	288	95	95	0	190
District 4 Survey	426	1,251	9,885	1,298	77	11,260
District 5 Survey	238	1,257	7,664	23,607	3,236	34,507
District 5 Permit <sup>a, b</sup>	62	596	-	-	-	12,934
District 6 Permit <sup>b</sup>	140	1,027	-	-	-	15,194
Totals	1,738	5,885	18,287	25,539	3,694	75,648

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Appendix B10.–Page 3 of 3.

Districts Survey or Permit and Year	Number of Households with Dogs	Number of Dogs	Summer Chum Salmon Fed to Dogs	Fall Chum Salmon Fed to Dogs	Coho Salmon Fed to Dogs	Total Salmon Fed to Dogs
<b>2007</b>						
Coastal District Survey	132	214	142	0	0	142
District 1 Survey	230	517	1,096	38	59	1,193
District 2 Survey	267	521	763	232	443	1,438
District 3 Survey	86	285	375	0	30	405
District 4 Survey	305	982	12,326	2,807	1,096	16,229
District 5 Survey	247	949	7,233	25,720	3,643	36,596
District 5 Permit <sup>a, b</sup>	52	567	-	-	-	17,891
District 6 Permit <sup>b</sup>	175	890	-	-	-	15,945
<b>Totals</b>	<b>1,494</b>	<b>4,925</b>	<b>21,935</b>	<b>28,797</b>	<b>5,271</b>	<b>89,839</b>
<b>2008 <sup>c</sup></b>						
Coastal District Survey	155	325	141	0	0	141
District 1 Survey	304	595	110	0	0	110
District 2 Survey	277	546	53	131	136	320
District 3 Survey	110	314	72	157	0	229
District 4 Survey	395	1,178	11,416	10,342	650	22,408
District 5 Survey	244	887	2,575	27,958	2,346	32,879
District 5 Permit <sup>a, b</sup>	55	552	-	-	-	14,103
District 6 Permit <sup>b</sup>	186	882	-	-	-	10,345
<b>Totals</b>	<b>1,726</b>	<b>5,279</b>	<b>14,367</b>	<b>38,588</b>	<b>3,132</b>	<b>80,535</b>
<b>2009</b>						
Coastal District Survey	104	133	0	0	0	0
District 1 Survey	228	390	632	75	0	707
District 2 Survey	269	457	100	0	44	144
District 3 Survey	90	237	0	160	72	232
District 4 Survey	371	938	12,973	2,855	2,502	18,330
District 5 Survey	231	913	3,385	20,459	1,678	25,522
District 5 Permit <sup>a, b</sup>	47	522	-	-	-	7,649
District 6 Permit <sup>b</sup>	155	630	-	-	-	14,253
<b>Totals</b>	<b>1,495</b>	<b>4,220</b>	<b>17,090</b>	<b>23,549</b>	<b>4,296</b>	<b>66,837</b>
<b>Five Year Average</b>						
<b>2004 to 2008</b>						
Coastal District Survey	165	322	59	7	13	79
District 1 Survey	261	511	462	50	19	531
District 2 Survey	278	574	724	183	275	1,182
District 3 Survey	96	275	812	119	20	950
District 4 Survey	382	1,232	10,446	4,213	1,304	15,962
District 5 Survey	249	1,035	4,834	26,707	2,365	33,906
District 5 Permit <sup>a, b</sup>	58	594	-	-	-	11,334
District 6 Permit <sup>b</sup>	159	995	-	-	-	17,385
<b>Totals</b>	<b>1,647</b>	<b>5,538</b>	<b>17,337</b>	<b>31,280</b>	<b>3,996</b>	<b>81,331</b>

*Note:* Beginning in 1993, the estimated number of salmon includes those retained from subsistence and commercial-related harvests. Beginning in 1992, the community of Shageluk was included in District 4 totals instead of District 3. Dashes indicate information was not collected. Data from 1992 to 1998 are included in earlier reports (Busher et al. 2009). Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Permit totals do not include the community of Stevens Village.

<sup>b</sup> Does not include duplicate information from households with more than one permit.

<sup>c</sup> Corrected to include 3,299 salmon fed to dogs retained for subsistence from commercial fisheries in surveyed communities.

Appendix B11.—Estimated and reported subsistence and personal use harvest of miscellaneous fish species, Yukon Area, 1999–2009.

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Five Year Average 1999-2003	Five Year Average 2004-2008
Survey Estimates <sup>a</sup>													
Whitefish	50,748	45,292	86,200	78,489	68,416	64,039	48,862	60,923	64,338	54,729	51,778	65,829	58,578
Pike	16,928	9,174	16,753	18,906	22,341	18,738	29,799	28,133	25,947	16,053	8,061	16,820	23,734
Sheefish	12,550	6,581	14,384	15,960	14,280	16,896	13,764	12,745	13,203	10,154	7,861	12,751	13,352
Survey Reported													
Burbot	11,545	2,168	2,836	5,809	3,000	2,628	3,138	5,069	3,500	3,273	2,027	5,072	3,522
Lamprey	30,536	785	4,520	623	29,886	33,919	38,115	2,092	12,584	803	1,699	13,270	17,503
Tomcod	2,399	2,999	7,278	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	4,356	7,560
Grayling	1,476	346	1,503	1,408	2,421	1,645	1,258	1,145	2,296	857	667	1,431	1,440
Suckers	104	364	277	546	234	178	1,452	105	225	25	59	305	397
Arctic Char	131	32	251	198	376	116	217	345	181	184	43	198	209
Blackfish	165,252	42,110	85,938	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	177,594	190,094
Sockeye Salmon	-	-	-	-	-	787	648	333	493	213	216	-	495
Permit Reported													
Whitefish	3,734	3,205	2,430	2,856	5,508	4,402	3,671	3,399	3,328	3,402	4,039	3,547	3,640
Pike	812	687	451	791	1,266	606	641	1,008	2,094	1,678	733	801	1,205
Sheefish	176	85	75	66	203	97	155	80	83	111	76	121	105
Burbot	101	95	124	65	129	127	78	127	99	89	119	103	104
Grayling	439	521	51	138	1,228	1,032	800	507	525	488	363	475	670
Suckers	986	739	236	344	978	341	694	770	243	298	518	657	469
Yukon Area Totals													
Whitefish	54,482	48,497	88,630	81,345	73,924	68,441	52,533	64,322	67,666	58,131	55,817	69,376	62,219
Pike	17,740	9,861	17,204	19,697	23,607	19,344	30,440	29,141	28,041	17,731	8,794	17,622	24,939
Sheefish	12,726	6,666	14,459	16,026	14,483	16,993	13,919	12,825	13,286	10,265	7,937	12,872	13,458
Burbot	11,646	2,263	2,960	5,874	3,129	2,755	3,216	5,196	3,599	3,362	2,146	5,174	3,626
Lamprey	30,536	785	4,520	623	29,886	33,919	38,115	2,092	12,584	803	1,699	13,270	17,503
Tomcod	2,399	2,999	7,278	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	4,356	7,560
Grayling	1,915	867	1,554	1,546	3,649	2,677	2,058	1,652	2,821	1,345	1,030	1,906	2,111
Suckers	1,090	1,103	513	890	1,212	519	2,146	875	468	323	577	962	866
Arctic Char	131	32	251	198	376	116	217	345	181	184	43	198	209
Blackfish	165,252	42,110	85,938	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	177,594	190,094
Sockeye Salmon	-	-	-	-	-	787	648	333	493	213	216	-	495

Note: Dashes indicate information was not collected. Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Subsistence whitefish, pike, and sheefish estimates in surveyed communities is based on a stratified random sample of households as designated for the estimation of subsistence salmon harvests.

Appendix B12.–Surveyed households which indicated that their subsistence salmon needs were not met, Yukon Area, 1992–2002.

Year	Total Number of Households Contacted	Total Number of Responses Indicating Needs Were not Met <sup>a</sup>	Percent of Responses Indicating Needs Were not Met <sup>a</sup>	Percent of Responses Indicating Poor Salmon Returns
1992	870	272	31%	7%
1993	979	514	53%	8%
1994	933	345	37%	1%
1995	1,011	207	20%	1%
1996	951	230	24%	6%
1997	915	213	23%	6%
1998	970	593	61%	47%
1999	1,024	385	38%	18%
2000 <sup>b</sup>	932	592	64%	77%
2001 <sup>b</sup>	885 <sup>c</sup>	496	56%	27%
2002 <sup>b</sup>	799 <sup>c</sup>	437	55%	25%
Eleven Year Average				
1992-2002	934	389	42%	20%

<sup>a</sup> This question was altered after 2002 season. Subsequent results are included in Appendix B13.

<sup>b</sup> A different method from prior years was used from 2000 to 2002 to provide an indication of the quality of the salmon runs by species. The method used was a weighted average expressed in percent of Chinook, summer chum, fall chum, and coho salmon responses from households that indicated poor salmon runs by species contributed to not meeting their needs.

<sup>c</sup> Total number of households that answered this survey question, rather than total number households contacted.

Appendix B13.–Households responses assessing their success of subsistence salmon needs being met (in percent), by species, Yukon Area, 2003–2009.

Chinook Salmon							
Year	Total Households	Households Contacted	Total Number of Household Responses <sup>a</sup>	Household Responses Indicated ≤ 50% Needs Met		Household Responses Indicated > 50% Needs Met	
				Responses	Percent	Responses	Percent
2003 <sup>b</sup>	2,351	920	639	223	0.35	416	0.65
2004	2,274	1,055	693	203	0.29	490	0.71
2005	2,231	1,022	749	223	0.30	526	0.70
2006	2,398	1,057	856	401	0.47	455	0.53
2007	2,353	1,086	914	422	0.46	492	0.54
2008	2,470	1,153	970	488	0.50	482	0.50
2009 <sup>c</sup>	2,366	1,036	618	457	0.74	161	0.26
2004-2008 Avg	2,345	1,080	836	347	0.40	489	0.60
Summer Chum Salmon							
Year	Total Households	Households Contacted	Total Number of Household Responses <sup>a</sup>	Household Responses Indicated ≤ 50% Needs Met		Household Responses Indicated > 50% Needs Met	
				Responses	Percent	Responses	Percent
2003 <sup>b</sup>	2,351	920	421	152	0.36	269	0.64
2004	2,274	1,055	542	187	0.35	355	0.65
2005	2,231	1,022	570	165	0.29	405	0.71
2006	2,398	1,057	686	247	0.36	439	0.64
2007	2,353	1,086	706	299	0.42	407	0.58
2008	2,470	1,153	685	265	0.39	420	0.61
2009 <sup>c</sup>	2,366	1,036	382	228	0.60	154	0.40
2004-2008 Avg	2,345	1,080	595	233	0.36	405	0.64
Fall Chum Salmon							
Year	Total Households	Households Contacted	Total Number of Household Responses <sup>a</sup>	Household Responses Indicated ≤ 50% Needs Met		Household Responses Indicated > 50% Needs Met	
				Responses	Percent	Responses	Percent
2003 <sup>b</sup>	2,351	920	181	58	0.32	123	0.68
2004	2,274	1,055	210	81	0.39	129	0.61
2005	2,231	1,022	380	145	0.38	235	0.62
2006	2,398	1,057	408	220	0.54	188	0.46
2007	2,353	1,086	580	396	0.68	184	0.32
2008	2,470	1,153	470	289	0.61	181	0.39
2009 <sup>c</sup>	2,366	1,036	196	165	0.84	31	0.16
2004-2008 Avg	2,345	1,080	374	226	0.52	183	0.48
Coho Salmon							
Year	Total Households	Households Contacted	Total Number of Household Responses <sup>a</sup>	Household Responses Indicated ≤ 50% Needs Met		Household Responses Indicated > 50% Needs Met	
				Responses	Percent	Responses	Percent
2003 <sup>b</sup>	2,351	920	116	40	0.34	76	0.66
2004	2,274	1,055	177	71	0.40	106	0.60
2005	2,231	1,022	226	104	0.46	122	0.54
2006	2,398	1,057	181	109	0.60	72	0.40
2007	2,353	1,086	399	283	0.71	116	0.29
2008	2,470	1,153	272	204	0.75	68	0.25
2009 <sup>c</sup>	2,366	1,036	103	90	0.87	13	0.13
2004-2008 Avg	2,345	1,080	226	154	0.58	97	0.42

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*Note:* Estimates from 2006 and 2007 are preliminary.

<sup>a</sup> Total number of households surveyed who answered this question.

<sup>b</sup> In 2003, the survey question “How successful was your household in meeting its subsistence salmon needs?” (indicated by percent success) targeted primarily only those households selected to be surveyed that indicated they subsistence fished for salmon and does not necessarily include all selected households that did not fish.

<sup>c</sup> In 2009, survey question was changed to ask 'How many (of each species) do you usually get?'



## **APPENDIX C. HISTORY OF REGULATORY CHANGES**

**Definitions:** Sec. 16.05.940. In AS 16.05 - AS 16.40

(25) "personal use fishing" means the taking, fishing for, or possession of finfish, shellfish, or other fishery resources, by Alaska residents for personal use and not for sale or barter, with gill or dip net, seine, fish wheel, long line, or other means defined by the Board of Fisheries

(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;

(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

**History of regulatory changes:**

1960

- Alaska Department of Fish and Game is given responsibility to manage all Alaskan subsistence and commercial fisheries.
- Commercial fishing is open six days per week, subsistence fishing is open 5.5 days per week.
- Once commercial fishing season ends, subsistence fishing is open 7 days per week.

1961

- Lower Yukon Area (Districts 1 – 3) commercial fisheries are open 4 days per week.
- Directed fall chum salmon fishery begins.

1962

- Four commercial fishing districts established within Alaska portion of the Yukon River drainage.
- Subsistence fishing in the Lower Yukon Area is reduced to 4 days per week (concurrent with commercial).

1974

- Six commercial fishing districts established within Alaska portion of the Yukon River drainage.
- Subsistence fishing restrictions are implemented along the southern portion of the Dalton Highway.
- Upper Yukon Area (Districts 4 – 6) begins concurrent subsistence and commercial fishing 5 days per week.
- Subsistence fishing schedules are linked to commercial fishing schedules in Districts 1-6.

1974–77

- Legalized sale of salmon roe from Yukon Area subsistence caught salmon.

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1976

- Limited entry begins for Yukon River commercial fisheries.
- Streams crossing the Dalton Highway north of the Yukon River are closed to subsistence fishing.

1977

- Lower Yukon Area is reduced to subsistence/commercial fishing 3 days per week during the commercial Chinook salmon season.
- Lower Yukon Area is reduced to subsistence/commercial fishing 3.5 days per week during the fall chum salmon season.

1978

- Passage of the *State of Alaska Subsistence Act*, which provides a rural subsistence priority in times of shortage.
- Commercial salmon roe fishery begins in the Upper Yukon Area.

1979

- Lower Yukon Area is reduced to subsistence/commercial fishing 3 days per week during the fall chum salmon season.

1980

- ANILCA (*Alaska National Interest Lands Conservation Act*) provides for a rural subsistence priority on Federal lands.

1980–89

- Unified management of subsistence fishing by the State of Alaska consistent with ANILCA and the *State of Alaska Subsistence Act*.

1981

- Commercial fishing periods in the Lower Yukon Area can be established inseason by state emergency order.

1982

- Tanana River Subdistrict 6-C Subsistence Management Plan established.

1983–84

- Lower Yukon Area subsistence periods established inseason by emergency order.

1986

- Personal use fisheries created for Alaska residents living in non-rural areas. Non-rural residents are classified as “personal use” fishermen rather than subsistence fishermen regardless of where they fish.

1987

- Regulations for a personal use fall chum salmon fishery established in the Yukon Area.
- Regulatory *Yukon Area Fall Chum Salmon Management Plan* established.

1988

- Subdistricts 6-A, 6-B and 6-C subsistence and personal use periods are limited to two 42 hour periods per week.
- “Old Minto Area” is open to subsistence salmon fishing 5 days per week.
- Upper Tanana Area remains open to subsistence fishing 7 days per week.
- Regulations for personal use fisheries for all salmon species established in the Yukon Area.

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1990

- Court case removes rural residency requirement for subsistence participation (*McDowell v. State*).
- Regulatory *Yukon River Summer Chum Salmon Management Plan* established.
- Regulatory *Tanana River Salmon Management Plan* established.

1992

- Alaska divided into subsistence and non-subsistence areas. Personal use fishing only allowed within the non-subsistence areas.
- Upper Yukon Area commercial periods established in season by emergency order.

1993

- Regulations implemented separating subsistence and commercial salmon fishing times in Districts 1-3 and Subdistrict 4-A (prior to 1993 subsistence and commercial periods coincided).
  - In Districts 1-3 subsistence salmon fishing is open 24 hours/day until commercial season begins. Once commercial fishing begins subsistence fishing is closed 18 hours before, during and 12 hours after each commercial period. Additional periods for subsistence salmon fishing may be authorized.
  - Subdistricts 4-B, 4-C, 5-B and 5-C subsistence salmon fishing is open 7 days per week until commercial season begins, then commercial and subsistence periods coincide. Additional periods for subsistence salmon fishing may be authorized.
  - Koyukuk River, Kantishna River and Subdistrict 5-D remain open to subsistence salmon fishing 7 days per week.
- Court case declares subsistence and non-subsistence areas are unconstitutional and subsistence salmon fishing again allowed statewide (*State v. Kenaitze Indian Tribe*).
- Regulatory *Toklat River Fall Chum Salmon Rebuilding Management Plan* established.
- Amounts necessary for subsistence was defined for Yukon-Northern Area:
  - 348,000–503,000 (all salmon species combined).

1994

- Subdistrict 5-A subsistence salmon fishing is allowed 5 days per week once commercial season ends.
- Regulatory *Anvik River Chum Salmon Fishery Management Plan* established.

1995

- Alaska Supreme Court reverses decision in *Kenaitze* case and Alaska is again divided into subsistence and non-subsistence areas. Personal use fishing is only allowed within the non-subsistence areas.
- Ninth Circuit Court finds that Federal jurisdiction for fisheries should be extended to navigable waters on Federal lands (*State of Alaska v. Babbitt a.k.a. Katie John decision*). US Senator Stevens delays implementation.

1998

- Subdistrict 5-A subsistence salmon fishing is allowed 7 days per week once commercial season ends.
- Regulatory *Yukon River King Salmon Management Plan* established.

1999

- Subdistrict 5-A subsistence salmon fishing is returned to 5 days per week once commercial season ends because in 1998 Toklat River escapement goals were not met.
- Regulatory *Yukon River Coho Salmon Management Plan* established.

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2000

- U.S. Fish and Wildlife Service begins first season of joint subsistence fisheries management authority with ADF&G in portions of the Yukon Area.

2001

- Subsistence fishing schedule “windows” established for times of conservation implemented throughout the entire Yukon River Area when there is no commercial fishing season:
  - Districts 1-3 area open to subsistence salmon fishing for two 36 hour periods per week.
  - District 4 and Subdistricts 5-B and 5-C are open to subsistence salmon fishing for two 48 hour periods per week.
  - Subdistrict 5-A, 6-A and 6-B (includes the Kantishna River) are open to subsistence salmon fishing for two 42 hour periods per week.
  - The “Old Minto Area” is open to subsistence salmon fishing 5 days per week.
  - The Coastal District, Koyukuk River and Subdistrict 5-D are open to subsistence salmon fishing 7 days per week.
  - Subdistrict 6-C is open to personal use salmon fishing for two 42 hour periods per week.
- Amounts necessary for subsistence defined by salmon species for Yukon Area:
  - Chinook salmon: 45,500–66,704 fish
  - Summer chum salmon: 83,500–142,192 fish
  - Fall chum salmon: 89,500–167,900 fish
  - Coho salmon: 20,500–51,980 fish

2004

- *Yukon River King Salmon Management Plan.*
  - During times of chum salmon conservation, the commercial fish wheel season may be closed by emergency order and immediately reopen the season during which set gillnet gear may be used instead of a fish wheel.
- *Yukon River Drainage Fall Chum Salmon Management Plan* revised.
  - Plan to be implemented from July 16 through December 31 to ensure adequate escapement for fall chum salmon into the Yukon River drainage and to provide management guidelines to ADF&G.
  - Subsistence fishing schedule of seven days a week fishing in the Kantishna River.
  - Returned Subdistrict 5-A to two 48-hour periods per week from 6:00 pm. Tuesdays until 6:00 p.m. Thursdays and from 6:00 pm. Fridays until 6:00 p.m. Sundays.
- *Toklat River Fall Chum Salmon Rebuilding Management Plan* repealed and elements of the plan incorporated into the *Yukon River Drainage Fall Chum Salmon Management Plan.*
- *Tanana River Salmon Management Plan.*
  - In Subdistricts 6-A and 6-B, through September 30, the subsistence salmon fishing periods are from 6:00 p.m. Fridays until 12:00 noon Sundays and from 6:00 p.m. Mondays until 12:00 Wednesdays, unless altered by emergency order. This allows for possible seven days a week subsistence fishing beginning October 1.
- In Subdistrict 4-A, king salmon may be taken during the commercial fishing season with drift gillnet gear only for two 48-hour fishing periods per week, by emergency order from 6:00 p.m. Sundays until 6:00 p.m. Tuesdays and from 6:00 p.m. Wednesdays until 6:00 p.m. Fridays.

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- New subsistence required permit areas in portions of the Koyukuk River along the Dalton Highway and Yukon River drainage from Garnet Island to Hess Creek:
  - South Fork of the Koyukuk River drainage upstream from the mouth of the Jim River and the Middle Fork of the Koyukuk River drainage upstream from the mouth of the North Fork. The Koyukuk River areas along the Dalton Highway were closed but are now opened for subsistence fishing for nonsalmon species with permit and gear stipulations. Gillnets gear may be used only from November 1 through June 30 and a gillnet mesh size may not exceed three and one-half inches.
  - Yukon River drainage upstream from the westernmost tip of Garnet Island to the mouth of Hess Creek of Subdistrict 5-C (encompassing the community or Rampart) in an effort to document harvest by transient fishermen. This change now requires a subsistence fishing permit in the entire Subdistrict 5-C.

2006

- Chinook salmon harvests in Districts 1 through 3 between June 1 and July 15 must be marked by the removal of both lobes of the tail. This is a change from the requirement to remove the dorsal fin, which is more difficult to remove, and potentially exposes the flesh.
  - Coho salmon management plan was revised.
    - Must be projected to provide a harvestable surplus.
    - Linked to Yukon River Drainage fall chum salmon management plan. Was adjusted from assessment of 625,000 to 550,000 fall chum salmon.
    - Fall chum salmon are considered incidental harvest during coho salmon openings.
    - End dates of plan in districts and subdistricts were adjusted.
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