Fishery Data Series No. 15-28

Subsistence and Personal Use Salmon Harvests in the Alaska Portion of the Yukon River Drainage, 2012

by

Deena M. Jallen,

Samantha K. S. Decker,

and

Toshihide Hamazaki

September 2015

Alaska Department of Fish and Game **Divisions of Sport Fish and Commercial Fisheries**

Symbols and Abbreviations

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Weights and measures (metric)

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

Weights and measures (English)

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

Time and temperature

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

Physics and chemistry

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

General

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

Mathematics, statistics

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

FISHERY DATA SERIES NO. 15-28

SUBSISTENCE AND PERSONAL USE SALMON HARVESTS IN THE ALASKA PORTION OF THE YUKON RIVER DRAINAGE, 2012

by

Deena M. Jallen
Alaska Department of Fish and Game, Division of Commercial Fisheries, Fairbanks

Samantha K. S. Decker
Alaska Department of Fish and Game, Division of Commercial Fisheries, Fairbanks

and

Toshihide Hamazaki
Alaska Department of Fish and Game, Division of Commercial Fisheries, Anchorage

Alaska Department of Fish and Game
Division of Sport Fish, Research and Technical Services
333 Raspberry Road, Anchorage, Alaska, 99518-1565

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Deena M. Jallen,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
1300 College Road, Fairbanks, AK 99701-1599, USA

Samantha K. S. Decker,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
1300 College Road, Fairbanks, AK 99701-1599, USA
and

Toshihide Hamazaki,
Alaska Department of Fish and Game, Division of Commercial Fisheries,
333 Raspberry Road, Anchorage, AK 99518-1599, USA

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ABSTRACT

This annual report contains estimates of subsistence and personal use salmon harvests 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 remote 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 2012, a total of 1,125 households were surveyed 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 2012, there were 478 subsistence and personal use permits issued, and 94% were returned. Of these returned permits, 229 reported fishing. This report also documents subsistence salmon given to households from various test fishery projects. The total subsistence and personal use harvest throughout the Yukon Area was estimated to be 30,486 Chinook *Oncorhynchus tshawytscha*, 127,313 summer chum *O. keta*, 99,719 fall chum *O. keta*, and 21,633 coho *O. kisutch* salmon. The primary fishing gear types used were set gillnets (49%), drift gillnets (45%), fish wheels (5%), and other (<1%). Approximately 1,655 households owned 6,299 dogs, and 287 households fed an estimated 98,898 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 *Coregonus* spp., harvest, personal use, subsistence.

INTRODUCTION

Since 1961, the Alaska Department of Fish and Game (ADF&G) has collected information on subsistence salmon harvests in the Yukon Area. Subsistence harvest estimates provide a record of historical harvest and trends. Annual documentation of the subsistence salmon harvest is used in conjunction with commercial, sport, personal use harvests, and escapement estimates to calculate total run size. Harvest and escapement information combined with age composition are used to construct brood tables and estimate the number of returning offspring per spawner for some stocks. Subsistence harvest information may also be used, in conjunction with other harvest and escapement information, to forecast future salmon returns and provide an outlook on fisheries management in the coming year.

Yukon Area communities have a long tradition of harvesting salmon for subsistence use, and fishing activities are usually based from a fish camp or a home community within the drainage. Extended family groups, representing 2 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, canned, or frozen. 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 Yukon River drainage are primarily of Yup'ik Eskimo and Athabascan Indian descent. Excluding the greater Fairbanks area (approximately 100,343 people), the most recent census indicates the population of rural Yukon Area residents within the Denali Borough, Southeast Fairbanks, Yukon-Koyukuk, and Wade Hampton Census Areas was approximately 22,470 people in 2012. The recent 5-year (2007–2011) average rural population in the Yukon Area has remained relatively stable at approximately 22,190 people (Hunsinger 2013).

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 to harvest salmon throughout the Yukon

Area, whereas drift gillnets are only allowed from the mouth of the Yukon River to approximately 18 miles below the community of Galena (River Mile 530). State regulations (Alaska Administrative Code (AAC) 5 AAC 01.220 and 5 AAC 77.717 Lawful Gear) were based on traditional practices. Since 2005, drift gillnets were allowed under federal permits in Subdistricts 4-B and 4-C (near the communities of Galena and Ruby) during weekly subsistence openings from June 10 to July 14 (Appendix A8). Although fish wheels are a legal gear type for subsistence fishing throughout the drainage, they are essentially used only in the Upper Yukon Area where river conditions and fishing locations are more suitable.

Yukon Area fishermen may participate in both commercial and subsistence salmon fisheries. Alaska state law dictates that subsistence is the highest priority use of salmon and subsistence is a primary consideration in fishery management actions. Salmon or their eggs harvested during subsistence openings cannot be legally bought or sold under the State of Alaska regulations, but commercially harvested salmon may be retained for subsistence use. In addition to salmon harvested during subsistence openings, commercial fishing households have the opportunity to retain salmon caught during commercial openings for subsistence purposes. Income from commercial fishing is often used by households to help pay for the costs associated with subsistence harvesting activities, including fuel and fishing equipment. Commercial fishermen are required to have a valid limited entry commercial fishing permit to participate in commercial fisheries. In some areas, subsistence fishing periods are separated from commercial fishing by closures before, during, and after commercial periods, whereas in other areas subsistence and commercial fishing may occur concurrently. Commercial fisheries in the Yukon Area are primarily opened in areas near fish buyer and processor operations where fishermen have a market for their catch.

Subsistence fishermen are not required to have a fishing permit in most of the Yukon River drainage; however, permits are required for subsistence or personal use fishing in the Tanana River and parts of the Koyukuk River and Yukon River that are accessible by road (Figure 1). In the communities along the Yukon River and tributaries where permits are not required, voluntary household surveys are conducted in each community in order to estimate the harvest. In contrast, fishermen in areas where permits are required must submit their harvest records.

Personal use fishing permits are available for the Fairbanks nonsubsistence area. Nonsubsistence areas are defined as areas where subsistence is not a principal characteristic of the economy, culture, and way of life (Alaska Statute 16.05.258(c)). The priority for personal use harvests are similar to that of commercial and sport fisheries and are a lower priority than subsistence fishing. The Fairbanks Nonsubsistence Area was established in 1992 (Figure 2, Appendix C) due to the potential heavy demand urban fishermen could place on the resource. Since 1995, personal use fishing has been open in nonsubsistence areas to all Alaska residents regardless of where they reside. In the nonsubsistence area, fishermen must possess a personal use household permit and a resident sport fish license in order to participate in the fishery. The personal use fishery has a limit of 750 Chinook and 5,000 chum salmon taken through August 15 and 5,200 chum and coho salmon combined taken after August 16. Fishermen who harvested salmon within a portion of Subdistrict 6-B and all of Subdistrict 6-C were required to call in their catch on a weekly basis for inseason fishery management purposes.

Subsistence-caught salmon are primarily used for human consumption but may also be fed to dogs, particularly sled dogs. During the active fishing season, households in all areas feed scraps from salmon processing to sled dogs and other dogs. The practice of keeping sled dogs is less common in the Lower Yukon area; therefore, relatively few whole salmon are fed to dogs in this area.

Harvesting salmon for sled dogs is more common in the Upper Yukon area (Figure 1). Sled dogs are used for recreation, transportation, and as haul animals. Summer chum, fall chum, and coho salmon are primarily harvested to feed dogs in the Upper Yukon area (Andersen and Scott 2010). 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. Salmon retained for dog food is an important component of subsistence harvest and was found to constitute between 25% and 92% of all fish species fed to sled dogs among 6 Yukon River communities (Andersen and Scott 2010). Because Chinook salmon are so prized for human use, a regulation was added in 2001 stating that only Chinook salmon that are small or unfit for human consumption may be fed to dogs (5 AAC 01.240(d), Appendix C1).

From the mid-19th century to the 1940s the use of dogs as winter transportation reached its peak. Fur trading, gold mining, and the development of towns and settlements throughout interior and northern Alaska were primarily serviced by commercial dog teams. An estimated 1 million salmon were fed to 6,000 working dogs in the Yukon River drainage in 1918 (Andersen and Scott 2010). 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, and the number of subsistence salmon harvested for dog food increased; however, from 1991 to present day there has been a decline in the number of households with dog teams (Andersen and Scott 2010). The decline is due in part to poor chum salmon runs from 1998 to 2002, combined with the steep rise in cost of equipment (e.g., boat, motor, nets, fuel) needed to harvest fish for dog food and a continued decline in households using dog teams for transportation or trapping.

Many of the fishing regulations implemented on the Yukon River prior to statehood were concerned with protecting subsistence harvests by restricting commercial fishing activities. Commercial fishing operations were first recorded in Canada from the Yukon Territory in 1903 and in the Lower Yukon Area in 1918 (Walker et al. 1989; Whitmore et al. 1990). Complaints about shortages of salmon for subsistence harvests led to increased research efforts; however, these projects were not uniform or continuously carried out year to year. The earliest known count of subsistence harvest consisted of a partial survey in 1918. Commercial fishing regulations in the Yukon area exist at least since 1919, when limits were imposed on the number of cases of canned salmon that could be commercially produced (Pennoyer et al. 1965). Large commercial harvests from 1918 to 1922 prompted complete closures of commercial fishing in the Lower Yukon Area from 1925 to 1931 to protect upriver subsistence fisheries. To improve understanding of subsistence and commercial fishing impacts on salmon stocks and the ability of residents to meet harvest needs, information on subsistence salmon harvests in the Yukon River has been collected or analyzed by the State of Alaska since 1958; however, survey methods from 1958 to 1960 were not documented. Methods from 1961 to 1987 varied from year to year, and included a 1961 survey by 2 Fish and Game aides who traveled by boat from the mouth of the Yukon to Dawson City enumerating fish on drying racks and in smoke houses (Pennoyer et al. 1962).

The 2012 subsistence salmon harvest survey and permit programs collected quantitative information on salmon harvest by species. The primary method of estimating Yukon Area subsistence harvest was the annual postseason salmon harvest survey. Other information collected included gear types used to harvest salmon, harvest distribution, nonsalmon species harvest,

number of dogs, and salmon fed to dogs. Qualitative information was also collected from households about salmon health and quality, subsistence fishing success, and fishery concerns. This report documents the estimated subsistence and personal use harvests within the Alaska portion of the Yukon River drainage during the 2012 season.

STUDY AREA

Postseason surveys are conducted in 33 communities within the Yukon Area, representing non-road accessible communities and areas of the drainage. Road-accessible communities on the Yukon and Koyukuk Rivers, and all communities along the Tanana River, were excluded from the survey (harvests are documented on permits). 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). For management purposes, the Yukon Area is divided into 7 districts and 10 subdistricts. The Lower Yukon Area consists of coastal waters and the Yukon River drainage from its mouth to Old Paradise Village (river mile 301) 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 Canada border (river mile 1,224) and is divided into Districts 4, 5, and 6. Upper Yukon Area includes 3 large (>400 miles) silt-laden tributaries where harvests occur: Koyukuk, Tanana, and Porcupine rivers. The Coastal District includes the remainder of coastal Yukon Area waters not included in District 1. The harvest from Coastal District communities may contain fish not necessarily Yukon River bound (Kerkvliet 1986). Two communities within the Yukon Area, Chevak and Arctic Village, are not included in this harvest survey based on their distance from the Yukon River proper and harvest of very few salmon. In this report, the difference between the designations Yukon River and Yukon Area is that the Yukon Area includes the Coastal District. Yukon River totals apply to data considered for the U.S./Canada border passage objectives, but Yukon Area totals refers to the management area that this report applies to.

The Yukon River drainage supports 5 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 2 temporally and genetically distinct stocks: early or summer chum and late or fall chum salmon. Chinook and summer chum salmon enter the Yukon River first and are later followed by a fall chum and coho salmon, with a period between when very few salmon are present. Pink salmon are only present and available for harvest in the lower Yukon to middle portion of the drainage up to about Anvik (315 river miles). Access to salmon species varies throughout the Yukon Management Area due to species distribution, migration patterns, and run timing. Salmon stocks are generally mixed in the Yukon River unless they segregate by the left- and right-bank orientation (e.g., Subdistricts 4-B, 4-C, 5-A and 5-B), or enter tributaries or areas that predominantly have only 1 salmon species present at a time (Subdistrict 5-D for Chinook and then fall chum salmon). During the survey and on fishing permits, information is also collected on subsistence harvests of nonsalmon fish species: whitefish *Coregonus* spp. and *Prosopium cylindraceum*, sheefish *Stenodus leucichthys*, burbot *Lota lota*, northern pike *Esox lucius*, Alaska blackfish *Dallia pectoralis*, Arctic grayling *Thymallus arcticus*, longnose sucker *Catostomus catostomus*, Arctic char *Salvelinus alpinus*, Arctic lamprey *Lampetra camtschatica*, saffron cod tomcod, *Eleginus gracilis,* herring *Clupea pallasii*, and Pacific halibut *Hippoglossus stenolepis*.

OBJECTIVES

The objectives of the study included the following:

1. Update community household lists to provide the basis for stratified random sampling of fishing and nonfishing households sufficient to support community harvest estimates, and estimate the number of people in each surveyed community.
2. Estimate the number of salmon and nonsalmon fish species harvested for subsistence in the Yukon Area, by community, using household surveys, harvest documented on subsistence and personal use permits, commercial fisheries reports of salmon caught but not sold, and records of salmon given to communities from test fishery projects.
3. Estimate the number of salmon harvested from each fishing district and subdistrict in the Yukon Area.
4. Document gear types used by Yukon Area subsistence and personal use fishermen and the percentage of Chinook salmon harvested by gear types in 2012.
5. Document the number of dogs within Yukon Area communities and salmon fed to dogs.
6. Document household responses relating to meeting of subsistence salmon needs in surveyed communities.
7. Collect additional information on species and time of harvest for small whitefish (Cisco and Round whitefish species).

In addition, the investigators documented comments and concerns conveyed by subsistence users during household surveys.

METHODS

Total number of salmon harvested for subsistence and personal use fisheries was estimated using information collected from household surveys, subsistence and personal use permits, test fishery data supplied by projects, harvest calendars, and postcards. Total subsistence and personal use harvest includes fish harvested for direct personal or family use (Appendix C), fish distributed to households from various test fishery projects, and fish caught in commercial fisheries and retained for household use. In surveyed communities, information was collected from selected households and expanded to estimate the harvest of the entire community. In permit communities, harvest totals reported on returned permits were summed but not expanded to account for any harvest associated with unreturned permits.

HOUSEHOLD SUBSISTENCE SURVEYS

Participation in the survey was voluntary, and household harvest information was kept confidential. Surveyed communities were contacted starting in the Lower Yukon Area in September. Communities were surveyed roughly in order from downriver to upriver after most households finished harvesting salmon for subsistence. To maintain consistency in administration of the survey, household surveys were primarily conducted by the same 2 ADF&G technicians through the season (Table 1).

Survey Design

The household harvest survey methodology was based on a stratified random sample design (Cochran 1977). In this design, a household within the community was the primary sampling unit. A household generally consists of 1 or more people living together in a dwelling and sharing the same landline phone and mailing address. Multiple generations living in 1 dwelling would be considered 1 household. Individuals living in detached but physically related structures were considered part of a household if they participated as a unit in harvesting, processing, and distributing resources and shared contact information.

The database of Yukon Area households was updated using information from the previous years' surveys. Community census lists, telephone directories, news items, and other sources of information were also used in maintaining the database. 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.

Households were stratified into 5 harvest groups based on the level of harvest, which was determined by the total number of salmon harvested by each household in the most recent 2 of the previous 5 years. Total salmon harvest included Chinook, summer chum, fall chum, and coho salmon and did not include pink or sockeye salmon. When 2 recent years of harvest data were unavailable, such as from new households or households that have not participated in the survey, the household's harvest group designation remained the same as the previous year or the household was classified as unknown. The harvest groups and survey coverages (i.e., percentages of households surveyed within the group) were as follows:

1. Unknown: unknown harvest level; survey coverage 100%.
2. Do Not Fish: households that do not harvest salmon; survey coverage 30%.
3. Light Harvester: harvest of 1–100 total salmon; survey coverage 30%.
4. Medium Harvester: harvest of 101–500 total salmon; survey coverage 100%.
5. Heavy Harvester: harvest of more than 500 total salmon; survey coverage 100%.

In recent years, households have been subject to subsistence restrictions in the summer and fall seasons, and as a result, a household might not have been able to harvest as many salmon as usual. However, when calculating groups for 2012, households may have been moved from the unknown group or a lower harvest group to a higher harvest group but were not downgraded based on their recent harvest data.

To improve the precision of harvest estimates in the larger communities of Emmonak, Holy Cross, Pilot Station, and Tanana, sampling rates in the Light Harvester and Do Not Fish groups were increased to 50% of households in those groups. When any harvest group contained 5 or fewer households, all households in that were included in the survey (i.e., 100% coverage). In communities with less than 40 households, all households were included in the survey (100% coverage).

Fishing households included all households that participated in subsistence salmon fishing activities. Frequently, 2 or more households fished together at a fish camp or as a group, where 1 household operated fishing gear and the other household processed fish (cutting and drying). Each of these households was considered to be a fishing household. The number of fish harvested by each household consisted of the number of fish taken home from the group catch. In cases where fishing households caught and brought home fish and then gave fish to nonfishing

households that did not participate in the group, receiving households were not considered to be fishing households.

Survey Questionnaire

To keep data comparable between years, the subsistence survey questions (Figure 3) have generally remained consistent from year to year. Questions included total number of salmon harvested by the household (Questions 5 and 7), whether the household commercial fished and if any of their subsistence harvest was retained from commercial fishing (Question 9), number of salmon kept by the household (Question 12), fishing gear types used to harvest salmon (Question 8), gear types used to harvest Chinook salmon (Question 8A), and area fished (Question 7). Salmon retained from commercial fishing are included in subsistence harvest totals for each household (Question 7).

To determine distribution of salmon within a community, the survey addressed 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 outside the group (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, and 20).

Households were asked to assess at what level their subsistence salmon needs were met for each species (Question 14). Needs met was calculated by comparing the number of salmon harvested or received to the number that the household said they usually harvested or received. Households may receive fish from test fishery projects or throughout the year from friends and relatives. At the time of the survey, some households were unable to assess whether their needs were met because they had not yet received their fish for the year. Comments were also recorded by surveyors to identify factors such as lack of fishing equipment or bad weather that affected a household's ability to meet its needs, and to indicate whether a household normally harvested or used a species, or usually did not harvest a particular species. If a household lost part of its subsistence catch (Question 10), the surveyor asked about the reason for loss and verified that the lost fish were included in the harvest estimates. Lost salmon are included in household harvest estimates but are not included in a household's use (Question 12), unless they were fed to dogs.

Households were also asked about their harvest of pink and sockeye salmon (Questions 7 and 16) and nonsalmon fish species (Question 15). Nonsalmon species include large whitefish over 4 pounds and small whitefish species less than 4 pounds, sheefish, burbot, northern pike, Alaska blackfish, Arctic grayling, longnose sucker, Arctic char, Arctic lamprey, and saffron cod/tomcod. 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 the current year's survey. Arctic lampreys harvested during the winter of 2011 were reported by households during the 2012 survey.

In 2012, minor changes to the survey form were made to Questions 7 and 15 to reflect local fishing districts and other species distribution (e.g., households in the middle and upper Yukon Area were not asked about harvest of tomcod). Households in all the surveyed communities were asked for additional information about whitefish species. "Large whitefish" was broken out into broad and humpback whitefish *Coregonus nasus* and *C. pidschian*. Small whitefish species were still grouped together, but households were asked what time of year they harvested small whitefish species (Question 15). Households in the Coastal District and District 1 and were asked about their harvest of herring and Pacific halibut.

Survey Implementation

Before conducting the survey, surveyors were trained in interviewing techniques, which included learning the local names of salmon species and various ways to obtain the number of fish harvested. The surveyors were also briefed on current fishery issues and management actions related to the subsistence and commercial salmon fishing season. Surveyors were trained to ask questions consistently and 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.

Subsistence Assistants (residents with local knowledge) were employed by the Yukon River Drainage Fisheries Association (YRDFA) to assist with annually reviewing and updating the household list and community maps and guiding surveyors within the communities. In a few cases, Subsistence Assistants served as translators, but they did not conduct interviews. When assistants were unavailable, surveyors worked with other sources of local information such as tribal administrators or school principals to aid in community navigation. In some communities, an additional assistant was hired to work with each surveyor and serve as an alternate if the first assistant was unavailable for the entire visit.

Household surveys were conducted in September and October, when the majority of salmon fishing activities had ended but while fishermen could still easily recall their harvest numbers. In 2012, a total of 1,425 households were selected to be surveyed in 33 communities. Surveyors attempted to contact all selected households and noted households that were unavailable during the community visit for follow-up later by phone or letter. After the interview was completed, survey participants were given a small token of appreciation (bookmark magnifier) for participating in the survey.

After the household surveys were conducted, survey forms were edited for clarity and completion. When fishermen reported amounts in alternative terms, such as the number of 5 gallon buckets, quart sized bags, gunny sacks, or pounds, a conversion sheet based on local approximate measures was used to estimate number of fish harvested. Calculations were made when the surveys were edited prior to database entry. Households were called back when further clarification was needed or to reconcile information among households that harvested or shared salmon with each other. Households that moved or were combined with another household were deleted from the database prior to data analysis. New households were added to the Unknown use group.

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 (portions of 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. Included were the dates an ADF&G representative would visit their community. In 2012, permit issuing trips were conducted in the communities of Central, Circle, Delta Junction, Dot Lake, Manley Hot Springs, Minto, Nenana, Northway, Tanacross, and Tok (Figure 1). Permits were also issued by ADF&G staff stationed at the sonar project near Eagle.

Permit holders were required to record 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 nonsalmon permits and Kantishna River salmon permits). Households that did not report their harvest by the expiration date were mailed up to 2 reminder letters. Official state news releases and newspaper advertisements were published as reminders of permit due dates. Further, households that did not respond to the reminder letters were contacted by telephone.

Harvests from permit communities were calculated by summing harvests of all permit holders who returned their permit, returned a completed reminder letter, or verbally reported their harvest information. Commercially harvested salmon reported as caught but not sold on fish tickets[1] from permit areas were added to the community where the harvest occurred (Table 1, Appendices B1–B4). Information about dogs and salmon fed to dogs was collected from subsistence permits but not from personal use permits. Personal use salmon are not allowed to be fed to dogs.

Fishermen who obtained permits for the upper portion of Subdistrict 5-D were asked to note on their permits how many salmon were harvested above and below the sonar project operated near Eagle (Figure 1). This distinction is necessary because harvest above the sonar must be subtracted from the sonar estimate to determine passage of Chinook, fall chum, and coho salmon into Canada. Follow-up phone calls were made to fishermen postseason to verify gear types and locations of harvest by species.

The community of Stevens Village was surveyed as part of the annual household harvest survey; however, some households fished downriver in a permit area (Figure 1). To avoid double counting fish estimated by the harvest survey, information from permits issued to households in Stevens Village was not added to the survey estimates. Permit information was used to supplement data collected as part of the household harvest survey. The number of fishing households does not include households issued permits for the harvest of northern pike in the Tolovana River. Households that were issued and fished permits in more than 1 permit area were also not included in overall fishing household totals (Table 1).

SUBSISTENCE HARVEST CALENDARS AND POSTCARDS

Prior to the salmon fishing season, subsistence harvest calendars were distributed to households in surveyed communities in the Yukon Area. Calendars were also sent to previously identified households that did not live in surveyed communities and fished outside of permit areas. 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 2012, 1,610 calendars (955 to Lower Yukon Area and 655 to Upper Yukon Area) were mailed to all households except those in the Do Not Fish category. Calendars were also mailed to households with a history of subsistence fishing in the community of Rampart, and extra calendars were available upon request. Prior to surveyor visits to each community, fliers were sent to post offices, stores, schools, or city offices to remind fishermen to have their harvest calendars available

[1] Statewide electronic fish ticket database [Internet]. 1985- . Juneau, AK: Alaska Department of Fish and Game, Division of Commercial Fisheries. (cited: March 2013). [URL not available as some information is confidential].

during the household surveys. Each household that returned a properly completed 2012 harvest calendar before January 1, 2013 became eligible to win one of six $100, two $250, or one $500 lottery prizes.

To collect additional information on the harvest of Arctic lamprey *Lampetra camtschatica*, 688 postcards were mailed to every household in the communities of Anvik, Grayling, Holy Cross, Marshall, Mountain Village, Pilot Station, Pitkas Point, Russian Mission, and St. Marys in November, 2011. Households were asked to record their subsistence and commercial Arctic lamprey harvests from October to December of 2011 (Figure 4), as the fishery usually occurs after salmon fishing is concluded.

DATA ANALYSIS AND ESTIMATION METHODS

Quantities were estimated in each surveyed community using classical statistical methods (Cochran 1977) and data collected from households in 5 stratified harvest groups. Salmon includes Chinook, chum, coho, and pink salmon. The number of sockeye salmon harvested annually was collected but was too low to support stratified estimates and was not expanded. Equations 1–8 were used to estimate number of people, number of dogs, salmon harvested, salmon given away, salmon used for subsistence, number of salmon usually harvested, number of salmon fed to dogs, and estimated harvest of nonsalmon species (large and small whitefish, sheefish, and northern pike). Equations 9–11 were used to estimate the number of each species of salmon harvested from each fishing district by each community. The number of subsistence fishing households, households that own dogs, and households that feed salmon to dogs were estimated using Equations 12–16. The number of households using a particular gear type as their primary gear was estimated with Equations 17–18, and the number of Chinook salmon harvested by gear types was estimated with Equations 19–22.

Denote that

N_{kj} = the number of households in a harvest group (j) of a community (k),

n_{kj} = the number of sampled households in the harvest group, and

y_{kji} = response (e.g., the number of fish harvested) of a sampled household (i).

Mean response of a harvest group in a community ($\bar{y}_{kj}$) was calculated as

$$\bar{y}_{kj} = \frac{\sum_i y_{kji}}{n_{kj}}; \tag{1}$$

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

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

The estimate of total response of a community ($\hat{T}_k$) was calculated as

$$\hat{T}_k = \sum_{j=1}^{5} N_{kj}\bar{y}_{kj}; \tag{3}$$

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

$$95\%\mathrm{CI}_k = t_{(0.025,df=n_k-1)} \cdot \sqrt{\hat{V}(T_k)} \text{ where } \hat{V}(T_k) = \sum_{j=1}^{5} N_{kj}^2 \left(\frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left(\frac{s_{kj}^2}{n_{kj}} \right). \quad (4)$$

When the number of surveyed households in a harvest group was less than 10 and the proportion of surveyed households was less than 0.3, estimates of responses of the harvest group would be considered biased and unreliable. Instead, individual household responses from these groups were summed and added to estimates from harvest groups where enough households were surveyed. In this case, the total response ($\hat{T}_k$) of the community (k) was calculated as

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

where N_k is the total number of households in a surveyed community, and its 95% confidence interval (95%CI$_k$) was calculated as

$$95\%\mathrm{CI}_k = t_{(0.025,df=n_k-1)} \cdot \sqrt{\hat{V}(T_k)} \text{ where } \hat{V}(T_k) = \left(\frac{N_k}{\sum_{j=1} N_{kj}} \right)^2 \sum_{j=1}^{5} N_{kj}^2 \left(\frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left(\frac{s_{kj}^2}{n_{kj}} \right). \quad (6)$$

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

$$\hat{T} = \sum_{k=1} \hat{T}_k \,, \quad (7)$$

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

$$95\%\mathrm{CI} = t_{(0.025,df=n-1)} \cdot \sqrt{\hat{V}(\hat{T})} \text{ where } \hat{V}(\hat{T}) = \sum_{k=1} \hat{V}(\hat{T}_k) \,. \quad (8)$$

The number of salmon (Chinook, summer chum, fall chum and coho salmon) harvested at each fishing area within a community was estimated as follows:

Denote that

y_{kjil} = number of salmon harvested at the a fishing area (l) by a household (i) in a harvest group (j) of a community (k).

Proportion of salmon harvested at a fishing area by a harvest group was estimated as

$$\hat{p}_{kjl} = \frac{\sum_i y_{kjil}}{\sum_i \sum_l y_{kjil}} \,. \quad (9)$$

The number of salmon harvested at the fishing area at the community was calculated as

$$\hat{T}_{kl} = \sum_j N_{kj} \bar{y}_{kj} \hat{p}_{kjl} , \tag{10}$$

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

Total number of salmon harvested at a fishing area was estimated as

$$\hat{T}_l = \sum_k \hat{T}_{kl} . \tag{11}$$

For estimation of the number of subsistence fishing households, households that own dogs, and households that feed salmon to dogs, the following expansion method was used.

Proportion of households who subsistence fish or own dogs or feed salmon to dogs in a harvest group of a community ($\hat{p}_{kj}$) was calculated as

$$\hat{p}_{kj(s)} = \frac{n_{kj(s)}}{n_{kj}} , \tag{12}$$

where $n_{kj(s)}$ is the number of sample households in a harvest group that subsistence fish or own dogs or feed salmon to dogs.

The number of households that subsistence fish or own dogs or feed salmon to dogs in a community ($\hat{N}_{k(s)}$) was estimated as

$$\hat{N}_{k(s)} = \sum_{j=1}^{5} N_{kj} \hat{p}_{kj(s)} ; \tag{13}$$

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

$$95\%\text{CI}_k = t_{(0.025, df=n-1)} \cdot \sqrt{\hat{V}(\hat{N}_{k(s)})} \text{ where } \hat{V}(\hat{N}_{k(s)}) = \sum_{j=1}^{5} N_{kj}^2 \left(\frac{N_{kj} - n_{kj}}{N_{kj}} \right) \left(\frac{\hat{p}_{kj(s)}(1 - \hat{p}_{kj(s)})}{n_{kj} - 1} \right) . \tag{14}$$

Drainagewide total number of households that subsistence fish or own dogs or feed salmon to dogs ($\hat{T}_{(s)}$) was calculated as

$$\hat{N}_{(s)} = \sum_k \hat{N}_k ; \tag{15}$$

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

$$95\%\text{CI} = t_{(0.025, df=n-1)} \cdot \sqrt{\hat{V}(\hat{N}_{(s)})} \text{ where } \hat{V}(\hat{N}_{(s)}) = \sum_{k=1} \hat{V}(\hat{N}_{k(s)}) . \tag{16}$$

The number of subsistence fishing households using a particular gear type was estimated as follows.

Proportion of subsistence fishing households in a harvest group (j) in a community (k), with a gear (g), was estimated as

$$\hat{q}_{kjg} = \frac{n_{kjg}}{n_{kj(s)}}, \tag{17}$$

where n_{kjg} = the number of sample households that used the fishing gear in the harvest group in the community.

The number of fishing households using the fishing gear in the community $(\hat{N}_{kg})$ was calculated as

$$\hat{N}_{kg} = \sum_{j} N_{kj} \hat{p}_{kj} \hat{q}_{kjg}, \tag{18}$$

where $\hat{p}_{kj(s)}$ is the proportion of fishing household in the harvest group of the community (k).

For the number of Chinook salmon harvested by gear types, the proportion of Chinook salmon harvested by a gear (g) by each household was estimated as follows.

Proportion of Chinook salmon harvested by a fishing gear (g) by a harvest group (j) in a community (k) was estimated as

$$\hat{p}_{kjg} = \frac{\sum_{i} y_{kjig}}{\sum_{i}\sum_{g} y_{kjig}}, \tag{19}$$

and its variance was calculated as

$$V(\hat{p}_{kjg}) = \frac{\hat{p}_{kjg} \cdot (1 - \hat{p}_{kjg})}{\sum_{i}\sum_{g} y_{kjig} - 1}. \tag{20}$$

The number of Chinook salmon harvested by the fishing gear by the harvest group was calculated as

$$\hat{\bar{y}}_{kjg} = \bar{y}_{kj} \hat{p}_{kjg}, \tag{21}$$

where $\bar{y}_{kj}$ is mean harvest of the harvest group, and its variance was calculated as

$$V(\hat{\bar{y}}_{kjg}) = (\bar{y}_{kj})^2 V(\hat{p}_{kjg}) + (\hat{p}_{kjg})^2 V(y_{kj}) - V(\hat{p}_{kjg}) V(y_{kj}). \tag{22}$$

Reported harvests of Alaska blackfish, Arctic char, Arctic grayling, Arctic lamprey, burbot, longnose sucker, Pacific herring and unspecified forage fish, Pacific halibut and unspecified species of flounder, and saffron cod were not expanded because of limited harvest information. Harvest groups stratified for salmon were not adequate to estimate species captured with different harvest methods and at different times of year.

RESULTS

OVERALL ESTIMATION OF HARVEST

An estimated total 30,486 Chinook, 127,313 summer chum, 99,719 fall chum, and 21,633 coho salmon were harvested for subsistence and personal use by 1,578 households in the Yukon Area (Table 1). These totals include salmon provided by test fishery projects to households for subsistence use that consisted of 2,057 Chinook, 8,355 summer chum, 2,438 fall chum, and 816 coho salmon (Appendix A5). By species, excluding pink and sockeye salmon, the 2012 total subsistence salmon harvests comprised 11% Chinook, 46% summer chum, 36% fall chum, and 8% coho salmon (Table 1 and Figure 5).

Of the total estimated harvest, the estimated number of salmon caught in subsistence fisheries only (all harvest excluding personal use harvest), was 278,249 fish consisting of 30,415 Chinook, 126,992 summer chum, 99,309 fall chum, and 21,533 coho salmon (Figure 5; Appendices B1–B4). The number of salmon harvested in nonsubsistence personal use salmon fisheries was 71 Chinook, 321 summer chum, 2,421 fall chum, and 1,441 coho salmon.

Surveyed communities and households that obtained subsistence permits owned an estimated number of 6,171 dogs (Table 1). An estimated 287 households reported feeding subsistence caught salmon for their dogs (Tables 2 and 3). Surveyed and permit households throughout the Yukon Area retained an estimated 98,898 salmon for dog food from subsistence harvests (Tables 3 and 4; Appendix B9), excluding permit harvests from Stevens Village.

SUBSISTENCE SURVEYS

Surveyors traveled to 31 Yukon Area communities between September 7 and October 26 and conducted surveys with 985 households. An additional 103 households were contacted by telephone, and information from 37 households was collected from surveys or calendars returned by mail. Due to their small size and difficulties in scheduling lodging, the communities of Alatna and Shageluk were surveyed by phone and letter in 2012. Thirty-eight unselected households from 19 communities were surveyed, either as new households, unselected households that requested to be surveyed, or that were misidentified as selected. The number of additional surveys from unselected households was small and not statistically significant in regards to the stratified household selection; therefore, their responses were entered along with responses from selected households. A small number of fishermen traveled to the Yukon River to fish in or near surveyed communities but were not present in the communities during the fall survey. In 2012, this group consisted of 26 households, representing less than 1% of the total number of households. Information on this group was updated when possible and included in the community nearest to where they fished.

Of the 2,655 households in the surveyed communities, households with Unknown harvest levels (16%) and households that Do Not Harvest salmon (32%) comprised nearly 50% of the total number of households in surveyed communities. The remaining households were from salmon harvesting groups, comprising 36% Light harvesters, 14% Medium harvesters, and 1% Heavy harvesters. In 2012, 1,125 households were surveyed, that represented 86% of the 1,312 selected households after households that moved or combined were deleted (Table 5). The percentage of households in each harvest group that were contacted ranged from 73% of selected households in the Unknown harvest group to 92% of selected households contacted in the Light harvester group (Table 5). All households in the Medium and Heavy harvester groups were selected; 89% (Medium) and 83% (Heavy) of those households were surveyed. Based on responses to the

survey questions, an estimated 1,389 households participated in the 2012 subsistence fishery. An estimated 40% of Unknown households and 20% of households in the Does Not Harvest Salmon group were estimated to have harvested salmon. Of the harvester groups, 60% (Light), 80% (Medium), and 90% (Heavy) were estimated to have harvested salmon in 2012 (Table 6). The estimated total population in surveyed communities was 10,457 people (Table 7).

The group with the largest proportion of the Chinook salmon harvest was the Light harvesters, who took an estimated 49% of the total (Appendix A1). Light harvesters and Medium harvesters took an equal proportion of summer chum (30%; Appendix A2). Heavy harvesters took the largest proportion of fall chum salmon (49%) and coho salmon (42%) for subsistence harvest (Appendix A3 and A4).

Districts where the greatest numbers of each salmon species were harvested were District 2 with a harvest of 6,196 Chinook salmon; District 2 with 30,374 summer chum salmon; District 5 with 34,032 fall chum salmon; and District 4 with a harvest of 3,556 coho salmon (Tables 8–11). Some fishermen from surveyed communities may have fished in multiple districts, subdistricts, or tributaries to take advantage of harvest opportunities for different salmon stocks.

At least 7 surveyed communities (Alakanuk, Emmonak, Hooper Bay, Kotlik, Mountain Village, Pilot Station, and St. Marys) received a total of 13,882 salmon from test fishery projects (Appendix A5). Harvest estimates from surveyed communities also included 2,211 Chinook, 1,812 summer chum, 118 fall chum, and 204 coho salmon reported as retained from commercial catches for subsistence use (Table 1).

The estimated subsistence harvest of miscellaneous species in Yukon Area surveyed communities included 5,150 pink salmon, 41,549 large whitefish, 28,937 small whitefish, 18,450 northern pike, and 17,094 sheefish. Coastal District communities harvested approximately 47% of the estimated total number of pink salmon, and District 1 communities harvested approximately 31% of pink salmon. The remaining estimated pink salmon harvest was taken from District 2 (17%), Districts 3 and 4 (2% each), and District 5 (less than 1%; Table 12). Broad whitefish comprised 78% of the estimated number of large whitefish (Table 12). Of the 1,118 households that provided information about the harvest of non-salmon species, 175 households provided harvest timing information for small whitefish. Households that harvested small whitefish reported the most effort in the months of September and October (Appendix A10). Unexpanded total harvests of other fish species included 64,841 Alaska blackfish, primarily occurring in the Lower Yukon Area. Households also reported harvesting 216 Arctic char and 918 Arctic grayling primarily from District 4 (81% and 69% of total for each species) and 1,243 Arctic lamprey primarily in Districts 2–4, between the communities of Mountain Village and Grayling. However, household surveys were conducted in communities that harvest Arctic lamprey in September (Table 1), before conclusion of the Arctic lamprey fishery for that year. Burbot harvest (2,422 fish) primarily occurred in Districts 1 and 2, and harvest of longnose suckers (95 fish) occurred almost exclusively in Districts 4 and 5. Coastal District and District 1 households reported a harvest of 321 halibut and 10,449 herring; however, these numbers include flounders and smelt. The reported harvest of sockeye salmon was 405 fish, mostly from Districts 1 and 2 (Table 13).

An estimated 1,440 households in surveyed communities in the Yukon Area owned 4,744 dogs. Of the households with dogs, 189 households (13%) fed whole fish to dogs (Table 2). Dogs were fed an estimated 28,054 summer chum and 37,302 fall chum salmon from subsistence harvests.

An additional 2,572 coho salmon, including 22 that were retained from commercial fisheries, were fed to dogs (Table 4).

A total of 1,440 salmon (about 0.5% of the total salmon harvest) was reported as lost in the surveyed communities. Lost salmon consisted of 50 Chinook, 997 summer chum, 28 fall chum, and 50 coho salmon. An additional 315 salmon were unsuitable for human consumption but were fed to dogs, including 1 Chinook, 234 summer chum, 74 fall chum, and 6 coho salmon (Appendix A6). Reasons for loss included disease, spoilage due to rain and bad weather, pathogens, and scavengers. The majority of fish lost in 2012 (49% of 1,440 fish) were lost due to disease and pathogens, including 525 summer chum salmon that households in Hooper Bay reported smelled like gasoline or smelled bad (Appendix A6).

Of the households contacted during the survey, 723 households replied to the ”needs met/usually get” question for Chinook salmon. Of these households, 71% met less than 50% of their Chinook salmon needs and 29% met 51% or more of their Chinook salmon needs based on what they usually harvest or receive. In individual communities, responses ranged from 0% (Kaltag, Hughes, Huslia, Alatna, Birch Creek, and Chalkyitsik) to 67% (Scammon Bay) of households meeting at least half of their subsistence needs for Chinook salmon. All communities had at least 1 household that responded to the needs met question for Chinook salmon. Of the 494 households providing information on summer chum salmon, 40% of households met less than 50% of their needs and 60% were able to meet 51% or more of their summer chum salmon needs based on what they usually harvest or receive. Households in 4 communities reported meeting 100% of their needs for summer chum salmon (Bettles, Hughes, Ruby, and Stevens Village). Some communities did not have any responses for summer chum (Alatna and Chalkyitsik). Only 275 and 114 households answered the ”needs met/usually get” question for fall chum and coho salmon respectively. The percentage of households meeting 50% or less of their subsistence needs was 64% for fall chum salmon and 69% for coho salmon; 36% and 31% of households reported meeting 51% or more of their needs for fall chum and coho salmon. Some communities did not have any responses for fall chum salmon (Hooper Bay, Alatna, and Bettles) or coho salmon (Shageluk, Hughes, Alatna, Bettles, Beaver, Venetie, Chalkyitsik). No community reported meeting 100% of their needs for fall chum salmon. Households in 2 communities reported meeting 100% of their needs for coho salmon (Kaltag and Pilot Station; Table 14). Comments from households reporting they ”usually get zero,” included species not traditionally fished in a particular area due to its distribution, personal preference, or individuals in a household allergic to the species.

Primary gear types used by households in surveyed communities to harvest salmon species consisted of set gillnets (51%), drift gillnets (45%), and fish wheels (4%; Table 1). All of the 487 surveyed households that reported harvesting Chinook salmon reported the gear type or types they used to harvest Chinook salmon and gave an estimate of how many Chinook salmon were harvested by each gear type. These responses were expanded to obtain estimates of total Chinook salmon harvested by gear type. An estimated 14,143 Chinook salmon (54% of the total) were harvested by drift gillnets, 8,806 (34%) by set gillnets, and 3,047 (12%) by fish wheels in 2012. No Chinook salmon were reported as harvested by other gear types such as seines or hook and line. Two communities (Pitkas Point, and Nulato) harvested 100% of their estimated Chinook salmon catch with drift gillnets. Eight communities (Hooper Bay, Nunam Iqua, Shageluk, Huslia, Allakaket, Bettles, Stevens Village, and Venetie) harvested 100% of their estimated Chinook salmon catch with set gillnets. Fish wheels were used to harvest Chinook salmon in 4

upper river communities: Ruby (28% of Chinook salmon harvested in that community), Tanana (34%), Beaver (17%), and Ft. Yukon (91%). Four communities (Hughes, Alatna, Birch Creek, and Chalkyitsik) did not report harvesting any Chinook salmon.

SUBSISTENCE PERMITS

In areas that require subsistence fishing permits in District 5 (Yukon River) and District 6 (Tanana River), 380 (94%) of the total subsistence permits issued were returned and 197 households reported participating in salmon and nonsalmon subsistence fisheries (Tables 3, 15 and 16). This includes 22 households that fished in the Tanana River upstream of Subdistrict 6-C and 1 household that fished in the middle Koyukuk River during the summer of 2012 and harvested only nonsalmon species, but it does not include 1 permit issued to a household in Stevens Village, 3 additional permits issued to households in Eagle that fished on either side of the permit boundary at the sonar site, 1 household issued both types of personal use permits (salmon and nonsalmon), or 35 permits issued for the pike fishery in the Tolovana River that primarily occurred in the winter under the ice. The timing and distribution of fishing effort by district and by day based on harvest recorded on permits (Figure 6, bottom panel) showed a decrease in fishing effort between summer and fall salmon runs in early August. The majority of the late season fishing effort was targeting fall chum salmon in the Upper Yukon Area districts.

The 2012 subsistence permit harvest information was based on permits returned by March 29, 2013 (Tables 3, 15 and 16). Total harvests of 2,352 Chinook, 838 summer chum, 33,197 fall chum, and 8,125 coho salmon were reported. The total harvest of other fish species included 3,944 whitefish, 147 sheefish, 58 burbot, 825 northern pike, 163 longnose suckers, and 104 Arctic grayling (Tables 15 and 16).

Additionally, salmon were obtained and utilized from commercial harvests in subsistence permit areas and test fishery projects (Appendix A5). Records from commercial fish tickets under "Not Sold/Personal Use" indicate that 24 Chinook, 184 summer chum 2,421 fall chum, and 1,441 coho salmon were retained from commercial fishing in District 6; these salmon were added to the community harvests from Fairbanks and Nenana (Table 1). Three Chinook and 2 fall chum salmon distributed to the community of Eagle from the sonar drift gillnet test fishery project (Table 1, Appendix A5).

Based on subsistence salmon permits (not including Tolovana pike permits, which do not require the reporting of dog information), 98 households indicated that they fed salmon to dogs (Table 3). These households reported retaining 30,970 whole salmon for dog food.

The 158 households that reported gear types on their permits for subsistence salmon included 119 households (75%) using set gillnets, 30 (19%) households using fish wheels (Table 1), and 9 (6%) households using other gear types (i.e., fyke net or spear). This does not include 35 households that fished in the Tolovana River pike fishery and primarily used jigging gear or 4 households with permits from 2 different areas.

PERSONAL USE

In 2012, 70 (97%) of the personal use permits issued were returned (Table 15). Of these, 32 permits reported fishing, including 29 that were issued for salmon and 3 that were issued for nonsalmon species. This includes 1 household that fished 2 types of personal use permits (salmon and nonsalmon). Personal use permit holders reported harvesting 71 Chinook, 321

summer chum, 410 fall chum, 100 coho salmon, 22 whitefish, and 233 longnose suckers (Tables 15 and 16). The 31 individual households that reported fishing for personal use by gear type included 30 households (94%) using set gillnets and 1 household (6%) using other gear (i.e., fyke net; Table 1).

CALENDARS AND POSTCARDS

In 2012, households returned 288 subsistence harvest calendars (approximately 18% of total issued). A total of 236 calendars (82% of those returned) documented salmon harvest information. The remaining households that returned harvest calendars in 2012 either indicated they did not fish this season (15%) or the calendars were returned blank (4%). The timing and distribution of fishing effort by district and by day is shown based on returned calendars (Figure 6 top panel). The greatest number of households that reported fishing on a single day in a district was 44 households in District 2. Fishing effort reported by more than 1 household per district ranged from 84 days in District 5 to only 11 days in District 3.

Arctic lamprey postcards were mailed to 688 households in November 2011 (Figure 4). The winter of 2011–2012 was the fifth year that postcards were sent to households for the purpose of documenting Arctic lamprey harvests. Of the 9 communities that received postcards, 7 reported subsistence or commercial fishing for Arctic lamprey. Postcards were returned by 151 households; 18 households indicated they fished for Arctic lamprey, with a reported harvest of 138 lamprey taken for subsistence use (Table 17). Several fishermen reported that they were unable to harvest eels (Arctic lamprey) due to poor ice conditions (Mountain Village, Pilot Station, Russian Mission, St. Marys) or that weather conditions were bad during the run (St. Marys, Grayling). Households from all 9 communities commented that they missed the run or the eels were in a different part of the channel.

DISCUSSION

Run size and fishery management actions can significantly impact the ability of subsistence fishing households to harvest salmon. In 2012, modifications were made to the regulatory subsistence fishing schedule by emergency orders to protect Chinook salmon (Appendices A7–A9). Long districts and subdistricts were further subdivided for management purposes to reduce fishing pressure on Chinook salmon, specifically through management of the Coastal District as 2 sections (Southern and Northern), restriction of some commercial fishing periods in District 1 to the South Mouth only, or limited to the lower portion of District 2, division of Subdistrict 4-A into Lower and Upper areas, and division of Subdistrict 5-D into 3 areas (Appendices A7–A8). Subsistence fishing closures occurred in several districts that are normally open 7 days per week, including the Northern portion of the Coastal District and Subdistrict 5-D. Several subsistence and commercial fishing periods in Districts 1 and 2 were held concurrently to allow subsistence fishermen more fishing opportunity to harvest from an abundant summer chum salmon run and to reduce the overall amount of time that fishermen would have to contact Chinook salmon (JTC 2013). Closures on the first pulse of Chinook salmon were extended during the second pulse of Chinook salmon based on inseason assessment. Subdistrict 5-D, which is usually open continuously by regulation (7 days per week), was closed during the first and second pulses of the Chinook salmon run. An additional closure was implemented in the middle and upper portions of Subdistrict 5-D to provide further protection for Canadian origin Chinook salmon (Appendices A7–A8). Fisheries in the Tanana River were managed to meet Chinook salmon escapement goals for the Chena and Salcha rivers. No additional restrictions were placed on

subsistence fishing during the fall season, and subsistence fishing periods were open continuously or according to regulatory schedules (Appendices A7–A8).

This was the second year for mesh restrictions limiting gillnet gear to mesh sizes of 7.5 inch or less in all districts, including the Coastal District (Appendix A7–A9, Appendix C1). Additional gear restrictions were implemented to further protect Chinook salmon and included limiting gillnets to 6.0 inch or smaller mesh in most of the drainage during the Chinook salmon run to target summer chum salmon and nonsalmon species, limiting subsistence fishing to continuously manned fish wheels in Subdistricts 4-A, 6-A, and 6-B for several openings, and restricting commercial fishing gear in Subdistrict 4-A similarly; all fish wheels having to be continuously monitored included the requirement that all Chinook salmon were to be released to the water alive. The Koyukuk and Innoko rivers were not closed, but fishermen were restricted to 6.0 inch or smaller mesh during the Chinook salmon run.

The preliminary cumulative passage estimate from the Pilot Station sonar project was 106,700 Chinook salmon, which was below the 5-year average (2007–2011) of 128,800 fish (JTC 2013). Passage of Chinook salmon across the U.S./Canada border was approximately 33,000 Chinook salmon, falling below the interim management escapement goal range of 42,500–55,000 fish(JTC 2013). Summer chum salmon passage at the Pilot Station sonar project was estimated to be approximately 2.1 million, well above the historical median of 1.4 million for the project (JTC 2013). The preliminary total reconstructed run size estimate for fall chum salmon was 970,000 fish, which was above average (1974–2012), whereas the mainstem Yukon River sonar (operated near Pilot Station) passage estimate of 106,800 coho salmon was below average(JTC 2013).

COMMERCIAL AND SUBSISTENCE FISHING

Most commercial fishery permit holders also utilize subsistence resources and have opportunity to take salmon home from commercial harvests for subsistence use. Commercial harvests of summer chum, fall chum, and coho salmon were each above their respective recent 5-year (2007–2011) and 10-year (2002–2011) averages (JTC 2013). The percentages of households that reported meeting subsistence needs for commercially harvested species varied by community and species (Table 14; Appendices B2–B4). Estimated subsistence harvests from districts with commercial fishing were largely above recent 5-year averages for summer chum, fall chum, and coho salmon.

Chinook salmon were not allowed to be sold during commercial summer or fall fishing seasons but could be retained for subsistence uses. A total of 2,524 Chinook salmon were incidentally harvested and reported as caught but not sold during commercial chum salmon openings in Districts 1 and 2. The number of Chinook salmon estimated from survey responses as retained from commercial fisheries was less than the number of Chinook salmon reported on fish tickets. However, retention of other species (summer chum, fall chum, and coho salmon) was often not reported on fish tickets but was reported during the surveys. Commercially related harvest information was sometimes difficult to obtain during the survey interview. Surveyors often contacted the household member that processed and put up the fish; this person may have known how many salmon the household harvested but may not have been involved in catching the salmon and therefore would not know the exact number of salmon taken from either commercial or subsistence periods.

In 2012, Kwik'pak Fisheries LLC donated fillets from approximately 430 Chinook salmon and 3,340 summer chum salmon to 8 surveyed communities and 5 communities in the permit areas

(Beaver, Birch Creek, Circle, Eagle, Fort Yukon, Hughes, Huslia, Minto, Old Minto, Rampart, Stevens Village, Tanana, and Venetie; Gene Sandone, G. Sandone Consulting LLC, Wasilla, personal communication). Donated salmon were not added to community harvests. Summer chum salmon were mostly donated from commercially harvested salmon purchased by Kwik'pak Fisheries. Donated Chinook salmon may have originated from Kwik'pak Fisheries operated dip net and fish wheel test fisheries or been donated by commercial fishermen. Fishermen receiving donations of Chinook salmon were asked to limit or eliminate their harvest of Chinook salmon (Kwik'pak Fisheries LLC representative, YRFDA Teleconference, July 24, 2012, personal communication), particularly in the upper Yukon River where there is a higher proportion of Canadian-origin Chinook salmon. Households may have used donated salmon to meet some portion of their subsistence needs and harvested fewer salmon. Of the households selected for the survey and interviewed, 89 households said they received salmon from Kwik'pak Fisheries.

SALMON SURVEY AND AMOUNTS NECESSARY FOR SUBSISTENCE

The subsistence harvest of Chinook salmon in 2012 was below the amounts necessary for subsistence (ANS) as established by the BOF (ADF&G 2001). The ANS levels outlined in regulation 5 AAC 01.236 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 7–10). Harvests of summer chum, fall chum, and coho salmon were within their respective ranges. The ANS harvest ranges established by the BOF represent the historical harvest drainagewide from permits, survey estimates, test fisheries, and retained from commercial fisheries by salmon species in the U.S. Personal use harvests are not included in ANS.

The percentage of households that reported meeting over 50% of their needs for each species in 2012 was below the recent 5-year average for Chinook salmon but above average for summer, fall, and coho salmon species. Closures during the Chinook salmon run appear to have affected households severely and in a similar way to 2009 when closures on the first pulse also occurred (Table 14; Appendix B11).

Salmon harvest estimates based on survey results indicated the Chinook salmon subsistence harvest was 33% below the recent 5-year average (2007–2011) and 42% below the previous 5-year average (2002–2006; Figure 7; Appendix B1). The 2012 summer chum salmon subsistence harvest was 37% above the recent 5-year average and 49% above the previous 5-year average (Figure 8; Appendix B2). The 2012 harvest of fall chum salmon was 72% above the recent 5-year average and 21% above the previous 5-year average (Figure 9; Appendix B3). Coho salmon harvest in 2012 was 26% above the recent 5-year average and 1% below the previous 5-year average (Figure 10; Appendix B4). Overall, the 2012 Yukon Area subsistence salmon harvest of 278,249 Chinook, summer chum, fall chum, and coho salmon combined (Appendices B1–B4) was approximately 17% above the recent 5-year average (2007–2011) of 237,065 fish and 28% above the previous 5-year average (2002–2006). The 10-year period (2002–2011) includes years with very poor harvests and fishing restrictions, such as the closures during the Chinook salmon run in 2009 and 2011, and the low returns of fall chum salmon that also may have affected the incidental harvests of coho salmon in the 2002 season (Figures 5 and 7–10). Personal use harvests in 2012 were below the recent 5-year average (2007–2011) for Chinook salmon, fall chum, and coho salmon and above average for summer chum salmon (Appendix B5). Harvest of pink salmon in 2012 was estimated to be 5,150 fish and was 30% below the even-year average for 2002–2010 and less than 1% below the all year (both odd- and even-year) average for 2002–

2012 (Appendix B8). Pink salmon are abundant in even-numbered years in the Lower Yukon Area; however, they are not widely targeted for subsistence harvest.

Ideally, a strong run would be reflected in a strong subsistence harvest or at least that most households should report meeting subsistence needs. However, in surveys from 2007 to 2012, 20–30% of households reported they were not able to get enough salmon even if escapement was very good and run sizes were large enough to support subsistence and commercial fisheries (Appendix B11; Estensen et al. 2013). Run size and harvest amounts for summer chum and fall chum salmon in 2012 were higher than recent 5-year averages, but fewer households said they met more than 50% of their needs (Appendix B11) in 2012 than in 2011. Analysis of responses to the needs met question (Figure 3, Question 14) in this project is hampered by the low number of households that choose to respond and the qualitative nature of the question. The percentages of subsistence needs being met were calculated by comparing household responses to harvest, salmon received, and needs met questions (Figure 3; Table 14; Appendix B11). Analysis of the needs met question does not incorporate harvest group or fishing information (Table 14); households that did not fish were included with all other households that answered the needs met question. The subsistence harvests of summer chum salmon in Districts 1 and 2 were 48% above the recent 5-year average (Appendix B2); however, only 51% (District 1) and 63% (District 2) of households reported meeting over 50% of their needs for summer chum salmon (Table 14).

Of the 846 households that provided a comment about meeting Chinook salmon needs, 217 households commented that management actions were positive or that they met their needs or got enough in 2012. Other households said that they did not fish (177) or did not need Chinook salmon (122). A total of 330 households were unable to meet their needs for Chinook salmon and gave a reason why; a third of households (112) responded that it was due to management actions and closures; another third (107) were unable to get enough Chinook salmon due to lack of equipment (e.g., net, boat, motor, smokehouse, freezer), expenses (e.g., gas) or personal reasons (e.g., health, travel, no time to fish, no crew to help). About a quarter of households that commented (87) said they were unable to get enough Chinook salmon due poor run dynamics, river or weather conditions, or loss due to animals. A few households (24) said that they did not harvest enough Chinook salmon to meet their needs due to conservation concerns. The number of households providing a verbal comment (846) was greater than the number of households (723) giving a number of salmon that they usually get (Appendix B12).

Aside from unclear comments, 116 households provided comments on why they were unable to meet their needs for summer chum salmon, including management actions (30), equipment and expenses (27), run dynamics and inriver conditions (31), and personal reasons (28) including conservation concerns. In contrast, 370 households reported meeting their needs for summer chum salmon.

Fishermen in the Upper Yukon Area are more limited in their options for salmon harvest; large numbers of summer chum and coho salmon spawn in the Tanana River but far fewer migrate past communities located in Subdistricts 5-C and 5-D above the confluence of the Yukon and Tanana rivers (Figure 1, Appendix B2). Coho are found throughout the Tanana River drainage but are less abundant than fall chum salmon that are also present. Coho salmon run timing also often coincides with the formation of river ice. Harvest of coho salmon in 2012 was above the recent 5-year average and was the largest since 2005. However, only 31% of households that responded to the needs met question said they got 50% or more of their needs met for coho salmon (Appendix B4 and B11). Households that commented on not meeting their needs for fall

salmon included dissatisfaction with management (6 fall chum and 1 coho salmon comments), expenses (23 fall chum and 11 coho salmon comments), river conditions (21 fall chum and 12 coho salmon comments), or personal reasons (39 fall chum and 14 coho salmon comments). Many households said they had no need or did not usually harvest fall fish (645 households for fall chum and 833 households for coho salmon).

Nonsalmon Species

Harvest of nonsalmon fish species was most likely underestimated by this project. The stratification and harvest estimation system is based on a household's historical salmon harvest and may not adequately represent households that fish predominantly for other species. In order to improve the harvest estimates of nonsalmon species, additional household harvest strata and sampling designs would need to be identified and developed (Borba and Hamner 1998). Asking households to estimate their harvest of nonsalmon species from the previous 12 months increases the possibility that ability to recall earlier harvests may produce more error in the estimates. Methods to estimate community harvests of Arctic lamprey or to account for differences between reported subsistence harvests have not been developed for either the subsistence survey or the lamprey postcards.

Dogs

The estimated amount of all salmon species (summer and fall chum and coho salmon) fed whole to dogs from surveyed communities and permit areas was 38% higher than the recent 5-year average. Much of the increase was due to the large number of summer chum salmon harvested in 2012 in District 4 surveyed communities, which was 87% higher than the recent 5-year average (Appendix B9). The estimated number of fish fed to dogs in the Yukon Area was higher in 2012 than the recent 5-year average for summer chum (78%) and fall chum (25%) salmon, but coho salmon was lower than the recent 5-year average by 26% (Appendix B9). Fluctuation in the amount of salmon fed to dogs is partially due to owners feeding nonsalmon fish species, meat, or commercial dog food. The number of dogs in the Yukon Area (Appendix B9) in 2012 was 28% greater than the recent 5-year average and was the largest estimated number of dogs (6,299) from communities since 2001 (7,589 dogs; Brase and Hamner 2002). The reported number of salmon from surveyed communities fed to dogs due to poor flesh quality was very small (Appendix A6).

Survey Comments

During the survey, households had the opportunity to comment on any topic related to fishing they felt was important (Figure 3; Question 21). The most numerous comments from the survey regarded fishing windows or fishing schedules that restricted openings, resulting in missed opportunity when salmon were running through the local fishing area (276 comments). More fishermen commented that 2012 was a poor year (119) than a good year (22). Other issues that generated comments were opposition to the 7.5 inch mesh change or difficulties in changing mesh sizes (32). An additional 37 households commented on lack of equipment or fishing expenses.

Fishermen also commented (Appendix A6) that salmon were affected by diseases or parasites (122), that fishing was adversely affected by weather or river conditions (34), or that salmon were stolen or damaged by animals (29). There is usually little wastage of fish taken for subsistence purposes, although poor weather conditions may cause some fish to spoil during processing and some fish are lost to disease (e.g., *Ichthyophonus*) or scavengers (Appendix A6).

Households may harvest additional salmon to make up for lost fish or be unable to meet subsistence needs if salmon were lost after the fishing season. Generally, the number of salmon lost each year is less than 2% of the total salmon harvest.

Fishermen commented on wanting to change the specific hours of the fishing schedule for their district and have more fishing time. The surveyors heard many comments to the effect that fishermen only catch what they need for subsistence and then stop fishing and that subsistence fishing restrictions were unnecessary. For some fishermen, the windows schedule prevented them from catching all their fish at once, which impacted processing and storage of fish. Short openings stretched out the season, an important consideration for those who were unable to spend the entire season at fish camps, when gasoline costs and work schedules limit the number of possible trips to a fish camp. Fishermen commented that by restricting fishing times, the windows schedule reduced the ability of fishermen to adapt to circumstances such as poor weather, water levels, or work schedules; they also expressed concern that it was difficult to know when fishing was open and that greater communication of schedules and management actions might help.

A few households (33) told the surveyors they were pleased with the 2012 season and ADF&G management actions put in place to conserve Chinook salmon. Some households in the Upper Yukon Area pledged to reduce their Chinook salmon harvest and may have received donated summer chum and Chinook salmon from the Lower Yukon Area in exchange for reducing their subsistence harvest. Several communities also harvested significantly fewer Chinook salmon than their recent 5-year (2007–2011) and previous 5-year averages (2002–2006, Appendix B1), and most communities harvested more summer chum and fall chum salmon than their recent 5 and 10-year averages (Appendices B2–B3).

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TABLES AND FIGURES

Table 1.–Subsistence and personal use salmon harvest estimates, including commercially related and test fishery harvests provided for subsistence use, and related information, Yukon Area, 2012.

Community	Survey date or permit [b]	Number of fishing households [c]	Number of dogs	Estimated harvest				Primary gear used[a]		
				Chinook	Summer Chum	Fall Chum	Coho	Set gillnet	Drift gillnet	Fish wheels
Hooper Bay [d]	9/14-17	114	289	1,090	15,799	1	7	106	8	0
Scammon Bay	9/11-12	73	108	1,014	7,442	10	86	73	0	0
Coastal District total		187	397	2,104	23,241	11	93	179	8	0
Nunam Iqua	9/10-12	25	51	195	1,977	210	18	24	1	0
Alakanuk [d]	9/8-10	85	202	1,081	9,012	449	252	21	64	0
Emmonak [d]	9/7-11	88	219	1,864	15,829	5,890	2,660	7	81	0
Kotlik [d]	9/8-9	99	110	1,173	8,552	1,073	420	53	46	0
District 1 subtotal		297	582	4,313	35,370	7,622	3,350	105	192	0
Mountain Village [d]	9/19-22	103	158	1,789	9,031	685	256	11	92	0
Pitkas Point [d]	9/19	14	30	261	1,153	9	53	0	14	0
St. Marys [d]	9/10-12	89	118	2,344	10,763	1,423	141	3	86	0
Pilot Station [d]	9/24-26	47	52	1,078	5,716	1,031	329	5	42	0
Marshall [d]	9/28	48	150	1,409	5,903	184	567	9	39	0
District 2 subtotal		301	508	6,881	32,566	3,332	1,346	28	273	0
Russian Mission [d]	9/26-28	53	127	1,711	2,508	282	319	10	43	0
Holy Cross	9/27-28	32	112	576	1,147	339	237	8	24	0
Shageluk	phone	11	64	75	5,035	16	0	11	0	0
District 3 subtotal		96	303	2,362	8,690	637	556	29	67	0
Lower Yukon River total		694	1,393	13,556	76,626	11,591	5,252	162	532	0
Anvik	9/25-26	25	73	435	1,371	569	214	8	17	0
Grayling	9/24-25	47	188	1,081	2,616	804	26	16	31	0
Kaltag	10/5	35	58	1,346	186	2,830	928	12	23	0
Nulato	10/6-7	50	131	1,955	254	2,729	41	0	50	0
Koyukuk	10/7-8	26	57	614	828	1,331	62	2	24	0
Galena	10/3-5	76	259	742	718	2,947	276	48	24	4
Ruby	10/15-16	47	129	1,316	3,891	4,408	1,806	36	0	11
District 4 Yukon River subtotal		306	895	7,489	9,864	15,618	3,353	122	169	15
Huslia	10/5-6	41	248	165	7,306	1,909	165	41	0	0
Hughes	10/7-8	5	49	0	428	2	0	5	0	0
Allakaket	10/11-12	14	777	5	3,850	508	38	14	0	0
Alatna	phone	5	16	0	100	18	0	5	0	0
Bettles	10/13	1	52	3	7	0	0	1	0	0
Koyukuk River subtotal		66	1,142	173	11,691	2,437	203	66	0	0
District 4 subtotal		372	2,037	7,662	21,555	18,055	3,556	188	169	15

-continued-

Table 1.–Page 2 of 3.

Community	Survey date or permit [a]	Number of fishing households [b]	Number of dogs	Estimated harvest				Primary gear used [c]		
				Chinook	Summer Chum	Fall Chum	Coho	Set gillnet	Drift gillnet	Fish wheels
Tanana	10/12-14	44	303	2,100	4,333	20,465	3,060	31	0	13
Rampart	Permits	5	2	190	71	190	0	5	0	0
Fairbanks NSB	Permits	34	164	558	172	793	0	32	0	2
Stevens Village	10/16-17[i]	8	78	330	188	277	0	8	0	0
Birch Creek	10/24-25	0	5	0	0	0	0	0	0	0
Beaver	10/17-18	17	22	71	27	174	2	15	1	1
Fort Yukon	10/24-26	50	328	2,141	0	12,659	4	25	0	25
Circle	permits	7	33	280	0	161	5	3	0	4
Central	permits	3	3	66	0	0	0	2	0	1
Eagle [d, e]	permits	15	219	167	0	18,731	0	8	0	7
Other District 5 [f]	permits	19	59	477	101	443	21	15	0	1
District 5 Yukon River subtotal		202	1,216	6,380	4,892	53,893	3,092	144	1	54
Venetie	10/23-24	14	146	86	0	295	0	14	0	0
Chalkyitsik	10/22-23	3	35	0	0	162	0	3	0	0
Chandalar and Black rivers subtotal		17	181	86	0	457	0	17	0	0
District 5 Subtotal		219	1,397	6,466	4,892	54,340	3,092	161	1	54
Manley	permits	8	72	174	58	2,164	1,374	6	0	2
Minto [g]	permits	5	85	99	64	2	0	5	0	0
Nenana	permits	25	288	296	370	8,671	5,904	16	0	8
Healy	permits	4	35	0	0	595	760	4	0	0
Fairbanks NSB	permits	41	319	129	435	4,280	1,602	34	0	5
Other District 6 [h]	permits	23	148	0	72	0	0	19	0	0
District 6 Tanana River subtotal		106	947	698	999	15,712	9,640	84	0	15
Upper Yukon River total		697	4,381	14,826	27,446	88,117	16,288	433	170	84
Survey community subtotal		1,389	4,744	25,996	117,615	61,253	4,675	625	710	54
Subsistence permit subtotal		158	1,427	2,338	838	33,197	6,127	119	0	30
Subsistence test fishery subtotal		–	–	2,057	8,355	2,438	816	–	–	–
District 6 commercial retained		–	–	24	184	2,421	1,441	–	–	–
Subsistence harvests subtotal		1,547	6,171	30,415	126,992	99,309	21,533	744	710	84
Personal use permit subtotal		31	–	71	321	410	100	30	0	0
Alaska, Yukon River total [i]		1,391	5,774	28,382	104,072	99,708	21,540	595	702	84
Alaska, Yukon Area total		1,578	6,171	30,486	127,313	99,719	21,633	774	710	84
Species & gear percentage of Yukon Area total				11%	46%	36%	8%	49%	45%	5%

-continued-

[a] Totals for gear and household may not be equal due to a small number of fishermen using unknown or other gear types.

[b] Permit data are unexpanded totals from all permits received as of March 29, 2013.

[c] Does not include 35 households with Tolovana River pike permits but does include 4 households that fished both District 5 and District 6 permit areas.

[d] Includes salmon distributed from test fishery projects.

[e] Permit holders harvested 91 Chinook and 11,681 fall chum salmon above the Eagle sonar project.

[f] Other District 5 includes residents of Anchorage, Manley, Minto, Nenana, Tanana, Wasilla, Willow, 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.

[g] Includes the harvest of 2 fall chum salmon from Tolovana River pike permits.

[h] Other District 6 includes residents of the Upper Tanana River drainage communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok, and the community of Anderson who obtained a permit and fished in the Tanana River

[i] Total excluding Coastal District is used to assess objectives under the Yukon River Salmon Agreement.

Table 2.–Estimated number of households with dogs, households that feed fish to dogs, numbers of dogs, and corresponding confidence intervals (CI 95%) for surveyed communities, Yukon Area, 2012.

			Number of households with dogs		Number of households that feed fish to dogs		Number of dogs	
Community	Total households	Households contacted	Estimated total	CI 95%	Estimated total	CI 95%	Estimated total	CI 95%
Hooper Bay	218	71	120	22	16	13	289	73
Scammon Bay	99	42	61	14	0	0	108	28
Coastal District	317	113	181	27	16	13	397	77
Nunam Iqua	42	32	31	1	2	1	51	6
Alakanuk	158	51	76	24	6	6	202	59
Emmonak	180	85	97	24	1	1	219	45
Kotlik	110	36	75	11	0	0	110	27
District 1	490	204	279	36	9	6	582	78
Mountain Village	152	56	71	19	9	7	158	45
Pitkas Point	27	21	12	1	1	1	30	9
St. Marys	127	45	42	12	6	6	118	48
Pilot Station	118	56	36	11	0	0	52	14
Marshall	69	26	50	12	0	0	150	30
District 2	493	204	211	28	16	9	508	72
Russian Mission	72	25	33	12	0	0	127	49
Holy Cross	55	29	37	6	8	5	112	34
Shageluk	29	10	16	3	2	2	64	24
District 3	156	64	86	14	10	5	303	62
Anvik	35	26	26	6	11	6	73	16
Grayling	47	16	37	9	7	9	188	0
Kaltag	58	15	34	10	4	7	58	0
Nulato	72	22	42	14	8	10	131	103
Koyukuk	49	21	26	8	2	2	57	29
Galena	169	47	127	19	12	9	259	100
Ruby	66	21	36	11	12	9	129	16
Huslia	95	29	49	15	12	7	248	70
Hughes	31	25	12	3	1	1	49	19
Allakaket	63	19	32	16	9	8	777	0
Alatna	10	4	5	0	0	0	16	10
Bettles	22	15	14	2	1	1	52	28
District 4	717	260	440	38	79	24	2,037	161
Tanana	103	47	49	11	18	4	303	64
Stevens Village	18	10	9	2	3	0	78	19
Birch Creek	16	11	3	1	0	0	5	2
Beaver	31	22	13	2	3	1	22	8
Fort Yukon	211	83	104	21	24	9	328	78
Venetie	75	22	47	18	7	8	146	42
Chalkyitsik	28	17	18	5	4	5	35	12
District 5	482	212	243	30	59	14	917	109
Survey total	2,655	1,057	1,440	73	189	33	4,744	241

Note: The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted about dog related information.

Table 3.–Household and dog information reported by subsistence and personal use permits issued and returned, listed by fishery and by community of residence, Yukon Area, 2012.

	Permit information [a]				Reported household information (based on permits issued)					
	Permits [b]									
Subsistence permits	Issued	Returned	Percent returned	Number of permits returned that fished [c]	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
Central	4	4	100%	3	10	6	2	3	1	0
Circle	19	19	100%	7	54	31	15	33	9	145
Eagle	33	31	94%	17	88	57	25	243	17	16,259
Rampart	5	5	100%	5	19	17	2	2	0	0
Fairbanks (FNSB) [d]	157	154	98%	78	470	323	60	585	23	2,560
Healy	5	5	100%	4	18	15	5	35	3	1,316
Manley	17	14	82%	10	45	37	12	74	5	2,709
Minto	37	33	89%	10	108	55	18	126	10	0
Nenana	45	41	91%	26	303	256	29	295	21	7,981
Stevens Village [e]	3	3	100%	1	12	3	1	1	0	0
Upper Tanana Villages [f]	53	44	83%	22	178	106	35	129	5	0
Other Subsistence [g]	28	27	96%	14	69	55	11	29	4	0
Subsistence permit subtotal	406	380	94%	197	1,374	961	215	1,555	98	30,970
Personal use permits										
Fairbanks (FNSB) [d]	66	65	98%	29	201	136	–	–	–	–
Other Personal Use [h]	6	5	83%	3	12	9	–	–	–	–
Personal use permit subtotal	72	70	97%	32	213	145	–	–	–	–
Permit total	478	450	94%	229	1,587	1,106	215	1,555	98	30,970

[a] Permits returned as of March 29, 2013.

[b] Includes 29 households that were issued permits for more than 1 area and 4 permit holders that were issued additional permits to track harvest above and below Eagle sonar.

[c] Includes 8 households that fished in 2 different areas and 3 permit holders that fished above and below the Eagle sonar.

[d] Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

[e] Stevens Village is a surveyed community, but some residents fish in permit areas. Therefore this permit information is not included in any final harvest estimates to avoid double counting.

[f] Upper Tanana River communities include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

[g] Includes residents from Anchorage, Anderson, Denali Park, Eagle River, Manley, Minto, Nenana, Seward, Tanana, Wasilla, Willow, and Wiseman who were issued a subsistence fishing permit.

[h] Includes residents of Anchorage, Delta Junction, Minto and Nenana that applied for a personal use permit.

Table 4.–Estimated number of salmon retained for dog food from subsistence harvests with corresponding confidence intervals (CI 95%) for surveyed communities, Yukon Area, 2012.

			Summer chum		Fall chum		Coho		
Community	Total households	Households contacted [a]	Estimated total	CI 95%	Estimated total	CI 95%	Estimated total	CI 95%	Estimated Total[b]
Hooper Bay	218	73	524	443	0	0	0	0	524
Scammon Bay	99	40	0	0	0	0	0	0	0
Coastal District	317	113	524	440	0	0	0	0	524
Nunam Iqua	42	33	6	3	0	0	0	0	6
Alakanuk	158	51	68	115	43	29	0	0	111
Emmonak	180	86	16	14	0	0	0	0	16
Kotlik [c]	110	36	0	0	0	0	22	15	22
District 1	490	206	90	114	43	29	22	15	155
Mountain Village	152	56	282	198	0	0	0	0	282
Pitkas Point	27	22	0	0	5	4	51	43	56
St. Marys	127	44	114	94	0	0	0	0	114
Pilot Station	118	57	0	0	0	0	0	0	0
Marshall	69	26	0	0	0	0	0	0	0
District 2	493	205	396	215	5	4	51	43	452
Russian Mission	72	26	0	0	0	0	0	0	0
Holy Cross	55	30	136	168	5	4	6	5	147
Shageluk	29	10	2,417	3,109	0	0	0	0	2,417
District 3	156	66	2,553	2,791	5	4	6	5	2,564
Anvik	35	27	774	639	0	0	15	25	789
Grayling	47	17	1,253	0	0	0	0	0	1,253
Kaltag	58	15	0	0	0	0	0	0	0
Nulato	72	22	0	0	218	379	0	0	218
Koyukuk	49	21	315	414	278	366	0	0	593
Galena	169	48	765	663	651	604	42	40	1,458
Ruby	66	21	2,310	0	3,324	0	0	0	5,634
Huslia	95	30	10,141	7,737	1,815	1,800	0	0	11,956
Hughes	31	25	351	248	0	0	0	0	351
Allakaket	63	21	3,803	787	394	0	27	0	4,224
Alatna	10	4	0	0	0	0	0	0	0
Bettles	22	17	7	4	0	0	0	0	7
District 4	717	268	19,719	7,563	6,680	1,901	84	46	26,483
Tanana	103	49	4,210	1,116	19,223	5,387	2,409	1,103	25,842
Stevens Village	18	10	166	0	69	0	0	0	235
Birch Creek	16	12	0	0	0	0	0	0	0
Beaver	31	22	6	6	97	90	0	0	103
Fort Yukon	211	83	390	373	10,498	4,599	0	0	10,888
Venetie	75	22	0	0	507	92	0	0	507
Chalkyitsik	28	18	0	0	175	267	0	0	175
District 5	482	216	4,772	1,155	30,569	6,983	2,409	1,082	37,750
Survey total	2,655	1,074	28,054	8,118	37,302	7,205	2,572	1,079	67,928

[a] The number of household responses per species may vary. The number of households indicated is the greatest number of households that supplied information.

[b] Does not include Chinook salmon that were not fit for human consumption but possibly fed to dogs.

[c] Includes 22 coho salmon reported as retained from commercial harvests and fed to dogs.

Table 5.–Estimated total number of households identified and contacted in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Community total			
Community	*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	31	12	5	42%	63	20	15	75%	84	26	22	85%	40	40	37	93%	–	–	–	–	218	98	79	81%
Scammon Bay	20	10	7	70%	21	6	5	83%	38	12	12	100%	20	20	20	100%	–	–	–	–	99	48	44	92%
Coastal District	51	22	12	55%	84	26	20	77%	122	38	34	89%	60	60	57	95%	–	–	–	–	317	146	123	84%
Nunam Iqua	9	1	1	100%	9	9	9	100%	12	12	12	100%	12	12	12	100%	–	–	–	–	42	34	34	100%
Alakanuk	37	6	4	67%	38	11	8	73%	57	17	17	100%	26	26	25	96%	–	–	–	–	158	60	54	90%
Emmonak	35	5	3	60%	45	23	23	100%	59	30	30	100%	40	40	35	88%	1	1	1	100%	180	99	92	93%
Kotlik	18	5	4	80%	20	7	5	71%	55	16	16	100%	17	17	12	71%	–	–	–	–	110	45	37	82%
District 1	99	17	12	71%	112	50	45	90%	183	75	75	100%	95	95	84	88%	1	1	1	100%	490	238	217	91%
Mountain Village	12	7	6	86%	37	11	6	55%	66	19	16	84%	37	37	29	78%	–	–	–	–	152	74	57	77%
Pitkas Point	2	1	0	0%	5	5	4	80%	14	14	13	93%	6	6	6	100%	–	–	–	–	27	26	23	88%
St. Marys	19	0	1	–	21	5	4	80%	58	18	18	100%	29	29	26	90%	–	–	–	–	127	52	49	94%
Pilot Station	19	3	7	233%	32	15	13	87%	52	26	22	85%	15	15	15	100%	–	–	–	–	118	59	57	97%
Marshall	3	2	2	100%	15	4	4	100%	35	11	8	73%	16	16	12	75%	–	–	–	–	69	33	26	79%
District 2	55	13	16	123%	110	40	31	78%	225	88	77	88%	103	103	88	85%	–	–	–	–	493	244	212	87%
Russian Mission	7	0	0	–	19	6	6	100%	38	12	12	100%	8	8	8	100%	–	–	–	–	72	26	26	100%
Holy Cross	1	0	0	–	17	9	8	89%	24	12	12	100%	13	13	11	85%	–	–	–	–	55	34	31	91%
Shageluk	11	11	2	18%	8	8	4	50%	6	6	2	33%	3	3	2	67%	1	1	1	100%	29	29	11	38%
District 3	19	11	2	18%	44	23	18	78%	68	30	26	87%	24	24	21	88%	1	1	1	100%	156	89	68	76%
Anvik	10	5	4	80%	5	5	5	100%	12	12	12	100%	7	7	6	86%	1	1	0	0%	35	30	27	90%
Grayling	8	1	1	100%	4	2	1	50%	26	8	7	88%	9	9	9	100%	–	–	–	–	47	20	18	90%
Kaltag	3	0	0	–	12	3	1	33%	38	11	9	82%	5	5	5	100%	–	–	–	–	58	19	15	79%
Nulato	2	0	0	–	15	5	3	60%	50	16	16	100%	5	5	4	80%	–	–	–	–	72	26	23	88%
Koyukuk	11	10	6	60%	14	5	5	100%	18	6	7	117%	5	5	3	60%	1	1	1	100%	49	27	22	81%
Galena	21	7	5	71%	70	22	16	73%	67	20	20	100%	8	8	8	100%	3	3	2	67%	169	60	51	85%
Ruby	11	1	1	100%	36	12	10	83%	14	5	5	100%	4	4	4	100%	1	1	1	100%	66	23	21	91%
Huslia	26	12	9	75%	48	15	11	73%	13	4	5	125%	6	6	6	100%	2	2	2	100%	95	39	33	85%
Hughes	4	3	2	67%	17	17	15	88%	8	8	7	88%	1	1	1	100%	1	1	0	0%	31	30	25	83%
Allakaket	17	7	3	43%	31	10	10	100%	9	3	3	100%	4	4	4	100%	2	2	1	50%	63	26	21	81%
Alatna	5	1	0	0%	3	3	2	67%	2	2	2	100%	–	–	–	–	–	–	–	–	10	6	4	67%
Bettles	5	1	1	100%	17	17	16	94%	–	–	–	–	–	–	–	–	–	–	–	–	22	18	17	94%
District 4	123	48	32	67%	272	116	95	82%	257	95	93	98%	54	54	50	93%	11	11	7	64%	717	324	277	85%

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Table 5.–Page 2 of 2.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Community total			
Community	*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	11	6	8	133%	43	22	16	73%	31	16	13	81%	8	8	7	88%	10	10	8	80%	103	62	52	84%
Stevens Village	5	0	0	–	3	3	3	100%	7	7	5	71%	2	2	2	100%	1	1	1	100%	18	13	11	85%
Birch Creek	4	2	2	100%	9	9	8	89%	3	3	2	67%	–	–	–	–	–	–	–	–	16	14	12	86%
Beaver	5	2	2	100%	10	10	8	80%	15	15	13	87%	1	1	1	100%	–	–	–	–	31	28	24	86%
Fort Yukon	41	35	26	74%	109	34	29	85%	38	12	11	92%	13	13	11	85%	10	10	10	100%	211	104	87	84%
Venetie	13	7	7	100%	45	14	10	71%	13	4	4	100%	3	3	2	67%	1	1	1	100%	75	29	24	83%
Chalkyitsik	13	6	5	83%	14	14	13	93%	1	1	0	0%	–	–	–	–	–	–	–	–	28	21	18	86%
District 5	92	58	50	86%	233	106	87	82%	108	58	48	83%	27	27	23	85%	22	22	20	91%	482	271	228	84%
Survey total	439	169	124	73%	855	361	296	82%	963	384	353	92%	363	363	323	89%	35	35	29	83%	2,655	1,312	1,125	86%

Note: 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) in each harvest group in surveyed communities. Households contacted (C) may include some households not pre-selected resulting in a household contacted percentage (%C) greater than 100%. Dashes indicate indefinable values.

Table 6.–Estimated number of subsistence fishing households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	0.2	0.2	63	15	0.3	0.1	84	22	0.6	0.1	40	37	0.8	0.0	–	–	–	–	218	79	114	24
Scammon Bay	20	7	0.9	0.1	21	5	0.2	0.2	38	12	0.6	0.1	20	20	0.9	0.0	–	–	–	–	99	44	73	13
Coastal District	51	12	0.9	0.1	84	20	0.3	0.1	122	34	0.6	0.1	60	57	0.8	0.0	–	–	–	–	317	123	187	27
Nunam Iqua	9	1	0.0	–	9	9	0.2	0.0	12	12	0.8	0.0	12	12	0.8	0.0	–	–	–	–	42	34	25	0
Alakanuk	37	4	0.5	0.3	38	8	0.1	0.1	57	17	0.5	0.1	26	25	0.7	0.0	–	–	–	–	158	54	85	23
Emmonak	35	3	0.3	0.3	45	23	0.1	0.0	59	29	0.6	0.1	40	35	0.8	0.0	1	1	1.0	–	180	91	88	11
Kotlik	18	4	0.5	0.3	20	5	0.2	0.2	55	16	0.9	0.1	17	12	1.0	0.0	–	–	–	–	110	37	99	12
District 1	99	12	–	–	112	45	0.1	0.0	183	74	0.6	0.0	95	84	0.8	0.0	1	1	1.0	–	490	216	297	28
Mountain Village	12	6	1.0	0.0	37	6	0.2	0.2	66	16	0.5	0.1	37	29	0.9	0.0	–	–	–	–	152	57	103	20
Pitkas Point	2	0	–	–	5	4	0.0	0.0	14	13	0.6	0.0	6	6	0.7	0.0	–	–	–	–	27	23	14	1
St. Marys	19	1	0.0	–	21	4	0.5	0.3	58	18	0.6	0.1	29	26	0.9	0.0	–	–	–	–	127	49	89	17
Pilot Station	19	7	0.4	0.2	32	13	0.3	0.1	52	22	0.3	0.1	15	15	0.8	0.0	–	–	–	–	118	57	47	12
Marshall	3	2	0.0	0.0	15	4	0.5	0.2	35	8	0.6	0.2	16	12	0.8	0.1	–	–	–	–	69	26	48	7
District 2	55	16	0.6	0.1	110	31	0.3	0.1	225	77	0.5	0.1	103	88	0.9	0.0	–	–	–	–	493	212	301	29
Russian Mission	7	0	–	–	19	6	0.5	0.2	38	12	0.8	0.1	8	8	0.9	0.0	–	–	–	–	72	26	53	11
Holy Cross	1	0	–	–	17	8	0.0	0.0	24	12	0.8	0.1	13	11	0.9	0.0	–	–	–	–	55	31	32	4
Shageluk	11	2	0.5	0.5	8	4	0.0	0.0	6	2	0.5	0.4	3	2	1.0	0.0	1	1	1.0	–	29	11	11	9
District 3	19	2	–	–	44	18	0.2	0.1	68	26	0.8	0.1	24	21	0.9	0.0	1	1	1.0	–	156	68	96	14
Anvik	10	4	0.8	0.2	5	5	0.0	0.0	12	12	0.8	0.0	7	6	1.0	0.0	1	0	–	–	35	27	25	4
Grayling	8	1	1.0	–	4	1	0.0	–	26	7	1.0	0.0	9	9	1.0	0.0	–	–	–	–	47	18	47	0
Kaltag	3	0	–	–	12	1	0.0	–	38	9	0.7	0.1	5	5	0.6	0.0	–	–	–	–	58	15	35	0
Nulato	2	0	–	–	15	3	0.3	0.3	50	16	0.7	0.1	5	4	0.8	0.1	–	–	–	–	72	23	50	13
Koyukuk	11	6	0.3	0.1	14	5	0.4	0.2	18	7	0.6	0.2	5	3	1.0	0.0	1	1	1.0	–	49	22	26	9
Galena	21	5	0.2	0.2	70	16	0.3	0.1	67	20	0.6	0.1	8	8	0.8	0.0	3	2	1.0	0.0	169	51	76	21
Ruby	11	1	0.0	–	36	10	0.2	0.1	14	5	0.6	0.2	4	4	1.0	0.0	1	1	1.0	–	66	21	47	20
Huslia	26	9	0.6	0.1	48	11	0.2	0.1	13	5	0.8	0.2	6	6	0.8	0.0	2	2	1.0	0.0	95	33	41	14
Hughes	4	2	0.0	0.0	17	15	0.1	0.0	8	7	0.3	0.1	1	1	0.0	–	1	0	–	–	31	25	5	2
Allakaket	17	3	0.0	0.0	31	10	0.0	0.0	9	3	0.7	0.3	4	4	0.5	0.0	2	1	1.0	–	63	21	14	7
Alatna	5	0	–	–	3	2	0.5	0.3	2	2	0.5	0.0	–	–	–	–	–	–	–	–	10	4	5	5
Bettles	5	1	0.0	–	17	16	0.1	0.0	–	–	–	–	–	–	–	–	–	–	–	–	22	17	1	1
District 4	123	32	0.5	0.1	272	95	0.2	0.0	257	93	0.6	0.0	54	50	0.8	0.0	11	7	1.0	0.0	717	277	372	36

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Table 6.–Page 2 of 2.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	PF	SE	*N*	*n*	Total	95%
Tanana	11	8	0.3	0.1	43	16	0.2	0.1	31	12	0.5	0.1	8	7	1.0	0.0	10	8	1.0	0.0	103	51	44	10
Stevens Village	5	0	–	–	3	3	0.0	0.0	7	5	0.4	0.1	2	2	1.0	0.0	1	1	1.0	–	18	11	8	3
Birch Creek	4	2	0.0	0.0	9	8	0.0	0.0	3	2	0.0	0.0	–	–	–	–	–	–	–	–	16	12	0	0
Beaver	5	2	1.0	0.0	10	8	0.3	0.1	15	13	0.6	0.1	1	1	0.0	–	–	–	–	–	31	24	17	2
Fort Yukon	41	26	0.2	0.0	109	29	0.1	0.1	38	11	0.4	0.1	13	11	0.5	0.1	10	10	0.6	0.0	211	87	50	16
Venetie	13	7	0.0	0.0	45	10	0.1	0.1	13	4	0.3	0.2	3	2	0.5	0.3	1	1	1.0	–	75	24	14	15
Chalkyitsik	13	5	0.2	0.2	14	13	0.0	0.0	1	0	–	–	–	–	–	–	–	–	–	–	28	18	3	4
District 5	92	50	0.2	0.0	233	87	0.1	0.0	108	47	0.4	0.1	27	23	0.7	0.0	22	20	0.8	0.0	482	227	136	24
Survey total	439	124	0.4	0.0	855	296	0.2	0.0	963	351	0.6	0.0	363	323	0.8	0.0	35	29	0.9	0.0	2,655	1,123	1,389	66

Note: The number of fishing households was estimated from the total number of households (*N*), the number of households contacted (*n*), the proportion of households that fished (PF), and the standard error (SE) of proportion that fished for each harvest group in each community. Estimated total number of fishing households includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Table 7.–Estimated number of people in households in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined			
																					Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	2.2	0.7	63	13	2.8	0.4	84	20	5.5	0.5	40	36	5.8	0.2	–	–	–	–	218	74	1,010	116
Scammon Bay	20	6	4.0	0.6	21	5	4.6	1.0	38	11	5.5	0.7	20	19	6.5	0.1	–	–	–	–	99	41	535	72
Coastal District	51	11	4.0	0.6	84	18	2.8	0.4	122	31	5.5	0.4	60	55	6.0	0.1	–	–	–	–	317	115	1,545	135
Nunam Iqua	9	1	4.0	–	9	9	5.0	0.0	12	11	4.5	0.2	12	12	4.5	0.0	–	–	–	–	42	33	194	5
Alakanuk	37	4	2.0	0.7	38	8	2.8	0.6	57	16	6.1	0.6	26	23	4.9	0.2	–	–	–	–	158	51	908	126
Emmonak	35	3	2.3	0.8	45	23	4.3	0.4	59	28	5.6	0.4	40	33	4.8	0.2	1	1	2.0	–	180	88	890	80
Kotlik	18	4	4.3	0.8	20	5	3.6	1.0	55	16	5.3	0.5	17	12	4.1	0.2	–	–	–	–	110	37	547	93
District 1	99	12	–	–	112	45	4.4	0.4	183	71	5.6	0.3	95	80	4.6	0.1	1	1	2.0	–	490	209	2,539	173
Mountain Village	12	6	6.0	0.6	37	6	5.2	1.6	66	16	5.9	0.5	37	29	5.7	0.2	–	–	–	–	152	57	891	91
Pitkas Point	2	0	–	–	5	4	2.8	0.5	14	12	4.3	0.3	6	6	4.8	0.0	–	–	–	–	27	22	110	10
St. Marys	19	1	2.0	–	21	3	2.7	1.1	58	17	3.9	0.5	29	25	3.9	0.2	–	–	–	–	127	46	495	92
Pilot Station	19	7	2.9	0.5	32	13	5.1	0.6	52	20	5.6	0.6	15	14	5.8	0.2	–	–	–	–	118	54	592	72
Marshall	3	2	4.0	0.6	15	4	6.8	0.5	35	8	5.0	0.5	16	12	4.0	0.4	–	–	–	–	69	26	276	44
District 2	55	16	4.1	0.3	110	30	4.8	0.5	225	73	5.1	0.3	103	86	4.9	0.1	–	–	–	–	493	205	2,364	152
Russian Mission	7	0	–	–	19	6	5.7	0.5	38	11	4.9	0.6	8	8	6.4	0.0	–	–	–	–	72	25	382	53
Holy Cross	1	0	–	–	17	8	1.8	0.3	24	11	3.2	0.3	13	10	4.5	0.3	–	–	–	–	55	29	168	20
Shageluk	11	2	1.5	0.5	8	4	1.3	0.2	6	2	4.5	0.4	3	2	2.5	0.3	1	1	2.0	–	29	11	75	10
District 3	19	2	–	–	44	18	3.4	0.3	68	24	4.3	0.3	24	20	4.9	0.2	1	1	2.0	–	156	65	625	56
Anvik	10	3	4.3	1.5	5	5	2.0	0.0	12	11	2.5	0.2	7	6	3.2	0.4	1	0	–	–	35	25	109	32
Grayling	8	1	6.0	–	4	1	2.0	–	26	4	5.3	0.7	9	7	3.0	0.3	–	–	–	–	47	13	141	31
Kaltag	3	0	–	–	12	1	1.0	–	38	9	3.4	0.5	5	5	5.8	0.0	–	–	–	–	58	15	336	0
Nulato	2	0	–	–	15	3	2.0	0.9	50	14	3.4	0.5	5	3	1.7	0.4	–	–	–	–	72	20	231	62
Koyukuk	11	5	2.8	0.5	14	5	2.8	0.6	18	7	2.4	0.6	5	3	2.0	0.0	1	1	5.0	–	49	21	129	30
Galena	21	5	2.6	0.7	70	16	2.1	0.3	67	18	2.6	0.3	8	7	3.4	0.3	3	2	1.5	0.3	169	48	401	62
Ruby	11	1	2.0	–	36	10	3.2	0.3	14	5	2.4	0.2	4	4	2.5	0.0	1	1	2.0	–	66	21	158	20
Huslia	26	9	2.4	0.4	48	10	3.7	0.6	13	5	4.4	0.4	6	6	5.7	0.0	2	1	5.0	–	95	31	333	53
Hughes	4	2	2.0	0.7	17	15	3.1	0.1	8	7	2.6	0.2	1	1	1.0	–	1	0	–	–	31	25	86	8
Allakaket	17	3	3.0	0.9	31	10	2.7	0.6	9	3	3.3	0.5	4	4	2.3	0.0	2	1	4.0	–	63	21	179	56
Alatna	5	0	–	–	3	2	4.5	0.9	2	2	3.0	0.0	–	–	–	–	–	–	–	–	10	4	39	14
Bettles	5	1	1.0	–	17	14	1.6	0.1	–	–	–	–	–	–	–	–	–	–	–	–	22	15	36	5
District 4	123	30	2.9	0.4	272	92	2.4	0.2	257	85	2.9	0.2	54	46	3.3	0.1	11	6	3.3	0.1	717	259	2,178	125

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Table 7.–Page 2 of 2.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Tanana	11	7	3.1	0.5	43	15	1.7	0.2	31	10	2.9	0.3	8	6	2.2	0.3	10	8	3.0	0.3	103	46	246	31
Stevens Village	5	0	–	–	3	3	2.3	0.0	7	5	2.4	0.1	2	2	3.5	0.0	1	1	3.0	–	18	11	47	3
Birch Creek	4	2	2.0	0.0	9	8	1.4	0.1	3	1	2.0	–	–	–	–	–	–	–	–	–	16	11	26	1
Beaver	5	2	2.0	0.0	10	7	1.9	0.3	15	13	2.3	0.1	1	0	–	–	–	–	–	–	31	22	65	7
Fort Yukon	41	25	2.2	0.2	109	28	1.9	0.2	38	11	3.1	0.5	13	10	3.1	0.4	10	8	2.4	0.2	211	82	474	57
Venetie	13	7	3.9	0.3	45	10	3.1	0.6	13	4	3.0	0.5	3	2	4.5	0.3	1	1	4.0	–	75	24	267	40
Chalkyitsik	13	4	3.3	0.8	14	13	2.5	0.1	1	0	–	–	–	–	–	–	–	–	–	–	28	17	81	23
District 5	92	47	2.7	0.2	233	84	1.9	0.1	108	44	2.8	0.2	27	20	3.0	0.2	22	18	2.8	0.2	482	213	1,206	78
Survey total	439	118	3.1	0.2	855	287	2.7	0.1	963	328	4.4	0.1	363	307	4.6	0.1	35	26	2.9	0.1	2,655	1,066	10,457	308

Note: The number of people in surveyed communities was estimated from the total number of households (*N*), the number of households contacted (*n*), average number of people in households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Table 8.–Estimated subsistence harvest including commercially related (not including test fish) of Chinook salmon by fishing location in surveyed communities, Yukon Area, 2012.

	Coastal	Districts			Subdistricts [a]								River drainages					Total by
Community	district		2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	community [b]
Hooper Bay	1,074	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,074
Scammon Bay	300	[1] 714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,014
Coastal District	1,374	714	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,088
Nunam Iqua	0	195	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	195
Alakanuk	0	883	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	883
Emmonak	0	1,136	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,143
Kotlik		739	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	739
District 1	0	2,953	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,960
Mountain Village	0	296	1,024	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,320
Pitkas Point	0	5	256	0	0	0	0	0	0	0	0	0	0	0	0	0	0	261
St. Marys	0	13	2,314	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,327
Pilot Station	0	0	879	0	0	0	0	0	0	0	0	0	0	0	0	0	0	879
Marshall	0	0	1,409	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,409
District 2	0	314	5,882	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6,196
Russian Mission	0	0	0	1,711	0	0	0	0	0	0	0	0	0	0	0	0	0	1,711
Holy Cross	0	0	0	576	0	0	0	0	0	0	0	0	0	0	0	0	0	576
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	75	0	0	0	0	75
District 3	0	0	0	2,287	0	0	0	0	0	0	0	0	75	0	0	0	0	2,362
Anvik	0	0	0	0	435	0	0	0	0	0	0	0	0	0	0	0	0	435
Grayling	0	0	0	0	1,081	0	0	0	0	0	0	0	0	0	0	0	0	1,081
Kaltag	0	0	0	0	1,346	0	0	0	0	0	0	0	0	0	0	0	0	1,346
Nulato	0	0	0	0	1,955	0	0	0	0	0	0	0	0	0	0	0	0	1,955
Koyukuk	0	0	0	0	614	0	0	0	0	0	0	0	0	0	0	0	0	614
Galena	0	0	0	0	99	296	347	0	0	0	0	0	0	0	0	0	0	742
Ruby	0	0	0	0	0	0	1,316	0	0	0	0	0	0	0	0	0	0	1,316
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	165	0	0	0	165
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	0	5	0	0	0	5
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	3	0	0	0	3
District 4	0	0	0	0	5,530	296	1,663	0	0	0	0	0	0	173	0	0	0	7,662

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Table 8.–Page 2 of 2.

Community	Coastal district	Districts			Subdistricts [a]								River drainages					Total by community [b]
		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	576	1,451	73	0	0	0	0	0	0	0	2,100
Stevens Village	0	0	0	0	0	0	0	0	0	0	330	0	0	0	0	0	0	330
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	71	0	0	0	0	0	0	71
Fort Yukon	0	0	0	0	0	0	0	0	0	0	1,516	602	0	0	0	23	0	2,141
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	0	0	86
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5	0	0	0	0	0	0	0	576	1,451	73	1,917	602	0	0	86	23	0	4,728
Survey total	1,374	3,981	5,889	2,287	5,530	296	1,663	576	1,451	73	1,917	602	75	173	86	23	0	25,996

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

[a] Harvest in Subdistrict 5-D 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.

[b] Totals may not add in both directions due to decimal rounding.

Table 9.–Estimated subsistence harvest including commercially related (not including test fish) of summer chum salmon by fishing location in surveyed communities, Yukon Area, 2012.

	Coastal	Districts			Subdistricts [a]								River drainages					Total by
Community	district	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	community [b]
Hooper Bay	14,868	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14,868
Scammon Bay	4,024	3,418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,442
Coastal District	18,892	3,418	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22,310
Nunam Iqua	0	1,977	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,977
Alakanuk	0	7,862	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,862
Emmonak	0	12,865	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12,865
Kotlik	0	7,434	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7,434
District 1	0	30,138	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,138
Mountain Village	0	1,798	6,897	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,695
Pitkas Point	0	17	1,136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,153
St. Marys	0	492	10,271	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10,763
Pilot Station	0	0	3,860	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,860
Marshall	0	0	5,903	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,903
District 2	0	2,307	28,067	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30,374
Russian Mission	0	0	0	2,508	0	0	0	0	0	0	0	0	0	0	0	0	0	2,508
Holy Cross	0	0	0	1,147	0	0	0	0	0	0	0	0	0	0	0	0	0	1,147
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	5,035	0	0	0	0	5,035
District 3	0	0	0	3,655	0	0	0	0	0	0	0	0	5,035	0	0	0	0	8,690
Anvik	0	0	0	0	1,371	0	0	0	0	0	0	0	0	0	0	0	0	1,371
Grayling	0	0	0	0	2,616	0	0	0	0	0	0	0	0	0	0	0	0	2,616
Kaltag	0	0	0	0	186	0	0	0	0	0	0	0	0	0	0	0	0	186
Nulato	0	0	0	0	254	0	0	0	0	0	0	0	0	0	0	0	0	254
Koyukuk	0	0	0	0	828	0	0	0	0	0	0	0	0	0	0	0	0	828
Galena	0	0	0	0	20	583	115	0	0	0	0	0	0	0	0	0	0	718
Ruby	0	0	0	0	0	0	3,891	0	0	0	0	0	0	0	0	0	0	3,891
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	7,306	0	0	0	7,306
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	428	0	0	0	428
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	3,850	0	0	0	3,850
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	100
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	5,275	583	4,006	0	0	0	0	0	0	11,684	0	0	0	21,548

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Table 9.–Page 2 of 2.

Community	Coastal district	Districts			Subdistricts [a]								River drainages					Total by community [b]
		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	1,209	3,105	19	0	0	0	0	0	0	0	4,333
Stevens Village	0	0	0	0	0	0	0	0	0	0	188	0	0	0	0	0	0	188
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	27	0	0	0	0	0	0	27
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Venetie	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
District 5	0	0	0	0	0	0	0	1,209	3,105	19	215	0	0	0	0	0	0	4,548
Survey total	18,892	35,863	28,067	3,655	5,275	583	4,006	1,209	3,105	19	215	0	5,035	11,684	0	0	0	117,608

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

[a] Harvest in Subdistrict 5-D 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.

[b] Totals may not add in both directions due to decimal rounding.

Table 10.–Estimated subsistence harvest including commercially related (not including test fish) of fall chum salmon by fishing location in surveyed communities, Yukon Area, 2012.

	Coastal	Districts			Subdistricts [a]								River drainages					Total by
Community	district	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	community [b]
Hooper Bay	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Scammon Bay	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10
Coastal District	8	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Nunam Iqua	0	210	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	210
Alakanuk	0	172	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	172
Emmonak	0	4,929	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4,929
Kotlik	0	487	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	487
District 1	0	5,798	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5,798
Mountain Village	0	348	152	0	0	0	0	0	0	0	0	0	0	0	0	0	0	500
Pitkas Point	0	0	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9
St. Marys	0	0	1,423	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,423
Pilot Station	0	0	604	0	0	0	0	0	0	0	0	0	0	0	0	0	0	604
Marshall	0	0	184	0	0	0	0	0	0	0	0	0	0	0	0	0	0	184
District 2	0	348	2,372	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,720
Russian Mission	0	0	0	282	0	0	0	0	0	0	0	0	0	0	0	0	0	282
Holy Cross	0	0	0	339	0	0	0	0	0	0	0	0	0	0	0	0	0	339
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	0	0	16
District 3	0	0	0	621	0	0	0	0	0	0	0	0	16	0	0	0	0	637
Anvik	0	0	0	0	569	0	0	0	0	0	0	0	0	0	0	0	0	569
Grayling	0	0	0	0	804	0	0	0	0	0	0	0	0	0	0	0	0	804
Kaltag	0	0	0	0	2,830	0	0	0	0	0	0	0	0	0	0	0	0	2,830
Nulato	0	0	0	0	2,729	0	0	0	0	0	0	0	0	0	0	0	0	2,729
Koyukuk	0	0	0	0	1,331	0	0	0	0	0	0	0	0	0	0	0	0	1,331
Galena	0	0	0	0	92	2,393	462	0	0	0	0	0	0	0	0	0	0	2,947
Ruby	0	0	0	0	0		4,408	0	0	0	0	0	0	0	0	0	0	4,408
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	1,909	0	0	0	1,909
Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Allakaket	0	0	0	0	0	0	0	0	0	0	0	0	0	508	0	0	0	508
Alatna	0	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	18
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4	0	0	0	0	8,355	2,393	4,870	0	0	0	0	0	0	2,437	0	0	0	18,055

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Table 10.–Page 2 of 2.

Community	Coastal district	Districts			Subdistricts [a]								River drainages					Total by community [b]
		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	5,098	15,367	0	0	0	0	0	0	0	0	20,465
Stevens Village	0	0	0	0	0	0	0	0	0	0	277	0	0	0	0	0	0	277
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	174	0	0	0	0	0	0	174
Fort Yukon	0	0	0	0	0	0	0	0	0	0	4,756	6,106	0	0	0	1,797	0	12,659
Venetie	0	0	0	0	0	0	0	0	0	0	0	0	0	0	295	0	0	295
Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	162	162
District 5	0	0	0	0	0	0	0	5,098	15,367	0	5,207	6,106	0	0	295	1,797	162	34,032
Survey total	8	6,149	2,372	621	8,355	2,393	4,870	5,098	15,367	0	5,207	6,106	16	2,437	295	1,797	162	61,253

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

[a] Harvest in Subdistrict 5-D 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.

[b] Totals may not add in both directions due to decimal rounding.

Table 11.–Estimated subsistence harvest including commercially related (not including test fish) of coho salmon by fishing location in surveyed communities, Yukon Area, 2012.

	Coastal	Districts			Subdistricts [a]								River drainages					Total by
Community	district	1	2	3	4A	4B	4C	5A	5B	5C	5D-down	5D-up	Innoko	Koyukuk	Chandalar	Porcupine	Black	community [b]
Hooper Bay	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
Scammon Bay	4	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86
Coastal District	11	82	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	93
Nunam Iqua	0	18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	18
Alakanuk	0	222	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	222
Emmonak	0	2,275	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,275
Kotlik	0	331	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	331
District 1	0	2,846	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,846
Mountain Village	0	137	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	137
Pitkas Point	0	0	53	0	0	0	0	0	0	0	0	0	0	0	0	0	0	53
St. Marys	0	0	141	0	0	0	0	0	0	0	0	0	0	0	0	0	0	141
Pilot Station	0	0	136	0	0	0	0	0	0	0	0	0	0	0	0	0	0	136
Marshall	0	0	567	0	0	0	0	0	0	0	0	0	0	0	0	0	0	567
District 2	0	137	897	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,034
Russian Mission	0	0	0	319	0	0	0	0	0	0	0	0	0	0	0	0	0	319
Holy Cross	0	0	0	237	0	0	0	0	0	0	0	0	0	0	0	0	0	237
Shageluk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 3	0	0	0	556	0	0	0	0	0	0	0	0	0	0	0	0	0	556
Anvik	0	0	0	0	214	0	0	0	0	0	0	0	0	0	0	0	0	214
Grayling	0	0	0	0	26	0	0	0	0	0	0	0	0	0	0	0	0	26
Kaltag	0	0	0	0	928	0	0	0	0	0	0	0	0	0	0	0	0	928
Nulato	0	0	0	0	41	0	0	0	0	0	0	0	0	0	0	0	0	41
Koyukuk	0	0	0	0	62	0	0	0	0	0	0	0	0	0	0	0	0	62
Galena	0	0	0	0	0	162	114	0	0	0	0	0	0	0	0	0	0	276
Ruby	0	0	0	0	0	0	1,806	0	0	0	0	0	0	0	0	0	0	1,806
Huslia	0	0	0	0	0	0	0	0	0	0	0	0	0	165	0	0	0	165
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	0	38	0	0	0	38
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
District 4	0	0	0	0	1,271	162	1,920	0	0	0	0	0	0	203	0	0	0	3,556

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Table 11.–Page 2 of 2.

Community	Coastal district	Districts			Subdistricts [a]								River drainages					Total by community [b]
		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	1,686	1,374	0	0	0	0	0	0	0	0	3,060
Stevens Village	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
Beaver	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	2
Fort Yukon	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Venetie	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
District 5	0	0	0	0	0	0	0	1,686	1,374	0	2	4	0	0	0	0	0	3,066
Survey total	11	3,065	897	556	1,271	162	1,920	1,686	1,374	0	2	4	0	203	0	0	0	11,151

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

[a] Harvest in Subdistrict 5-D 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.

[b] Totals may not add in both directions due to decimal rounding.

Table 12.–Estimated subsistence harvest of pink salmon, whitefish, pike, and sheefish by surveyed communities, Yukon Area, 2012.

			Estimated subsistence harvest										Total	
			Pink salmon [a]		Lg. whitefish [b]		Sm. whitefish [b]		Northern pike		Sheefish		est.	Percent
	Total	Households	Est.	CI	Est.	CI	Est.	CI	Est.	CI	Est.	CI	fish	broad
Community	households	contacted [c]	total	95%	total	95%	total	95%	total	95%	total	95%	harvest	whitefish [d]
Hooper Bay [a]	218	78	1,101	708	447	265	1,447	748	456	517	25	24	3,476	52%
Scammon Bay	99	44	1,343	708	1,066	426	1,578	699	1,854	675	836	821	6,677	48%
Coastal District	317	122	2,444	989	1,513	494	3,025	1,011	2,310	838	861	806	10,153	50%
Nunam Iqua	42	34	1,051	0	377	67	2,381	451	171	40	1,189	257	5,169	74%
Alakanuk [a]	158	54	174	150	3,006	804	7,406	3,226	1,732	1,267	2,355	1,339	14,673	93%
Emmonak [a]	180	89	199	53	3,497	1,020	6,122	1,500	1,181	473	2,295	540	13,294	60%
Kotlik [a]	110	37	195	167	694	353	2,661	1,441	375	229	1,122	403	5,047	96%
District 1	490	214	1,619	226	7,574	1,330	18,570	3,796	3,459	1,348	6,961	1,494	38,183	77%
Mountain Village	152	56	207	109	1,302	369	612	509	1,579	648	426	127	4,126	78%
Pitkas Point	27	22	2	1	502	199	59	25	78	29	48	11	689	63%
St. Marys	127	49	643	543	3,969	3,633	834	517	496	289	757	512	6,699	59%
Pilot Station [a]	118	57	23	0	931	413	127	117	66	40	416	144	1,563	73%
Marshall	69	26	5	5	1,840	969	48	50	387	181	296	74	2,576	95%
District 2	493	210	880	544	8,544	3,718	1,680	723	2,606	720	1,943	541	15,653	71%
Russian Mission	72	26	76	48	2,468	314	0	0	2,758	530	331	72	5,633	96%
Holy Cross	55	31	0	0	291	241	73	72	53	35	44	33	461	88%
Shageluk	29	11	24	31	1,027	1,166	0	0	118	140	85	93	1,254	88%
District 3	156	68	100	54	3,786	1,113	73	71	2,929	530	460	114	7,348	93%
Anvik	35	27	0	0	658	803	0	0	62	19	97	45	817	78%
Grayling	47	18	0	0	2,872	0	26	0	298	0	637	0	3,833	70%
Kaltag	58	15	0	0	870	0	232	0	116	0	394	0	1,612	73%
Nulato	72	23	0	0	354	400	25	23	65	82	465	317	909	62%
Koyukuk	49	22	0	0	858	1,096	58	44	167	219	179	220	1,262	81%
Galena	169	51	3	4	1,241	309	216	177	154	79	288	130	1,902	72%
Ruby	66	21	0	0	21	0	0	0	104	0	149	0	274	67%
Huslia	95	33	101	167	1,325	387	399	310	698	268	390	186	2,913	80%
Hughes	31	25	0	0	1,086	676	973	398	0	0	103	50	2,162	57%
Allakaket	63	21	0	0	3,812	0	420	0	4,200	0	2,394	0	10,826	97%
Alatna	10	4	0	0	411	14	1,000	0	23	5	83	5	1,517	100%
Bettles	22	17	0	0	0	0	0	0	0	0	3	2	3	0%
District 4	717	277	104	161	13,508	1,570	3,349	517	5,887	350	5,182	432	28,030	80%

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Table 12.–Page 2 of 2.

Community	Total households	Households contacted [c]	Estimated subsistence harvest: Pink salmon [a] Est. total	Pink salmon [a] CI 95%	Lg. whitefish [b] Est. total	Lg. whitefish [b] CI 95%	Sm. whitefish [b] Est. total	Sm. whitefish [b] CI 95%	Northern pike Est. total	Northern pike CI 95%	Sheefish Est. total	Sheefish CI 95%	Total est. fish harvest	Percent broad whitefish[d]
Tanana	103	52	3	2	4,695	2,817	1,473	412	257	165	1,194	419	7,622	83%
Stevens Village	18	11	0	0	47	0	14	0	83	0	36	0	180	70%
Birch Creek	16	12	0	0	454	298	0	0	60	33	5	2	519	82%
Beaver	31	24	0	0	47	22	12	9	67	26	13	13	139	51%
Fort Yukon	211	86	0	0	1,370	568	741	212	562	363	415	150	3,088	71%
Venetie	75	24	0	0	0	0	0	0	131	120	7	8	138	0%
Chalkyitsik	28	18	0	0	11	6	0	0	99	88	17	22	127	0%
District 5	482	227	3	2	6,624	2,834	2,240	456	1,259	421	1,687	438	11,813	80%
Survey total	2,655	1,118	5,150	1,155	41,549	5,224	28,937	4,033	18,450	1,890	17,094	1,878	111,180	78%
Proportion of harvest by district														
Coastal District			47%	–	4%	–	10%	–	13%	–	5%	–	9%	2%
District 1			31%	–	18%	–	64%	–	19%	–	41%	–	34%	18%
District 2			17%	–	21%	–	6%	–	14%	–	11%	–	14%	19%
District 3			2%	–	9%	–	< 1%	–	16%	–	3%	–	7%	11%
District 4			2%	–	33%	–	12%	–	32%	–	30%	–	25%	33%
District 5			< 1%	–	16%	–	8%	–	7%	–	10%	–	11%	16%

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. Estimates include a 95% confidence interval (CI 95%).

[a] Estimated total includes pink salmon that were given to communities from test fish projects. A total of 216 pink salmon were donated to 5communities.

[b] Large whitefish are considered those 4 pounds or larger and small whitefish are less than 4 pounds.

[c] 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.

[d] In 2012, households were asked to categorize their harvest of large whitefish as either Broad whitefish or Humpback whitefish. The remaining percent were Humpback whitefish.

Table 13.–Reported subsistence harvest of other miscellaneous fish species by surveyed communities, Yukon Area, 2012.

Community	Total households	Households contacted [a]	Reported harvest of miscellaneous fish species (not expanded)									
			Alaska blackfish	Arctic char	Arctic grayling	Arctic lamprey [b]	Burbot	Pacific halibut [c]	Pacific herring [d]	Longnose sucker	Sockeye salmon [e]	Tomcod
Hooper Bay	220	78	1,470	0	0	0	27	67	1,320	0	17	1,636
Scammon Bay	99	44	5,810	10	0	0	36	251	8,923	0	2	1,067
Coastal District	319	122	7,280	10	0	0	63	318	10,243	0	19	2,703
Nunam Iqua	43	34	17,920	0	0	0	187	1	0	0	7	215
Alakanuk	159	54	4,906	0	0	0	246	0	42	0	10	48
Emmonak	181	89	12,510	0	20	0	338	2	164	0	58	905
Kotlik	111	37	3,150	5	0	0	59	0	0	0	58	127
District 1	494	214	38,486	5	20	0	830	3	206	0	133	1,295
Mountain Village	152	56	3,244	0	61	33	247	0	0	3	31	0
Pitkas Point	27	22	2,800	0	12	0	45	0	0	0	6	0
St. Marys	130	49	4,900	19	19	60	101	0	0	0	35	25
Pilot Station	119	57	1,400	6	66	140	129	0	0	0	15	0
Marshall	70	26	4,760	0	0	267	452	0	0	0	49	0
District 2	498	210	17,104	25	158	500	974	0	0	3	136	25
Russian Mission	72	26	0	1	1	515	167	0	0	0	37	0
Holy Cross	57	31	70	0	0	30	23	0	0	0	0	0
Shageluk	29	11	0	0	0	0	4	0	0	0	0	0
District 3	158	68	70	1	1	545	194	0	0	0	37	0
Anvik	36	27	0	0	50	0	0	0	0	0	12	0
Grayling	48	18	0	10	43	198	40	0	0	45	9	0
Kaltag	58	15	0	0	10	0	6	0	0	0	0	0
Nulato	72	23	0	78	200	0	0	0	0	0	0	0
Koyukuk	49	22	0	56	80	0	30	0	0	0	40	0
Galena	169	51	1,520	20	24	0	62	0	0	5	1	0
Ruby	66	21	0	6	62	0	1	0	0	0	0	0
Huslia	95	33	20	2	6	0	27	0	0	20	13	0
Hughes	31	25	0	0	0	0	0	0	0	0	0	0
Allakaket	63	21	0	0	50	0	2	0	0	0	0	0
Alatna	10	4	0	3	92	0	0	0	0	0	0	0
Bettles	22	17	0	0	14	0	0	0	0	0	0	0
District 4	719	277	1,540	175	631	198	168	0	0	70	75	0

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Table 13.–Page 2 of 2.

Community	Total households	Households contacted [a]	Reported harvest of miscellaneous fish species (not expanded)									
			Alaska blackfish	Arctic char	Arctic grayling	Arctic lamprey [b]	Burbot	Pacific halibut [c]	Pacific herring [d]	Longnose sucker	Sockeye salmon [e]	Tomcod
Tanana	103	52	0	0	11	0	45	0	0	14	0	0
Stevens Village	18	11	0	0	0	0	10	0	0	0	0	0
Birch Creek	16	12	0	0	6	0	5	0	0	0	0	0
Beaver	31	24	0	0	0	0	5	0	0	0	0	0
Fort Yukon	211	86	1	0	11	0	128	0	0	8	5	0
Venetie	75	24	0	0	80	0	0	0	0	0	0	0
Chalkyitsik	28	18	0	0	0	0	0	0	0	0	0	0
District 5	482	227	1	0	108	0	193	0	0	22	5	0
Survey total	2,655	1,118	64,481	216	918	1,243	2,422	321	10,449	95	405	4,023
Proportion of harvest by district												
Coastal District			11%	5%	0%	0%	3%	99%	98%	0%	5%	67%
District 1			60%	2%	2%	0%	34%	1%	2%	0%	33%	32%
District 2			27%	12%	17%	40%	40%	0%	0%	3%	34%	1%
District 3			0%	0%	0%	44%	8%	0%	0%	0%	9%	0%
District 4			2%	81%	69%	16%	7%	0%	0%	74%	19%	0%
District 5			0%	0%	12%	0%	8%	0%	0%	23%	1%	0%

[a] The number of households contacted per species may vary. The number of households indicated is the greatest number of households contacted in a community for any species.

[b] Surveys are conducted before the Arctic lamprey fishery occurs in November and December. Consequently the total is for previous year harvest, i.e., the 2012 reported harvest is for the 2011 calendar year.

[c] Includes reported harvest of flounders and unspecified flatfish species.

[d] Includes harvest of small fish reported as smelt.

[e] Due to low harvest numbers of sockeye salmon and difficulties with identification by fishermen, the harvest is not estimated.

Table 14.–Responses to survey question assessing percentage of subsistence salmon needs being met, by community, by species, Yukon Area, 2012.

		Percent of households (HH) that responded to subsistence needs met question, by community, by species									
		Chinook salmon					Summer chum salmon				
Community	Total households	Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%	Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%
Hooper Bay	218	53	51%	15%	4%	30%	51	20%	10%	2%	69%
Scammon Bay	99	27	22%	11%	15%	52%	28	0%	11%	11%	79%
Coastal District	317	80	41%	14%	8%	38%	79	13%	10%	5%	72%
Nunam Iqua	42	27	56%	15%	4%	26%	26	35%	15%	12%	38%
Alakanuk	158	44	45%	11%	9%	34%	40	43%	18%	5%	35%
Emmonak	180	60	55%	13%	12%	20%	62	39%	8%	8%	45%
Kotlik	110	32	47%	22%	13%	19%	28	21%	18%	14%	46%
District 1	490	163	51%	15%	10%	25%	156	36%	13%	9%	42%
Mountain Village	152	49	33%	31%	8%	29%	48	31%	4%	8%	56%
Pitkas Point	27	17	47%	24%	6%	24%	15	13%	27%	7%	53%
St. Marys	127	37	38%	27%	14%	22%	32	22%	16%	16%	47%
Pilot Station	118	31	48%	16%	19%	16%	30	37%	3%	20%	40%
Marshall	69	21	43%	29%	14%	14%	16	19%	19%	13%	50%
District 2	493	155	40%	26%	12%	22%	141	27%	11%	13%	50%
Russian Mission	72	19	26%	32%	11%	32%	15	20%	33%	7%	40%
Holy Cross	55	24	71%	25%	4%	0%	6	50%	0%	33%	17%
Shageluk	29	5	40%	20%	20%	20%	3	0%	33%	0%	67%
District 3	156	48	50%	27%	8%	15%	24	25%	25%	13%	38%

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Table 14.–Page 2 of 4.

Community	Total households	Percent of households (HH) that responded to subsistence needs met question, by community, by species: Chinook salmon: Total number of household responses	Chinook salmon: % HH responses 0% to 25%	Chinook salmon: % HH responses 26 % to 50%	Chinook salmon: % HH responses 51% to 75%	Chinook salmon: % HH responses 76% to 100%	Summer chum salmon: Total number of household responses	Summer chum salmon: % HH responses 0% to 25%	Summer chum salmon: % HH responses 26 % to 50%	Summer chum salmon: % HH responses 51% to 75%	Summer chum salmon: % HH responses 76% to 100%
Anvik	35	25	36%	20%	12%	32%	18	17%	0%	0%	83%
Grayling	47	15	53%	13%	13%	20%	12	42%	8%	0%	50%
Kaltag	58	11	73%	27%	0%	0%	2	0%	0%	50%	50%
Nulato	72	11	27%	9%	27%	36%	5	20%	20%	0%	60%
Koyukuk	49	12	42%	25%	0%	33%	4	25%	25%	0%	50%
Galena	169	35	74%	14%	6%	6%	7	0%	14%	29%	57%
Ruby	66	9	44%	22%	11%	22%	2	0%	0%	0%	100%
Huslia	95	19	79%	5%	5%	11%	9	22%	22%	0%	56%
Hughes	31	11	100%	0%	0%	0%	2	0%	0%	0%	100%
Allakaket	63	3	100%	0%	0%	0%	4	75%	0%	25%	0%
Alatna	10	2	100%	0%	0%	0%	–	–	–	–	–
Bettles	22	2	50%	0%	0%	50%	1	0%	0%	0%	100%
District 4	717	155	61%	14%	8%	17%	66	23%	9%	6%	62%
Tanana	103	28	54%	21%	4%	21%	14	14%	14%	7%	64%
Stevens Village	18	6	67%	17%	0%	17%	2	0%	0%	0%	100%
Birch Creek	16	8	100%	0%	0%	0%	3	100%	0%	0%	0%
Beaver	31	12	67%	8%	8%	17%	2	50%	50%	0%	0%
Fort Yukon	211	48	79%	10%	2%	8%	4	100%	0%	0%	0%
Venetie	75	19	79%	5%	5%	11%	3	33%	0%	0%	67%
Chalkyitsik	28	1	100%	0%	0%	0%	–	–	–	–	–
District 5	482	122	73%	11%	3%	12%	28	39%	11%	4%	46%
Survey total	2,655	723	53%	18%	8%	21%	494	27%	13%	8%	52%

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Table 14.–Page 3 of 4.

Community	Total households	Percent of households (HH) that responded to subsistence needs met question, by community, by species									
		Fall chum salmon					Coho salmon				
		Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%	Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%
Hooper Bay	218	–	–	–	–	–	1	100%	0%	0%	0%
Scammon Bay	99	3	33%	33%	0%	33%	4	50%	25%	0%	25%
Coastal District	317	3	33%	33%	0%	33%	5	60%	20%	0%	20%
Nunam Iqua	42	12	83%	0%	0%	17%	6	83%	0%	0%	17%
Alakanuk	158	16	63%	0%	6%	31%	10	50%	0%	0%	50%
Emmonak	180	23	57%	9%	0%	35%	19	53%	11%	5%	32%
Kotlik	110	14	64%	0%	0%	36%	9	44%	0%	0%	56%
District 1	490	65	65%	3%	2%	31%	44	55%	5%	2%	39%
Mountain Village	152	7	71%	0%	14%	14%	1	100%	0%	0%	0%
Pitkas Point	27	4	75%	0%	0%	25%	4	75%	0%	0%	25%
St. Marys	127	13	46%	8%	15%	31%	5	80%	20%	0%	0%
Pilot Station	118	4	25%	25%	0%	50%	3	0%	0%	0%	100%
Marshall	69	6	50%	17%	0%	33%	3	67%	33%	0%	0%
District 2	493	34	53%	9%	9%	29%	16	63%	13%	0%	25%
Russian Mission	72	6	17%	33%	0%	50%	6	33%	17%	0%	50%
Holy Cross	55	10	80%	0%	10%	10%	4	100%	0%	0%	0%
Shageluk	29	3	67%	0%	0%	33%	–	–	–	–	–
District 3	156	19	58%	11%	5%	26%	10	60%	10%	0%	30%

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Table 14.–Page 4 of 4.

Community	Total households	Percent of households (HH) that responded to subsistence needs met question, by community, by species									
		Fall chum salmon					Coho salmon				
		Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%	Total number of household responses	% HH responses 0% to 25%	% HH responses 26 % to 50%	% HH responses 51% to 75%	% HH responses 76% to 100%
Anvik	35	18	11%	11%	0%	78%	6	33%	0%	0%	67%
Grayling	47	13	54%	8%	0%	38%	3	100%	0%	0%	0%
Kaltag	58	7	43%	14%	0%	43%	1	0%	0%	0%	100%
Nulato	72	10	10%	30%	0%	60%	3	33%	33%	0%	33%
Koyukuk	49	8	0%	25%	25%	50%	2	50%	0%	0%	50%
Galena	169	20	25%	15%	15%	45%	8	50%	13%	13%	25%
Ruby	66	9	22%	0%	11%	67%	4	25%	0%	0%	75%
Huslia	95	8	38%	13%	25%	25%	3	100%	0%	0%	0%
Hughes	31	2	100%	0%	0%	0%	–	–	–	–	–
Allakaket	63	2	100%	0%	0%	0%	1	0%	0%	100%	0%
Alatna	10	–	–	–	–	–	–	–	–	–	–
Bettles	22	–	–	–	–	–	–	–	–	–	–
District 4	717	97	28%	13%	8%	51%	31	48%	6%	6%	39%
Tanana	103	13	46%	0%	8%	46%	3	0%	33%	0%	67%
Stevens Village	18	2	50%	0%	0%	50%	1	100%	0%	0%	0%
Birch Creek	16	6	100%	0%	0%	0%	2	100%	0%	0%	0%
Beaver	31	1	100%	0%	0%	0%	–	–	–	–	–
Fort Yukon	211	29	72%	14%	0%	14%	2	100%	0%	0%	0%
Venetie	75	5	100%	0%	0%	0%	–	–	–	–	–
Chalkyitsik	28	1	0%	100%	0%	0%	–	–	–	–	–
District 5	482	57	70%	9%	2%	19%	8	63%	13%	0%	25%
Survey total	2,655	275	51%	13%	4%	32%	114	58%	11%	1%	30%

Note: Dashes indicate indefinable values.

Table 15.–Reported subsistence and personal use fish harvested under the authority of a permit, listed by permit area, Yukon Area, 2012.

Permit fishing area	Permit [a] Type	Issued [b]	Returned	Percent returned	Number of permits returned that fished [c]	Reported harvest: Chinook [d]	Summer Chum [d]	Fall Chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subsistence permit															
Koyukuk Middle and South Fork rivers	SF	1		100%	1	0	0	0	0	11	0	0	1	3	15
Yukon River Rampart Area	SR	32	31	97%	28	575	197	1,161	21	345	2	3	5	11	0
Yukon River near [e] Haul Road bridge	SY	63	61	97%	26	629	147	259	0	75	35	3	19	0	0
Yukon River near	SE	42	42	100%	19	454	0	7,215	5	66	19	4	3	0	28
Circle and Eagle [f]		26	24	92%	13	91	0	11,681	0	166	44	1	2	7	16
Tanana River Subdistrict 6A	SA SEU	23	22	96%	11	228	58	2,166	1,374	77	2	14	5	0	2
Tanana River Subdistrict 6B	SB	85	79	93%	39	375	436	10,428	6,674	550	37	16	62	44	12
Tanana River Upstream of Subdistrict 6C	SU	58	49	84%	22	0	0	0	0	2,522	0	10	199	97	31
Kantishna River Subdistrict 6A	SK	3	3	100%	3	0	0	285	51	2	0	1	4	1	0
Tolovana River Pike Subdistrict 6B	ST	73	68	93%	35	0	0	2	0	130	8	6	525	0	0
Subsistence permit subtotal		406	380	94%	197	2,352	838	33,197	8,125	3,944	147	58	825	163	104
Personal use permit															
Tanana River Salmon Subdistrict 6C	PC	60	59	98%	29	71	321	410	100	3	0	0	0	0	0
Tanana River whitefish Upstream of Subdistrict 6C	PW	12	11	92%	3	0	0	0	0	19	0	0	0	233	0
Personal use permit subtotal		72	70	97%	32	71	321	410	100	22	0	0	0	233	0
Permit total		478	450	94%	229	2,423	1,159	33,607	8,225	3,966	147	58	825	396	104

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Table 15.–Page 2 of 2.

Note: Permit type is the letter code used on permits and refers to the fishery type (subsistence or personal use) permit fishing area or species targeted.

[a] Permits returned as of March 29, 2013.

[b] Includes 29 households that were issued permits for more than 1 area, including 4 permit holders issued an additional SE or SEU permit to track harvest above and below Eagle sonar project.

[c] Includes 8 households that fished in 2 different permit areas and 3 households that fished in SE and SEU.

[d] Does not include District 6 commercial related harvest of 24 Chinook, 184 summer chum, 2,421 fall chum, and 1,441 coho salmon caught but not sold during commercial fishing and retained for subsistence use.

[e] Includes harvest of 14 Chinook salmon from residents of Stevens Village, which is a surveyed community near a permit area. To avoid double counting, these salmon are not added to community subsistence harvest estimates from Stevens Village.

[f] Does not include 3 Chinook and 2 fall chum salmon that could not be released live from the Eagle sonar test fishery project and were given to residents of Eagle. Harvest taking place between the Eagle sonar and the U.S./Canada border is reported on SEU permits.

Table 16.–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, 2012.

Community	Harvest by drainage	Permits [a] Issued [b]	Returned	Percent returned	Number of permits returned that fished [c]	Reported harvest: Chinook [d]	Summer chum [d]	Fall chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subsistence permit															
Central	Yukon River	4	4	100%	3	66	0	0	0	0	1	0	0	0	20
Circle	Yukon River	19	19	100%	7	280	0	161	5	27	0	4	0	0	0
Eagle [e]	Yukon River	33	31	94%	17	164	0	18,729	0	205	62	1	5	7	24
Fairbanks (FNSB)[f]	Yukon River	71	70	99%	34	558	172	793	0	261	36	5	21	1	0
	Tanana River	28	28	100%	13	56	36	3,555	1,257	156	1	1	21	52	1
	Tolovana River	58	56	97%	31	0	0	0	0	0	0	0	284	0	0
	FNSB subtotal	157	154	98%	78	614	208	4,348	1,257	417	37	6	326	53	1
Healy	Tanana River	4	4	100%	3	0	0	563	753	140	8	14	0	0	0
	Kantishna River	1	1	100%	1	0	0	32	7	0	0	0	0	0	0
	Healy subtotal	5	5	100%	4	0	0	595	760	140	8	14	0	0	0
Manley	Yukon River	3	2	67%	2	25	0	0	0	0	0	0	0	0	0
	Tanana River	13	12	92%	8	174	58	2,164	1,374	59	2	0	4	0	2
	Tolovana River	1	0	0%	0	0	0	0	0	0	0	0	0	0	0
	Manley subtotal	17	14	82%	10	199	58	2,164	1,374	59	2	0	4	0	2
Minto	Yukon River	3	3	100%	2	10	20	140	0	0	0	0	0	0	0
	Tanana River	22	20	91%	5	99	64	0	0	25	0	1	29	4	0
	Tolovana River	12	10	83%	3	0	0	2	0	130	8	6	232	0	0
	Minto subtotal	37	33	89%	10	109	84	142	0	155	8	7	261	4	0
Nenana	Yukon River	2	2	100%	2	286	26	0	0	15	1	0	1	0	0
	Tanana River	41	37	90%	22	274	264	6,312	4,664	281	28	14	27	40	11
	Kantishna River	2	2	100%	2	0	0	253	44	2	0	1	4	1	0
	Nenana subtotal	45	41	91%	26	560	290	6,565	4,708	298	29	15	32	41	11
Rampart	Yukon River	5	5	100%	5	190	71	190	0	43	0	0	0	0	0
Stevens Village	Yukon River	3	3	100%	1	14	0	0	0	0	0	0	0	0	0
Upper Tanana Villages [g]	Yukon River	5	5	100%	4	25	0	3	0	0	0	0	0	0	0
	Tanana River	48	39	81%	18	0	0	0	0	2,411	0	10	179	45	31
	UTV subtotal	53	44	83%	22	25	0	3	0	2,411	0	10	179	45	31

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Table 16.–Page 2 of 2.

Community	Harvest by drainage	Permits [a] Issued [b]	Returned	Percent returned	Number of permits returned that fished [c]	Reported harvest: Chinook [d]	Summer chum [d]	Fall chum [d]	Coho [d]	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Other subsistence [h]	Yukon River	15	14	93%	9	131	55	300	21	101	0	1	2	10	0
	Tanana River	10	10	100%	3	0	72	0	0	77	0	0	6	0	0
	Tolovana River	2	2	100%	1	0	0	0	0	0	0	0	9	0	0
	Koyukuk River	1	1	100%	1	0	0	0	0	11	0	0	1	3	15
	Other subtotal	28	27	96%	14	131	127	300	21	189	0	1	18	13	15
Subsistence	Permit subtotal	406	380	94%	197	2,352	838	33,197	8,125	3,944	147	58	825	163	104
Personal use permit															
Fairbanks (FNSB) [f]	Tanana River	66	65	98%	29	71	321	404	100	8	0	0	0	4	0
Other personal use [i]	Tanana River	6	5	83%	3	0	0	6	0	14	0	0	0	229	0
Personal use	Permit subtotal	72	70	97%	32	71	321	410	100	22	0	0	0	233	0
Permit total		478	450	94%	229	2,423	1,159	33,607	8,225	3,966	147	58	825	396	104

Note: Permit type is the letter code used on permits and refers to the fishery type (subsistence or personal use) permit fishing area or species targeted.

[a] Permits returned as of March 29, 2013.

[b] Includes 29 households that were issued permits for more than 1 area including 4 permit holders issued an additional SE or SEU permit to track harvest above and below Eagle sonar.

[c] Includes 8 households that fished in more than 1 permit area, including 3 households that fished in both SE and SEU permit areas.

[d] Does not include District 6 commercial related harvest of 24 Chinook, 184 summer chum, 2,421 fall chum, and 1,441 coho salmon caught but not sold during commercial fishing and retained for subsistence use.

[e] Does not include 3 Chinook and 2 fall chum salmon that could not be released live from the Eagle sonar test fishery project and were given to residents of Eagle.

[f] Fairbanks North Star Borough (FNSB) includes residents from the communities of Ester, Fairbanks, North Pole, Salcha, and Two Rivers.

[g] Upper Tanana Villages (UTV) include residents from the communities of Delta Junction, Dot Lake, Northway, Tanacross, and Tok.

[h] Other Subsistence represents residents from Anchorage, Anderson, Wasilla, Willow, and Wiseman who were issued a subsistence fishing permit..

[i] Other Personal Use includes residents from Nenana and Delta Junction.

Table 17.–Reported subsistence and commercial harvest of Arctic lamprey from postseason postcards for the October 1 to December 31, 2011 fishing period.

Community	Households mailed postcards	Returned postcards	Reported subsistence fishing	Subsistence lamprey harvested [a]	Reported commercial fishing [a]	Commercial lamprey harvested [a]	Number of lamprey given away [a]	Number of lamprey received [a]
Mountain Village	162	38	2	0	5	0	0	0
Pitkas Point	27	8	1	0	1	0	0	0
St. Marys	120	33	5	0	4	0	0	4
Pilot Station	110	20	5	2	0	0	0	0
Marshall	73	13	1	20	0	0	0	0
Russian Mission	65	10	0	0	1	0	0	5
Holy Cross	59	13	1	1	0	0	0	0
Anvik	28	6	0	0	0	0	0	0
Grayling	44	10	3	115	2	215	40	0
Total	688	151	18	138	13	215	40	9
Percent		22%	3%					

Note: Postcards were mailed on November 28, 2011, to all households in the subsistence survey database in the above communities. Arctic lamprey harvest occurs after communities have been surveyed. The 2012 survey asks about harvests from the previous winter.

[a] Arctic lamprey are estimated to weigh a third of a pound each for converting between pounds and number harvested.

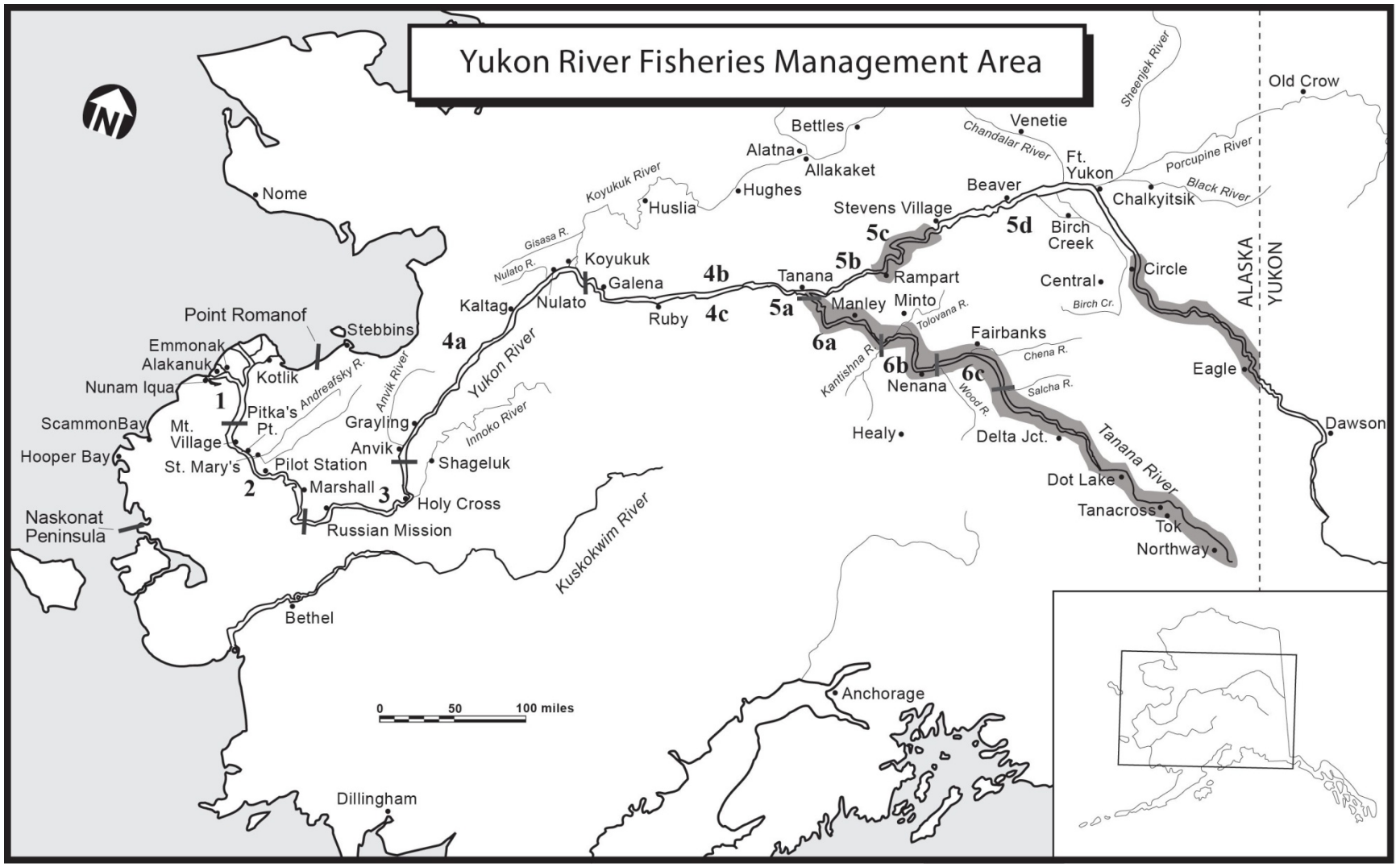
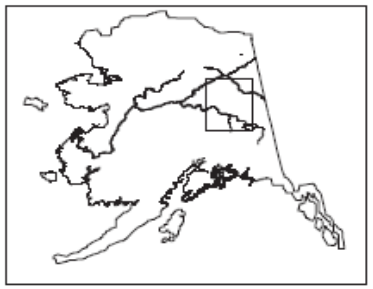


Figure 1.–Map of Alaska portion of Yukon River drainage showing communities and fishing districts.

Note: The community of Nunam Iqua was formerly known as Sheldon or Sheldon's Point. Subsistence and personal use permit areas are shaded. The permit area along the south fork of the Koyukuk River near the community of Wiseman is not shown.

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 5AAC 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.



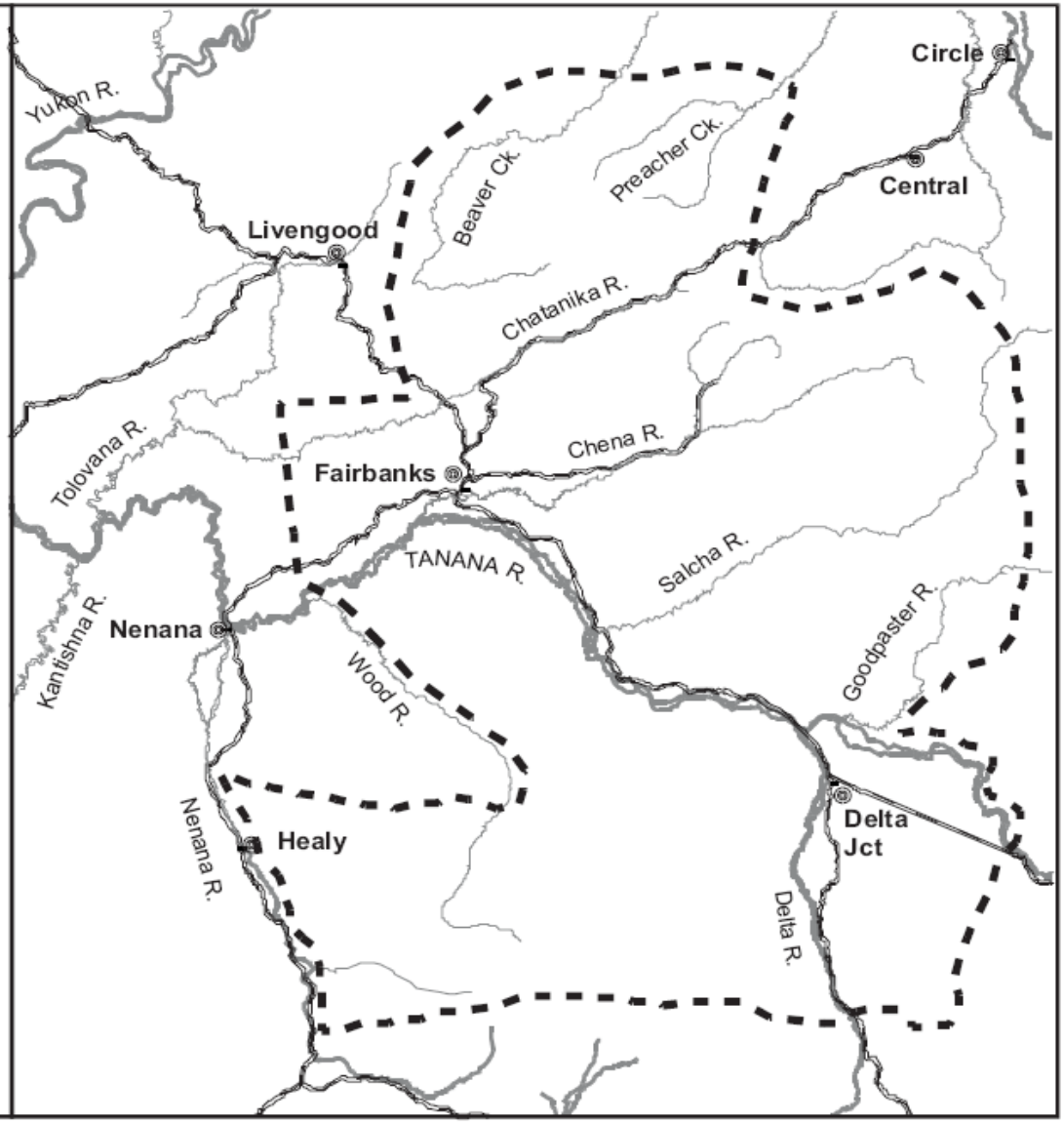
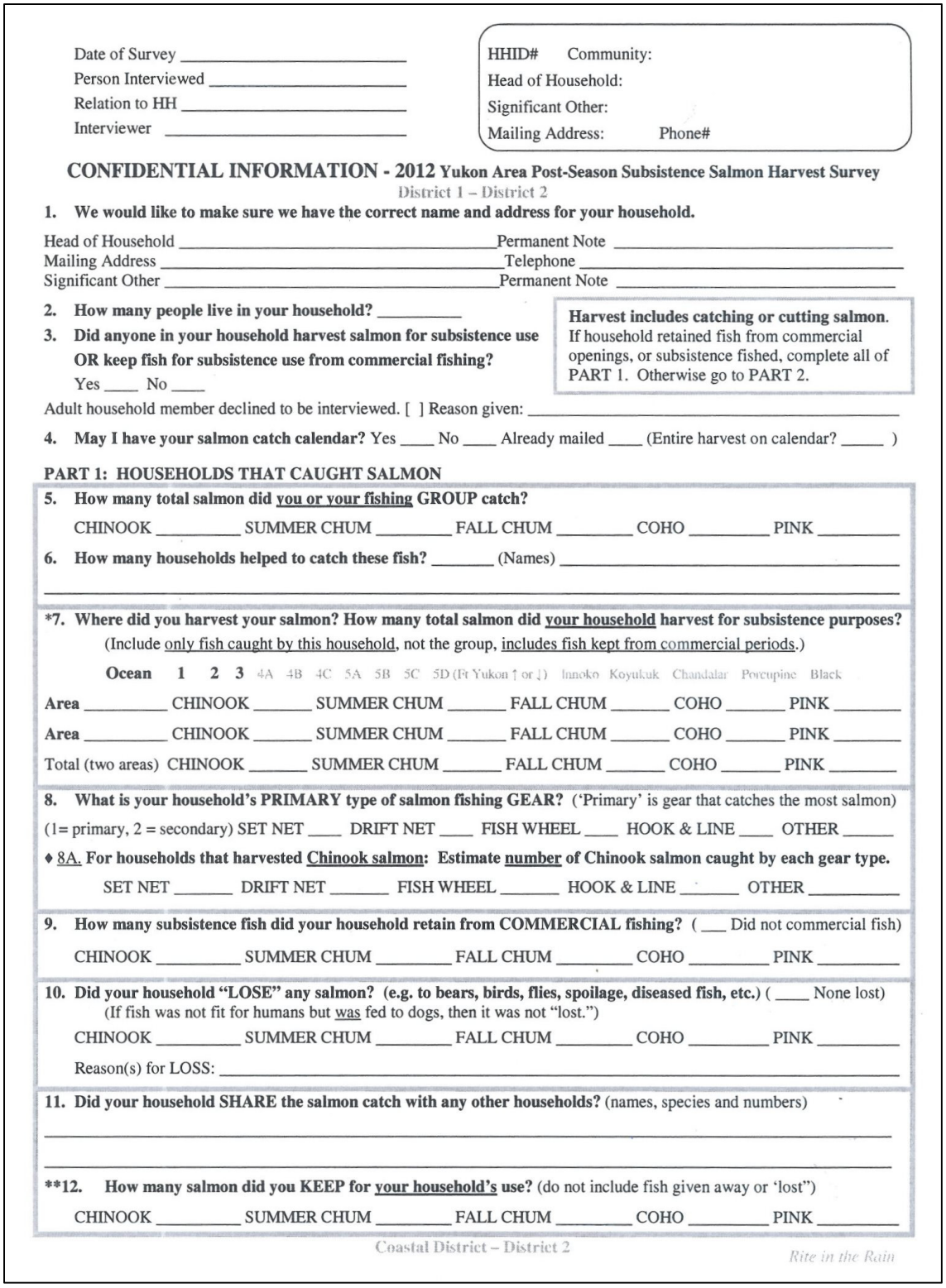


Figure 2.–Map of the Fairbanks Nonsubsistence Area.



Date of Survey _____
Person Interviewed _____
Relation to HH _____
Interviewer _____

HHID# Community:
Head of Household:
Significant Other:
Mailing Address: Phone#

CONFIDENTIAL INFORMATION - 2012 Yukon Area Post-Season Subsistence Salmon Harvest Survey

District 1 – District 2

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

Head of Household _____ Permanent Note _____
Mailing Address _____ Telephone _____
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 ____

Harvest includes catching or cutting salmon. If household retained fish from commercial openings, or subsistence fished, complete all of PART 1. Otherwise go to PART 2.

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

4. May I have your salmon catch calendar? Yes ____ No ____ Already mailed ____ (Entire harvest on calendar? _____)

PART 1: HOUSEHOLDS THAT CAUGHT SALMON

5. How many total salmon did you or your fishing GROUP catch?
CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

6. How many households helped to 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 (two areas) CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

8. What is your household's PRIMARY type of salmon fishing GEAR? ('Primary' is gear that catches the most salmon)
(1= primary, 2 = secondary) SET NET ____ DRIFT NET ____ FISH WHEEL ____ HOOK & LINE ____ OTHER _____

♦ **8A. For households that harvested Chinook salmon: Estimate number of Chinook salmon caught by each gear type.**
SET NET _____ DRIFT NET _____ FISH WHEEL _____ HOOK & LINE _____ OTHER _____

9. How many subsistence fish did your household retain 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.) (____ None lost)
(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 _____

Coastal District – District 2

Rite in the Rain

Figure 3.–Yukon Area postseason subsistence salmon harvest survey form, 2012.

Note: Area specific versions of the survey form were used throughout the drainage. Different versions highlighted specific fishing areas and other fish species local to the community.

PART 2: TO BE ASKED OF 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. Did YOUR household get enough salmon this year? (compared to Question 7 or 13). If the household has no need or usually does not harvest the species, indicate '0'. If the number needed/wanted is more/less than the household got, ask why.)

Were you able to harvest or receive enough:

CHINOOK ? Y / N How many did you need/want: _____ Comment:_____

SUMMER CHUM ? Y / N How many did you need/want: _____ Comment:_____

FALL CHUM ? Y / N How many did you need/want:_____ Comment:_____

COHO ? Y / N How many did you need/want:_____ 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.)

Large whitefish: BROAD _____ HUMPBACK _____ SMALL WHITEFISH (Cisco*, Round whitefish) _____

SHEEFISH _____ BURBOT _____ PIKE _____ BLACKFISH _____ GRAYLING _____ SUCKERS _____

TROUT (Arctic Char) _____ EELS (Lamprey) _____ TOMCOD (Saffron) _____ HERRING _____ HALIBUT _____

*MONTHS WHEN CISCO WERE HARVESTED or Other FISH Notes_____

16. How many SOCKEYE (red) salmon did your household catch? _____ (Mark '0' if household didn't 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?_____

_____

_____

How did this year compare to last year?_____

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:

Reminder: How many people live in this Household? _____ Please verify correct address and phone numbers

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)

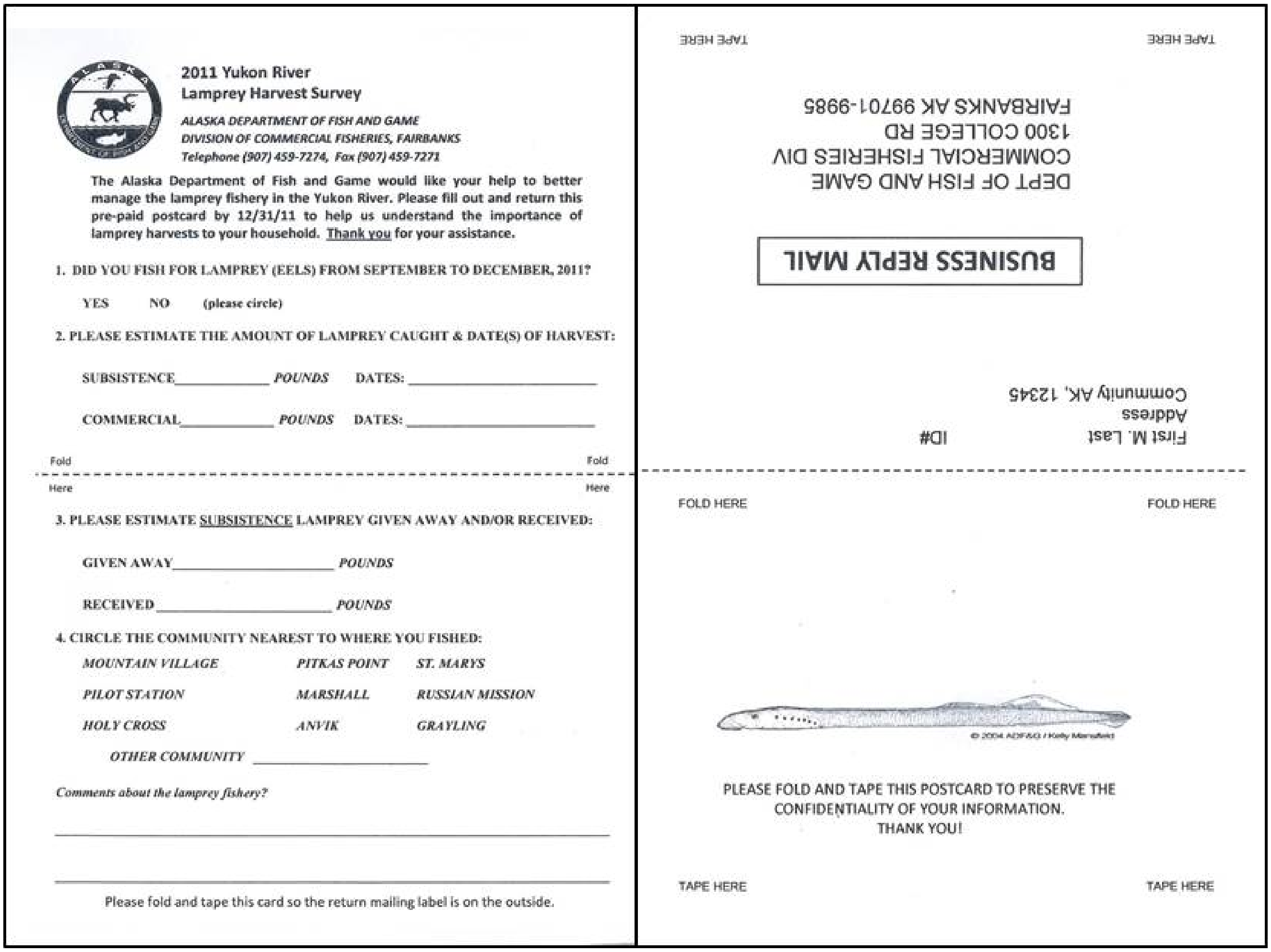
CHINOOK _____ SUMMER CHUM _____ FALL CHUM _____ COHO _____ PINK _____

Complete Survey _____ Partial Survey _____ No Survey _____

Rite in the Rain

Coastal District – District 2

Figure 3.–Page 2 of 2.



2011 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 by 12/31/11 to help us understand the importance of lamprey harvests to your household. Thank you for your assistance.

1. DID YOU FISH FOR LAMPREY (EELS) FROM SEPTEMBER TO DECEMBER, 2011?

YES NO (please circle)

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

SUBSISTENCE__________ *POUNDS* DATES: ____________________

COMMERCIAL__________ *POUNDS* DATES: ____________________

Fold Here -- Fold Here

3. PLEASE ESTIMATE 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 COMMUNITY __________________

Comments about the lamprey fishery?

____

____

Please fold and tape this card so the return mailing label is on the outside.

TAPE HERE TAPE HERE

DEPT OF FISH AND GAME
COMMERCIAL FISHERIES DIV
1300 COLLEGE RD
FAIRBANKS AK 99701-9985

BUSINESS REPLY MAIL

First M. Last ID#
Address
Community AK, 12345

FOLD HERE FOLD HERE

© 2004 ADF&G / Kelly Mansfield

PLEASE FOLD AND TAPE THIS POSTCARD TO PRESERVE THE CONFIDENTIALITY OF YOUR INFORMATION.
THANK YOU!

TAPE HERE TAPE HERE

Figure 4.–Supplemental postcard mailed to Arctic lamprey harvesting communities.

Note: Front and back of Yukon Area postseason subsistence Arctic lamprey harvest survey postcards were mailed November 2011 to all households in the communities listed in mainstem Districts 2, 3, and Subdistrict 4-A communities of Anvik and Grayling. Surveys took place in these communities in September 2012, and asked about lamprey harvested in the winter of 2011.

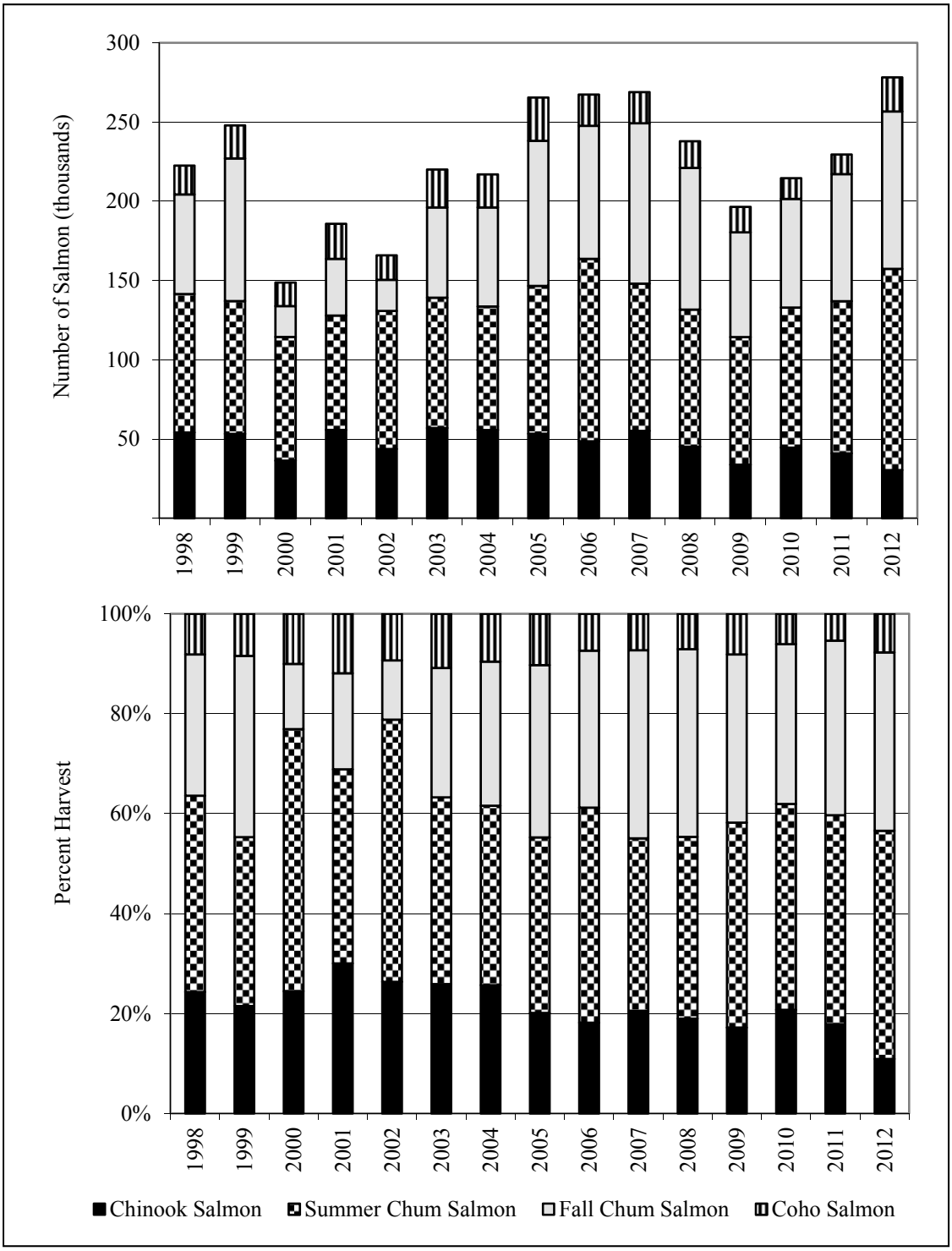


Figure 5.–Estimated total subsistence salmon harvest by species, Yukon Area, 1998–2012.

Note: Annual harvest of salmon species from 1998 through 2012 by number (top) and proportion (bottom). 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.

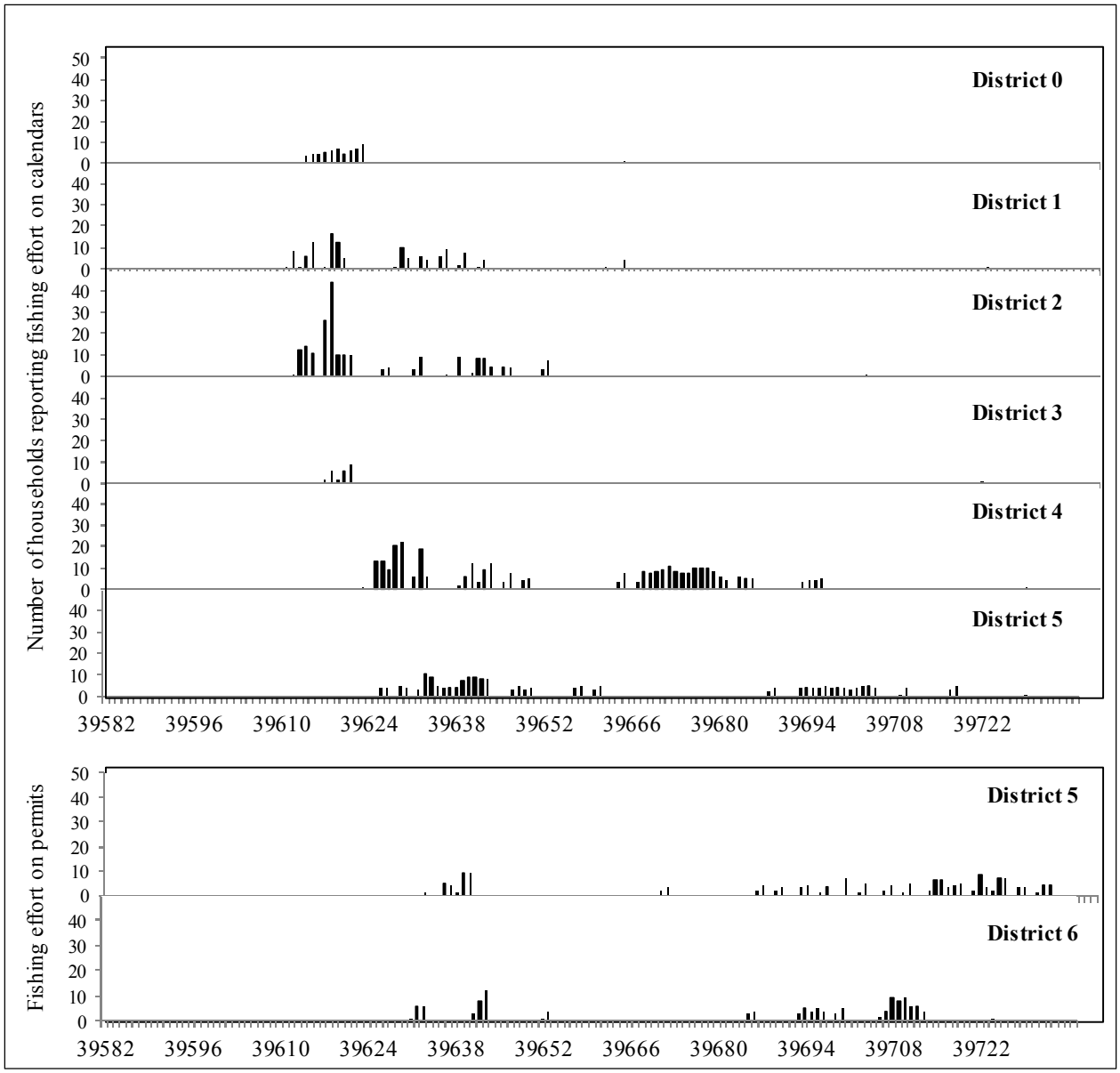


Figure 6.–Subsistence fishing effort, shown as number of households reporting fishing, by day and by district, in 2012.

Note: Top panel: fishing effort by day as recorded on harvest calendars. Bottom panel: fishing effort by day as recorded on permits. District 5 is represented in both panels because it includes survey and permit communities. Bars represent the number of households (*N*) in each district that recorded harvest by day on calendars or permits.

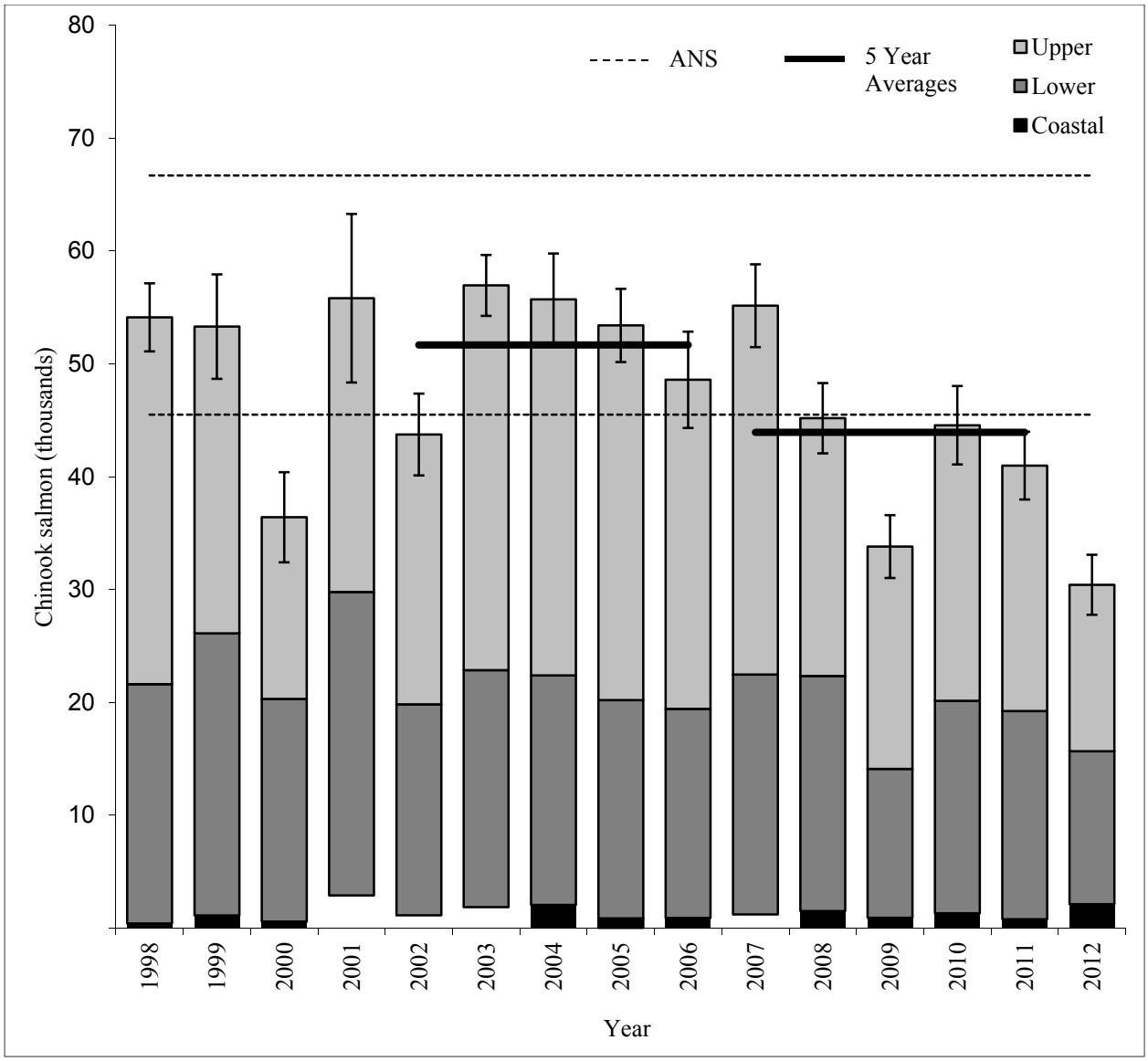


Figure 7.–Estimated Chinook salmon subsistence harvest, Yukon Area, 1998–2012.

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. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

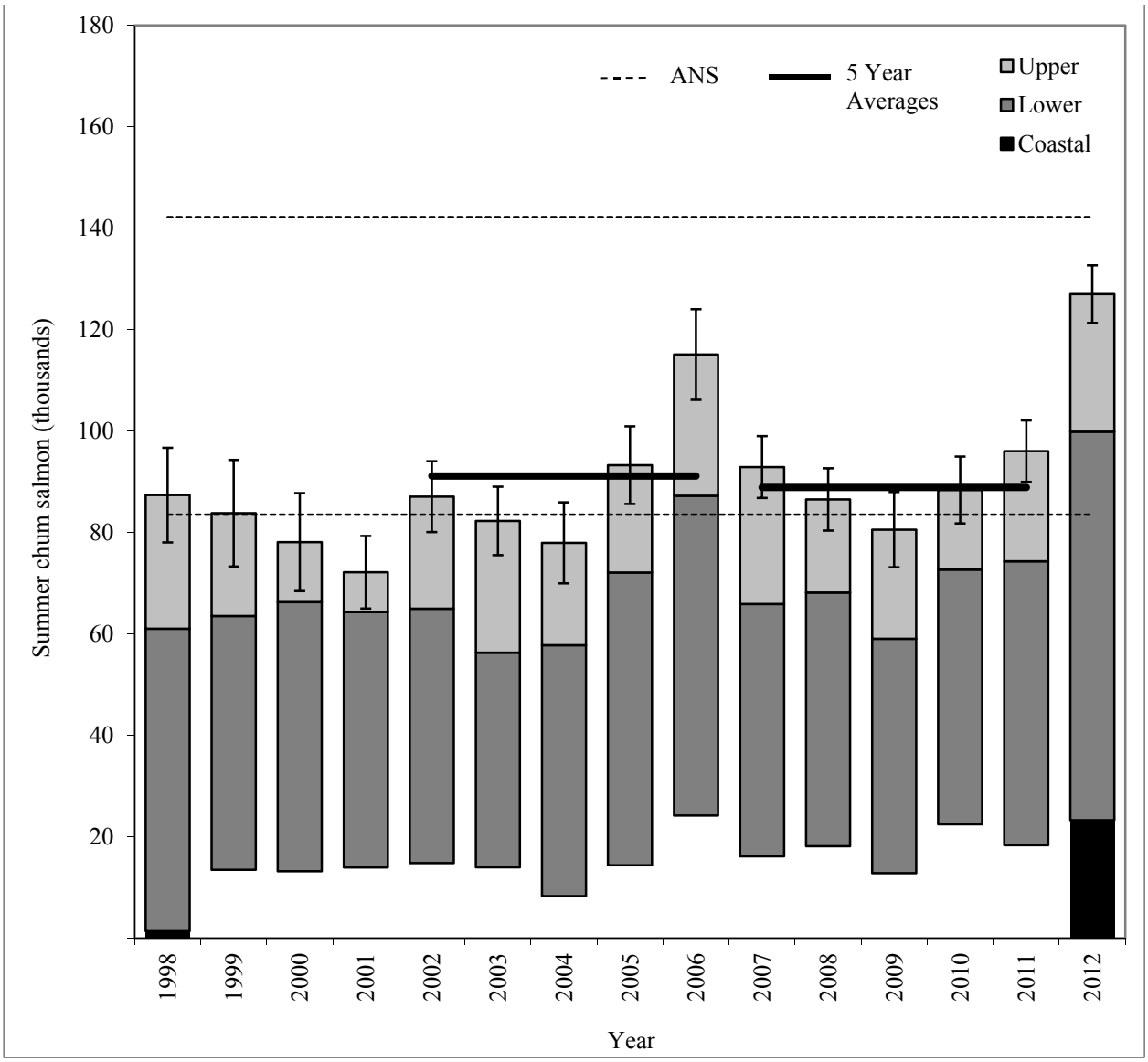


Figure 8.–Estimated summer chum salmon subsistence harvest, Yukon Area, 1998–2012.

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. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

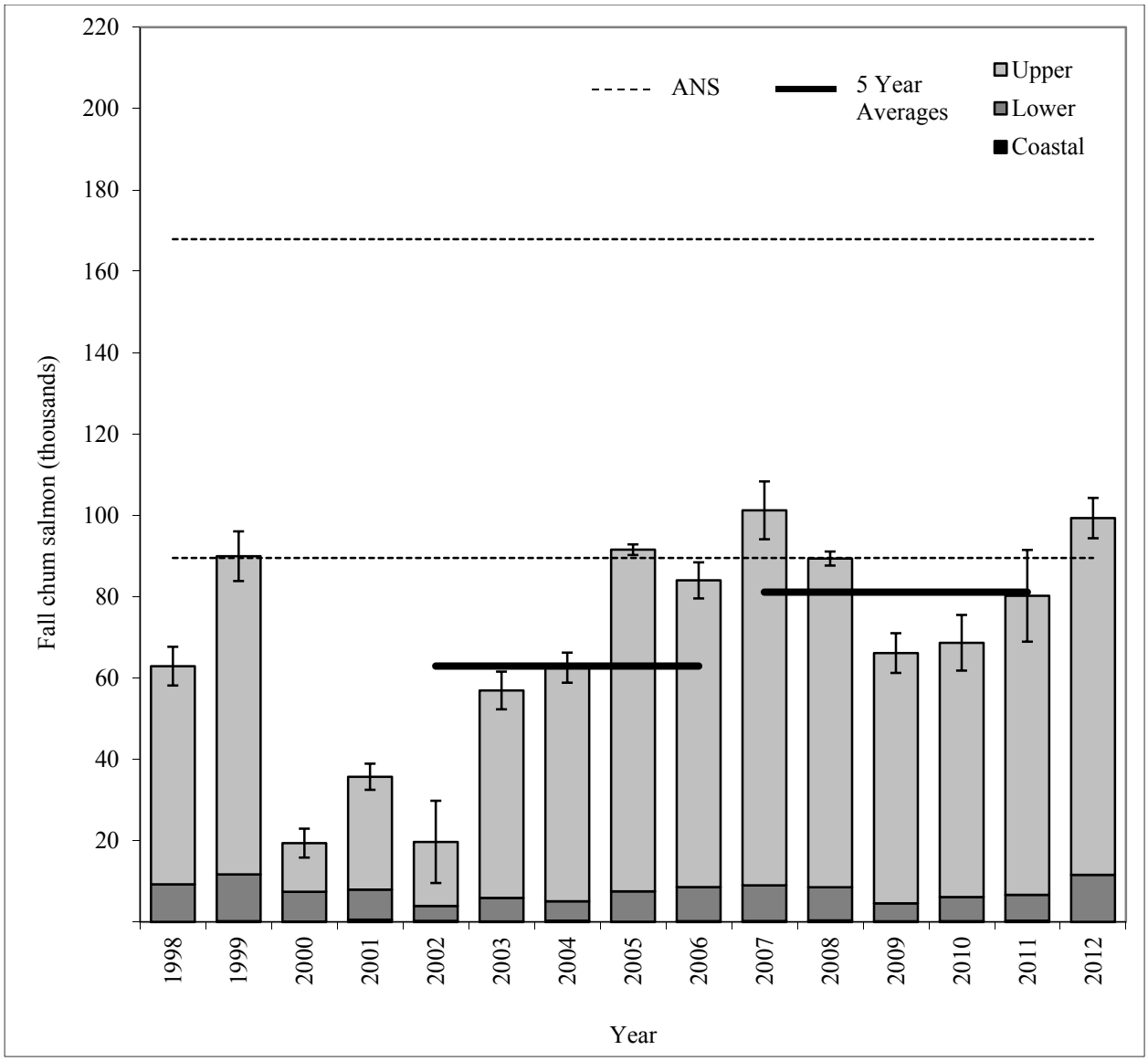


Figure 9.–Estimated fall chum salmon subsistence harvest, Yukon Area, 1998–2012.

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. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

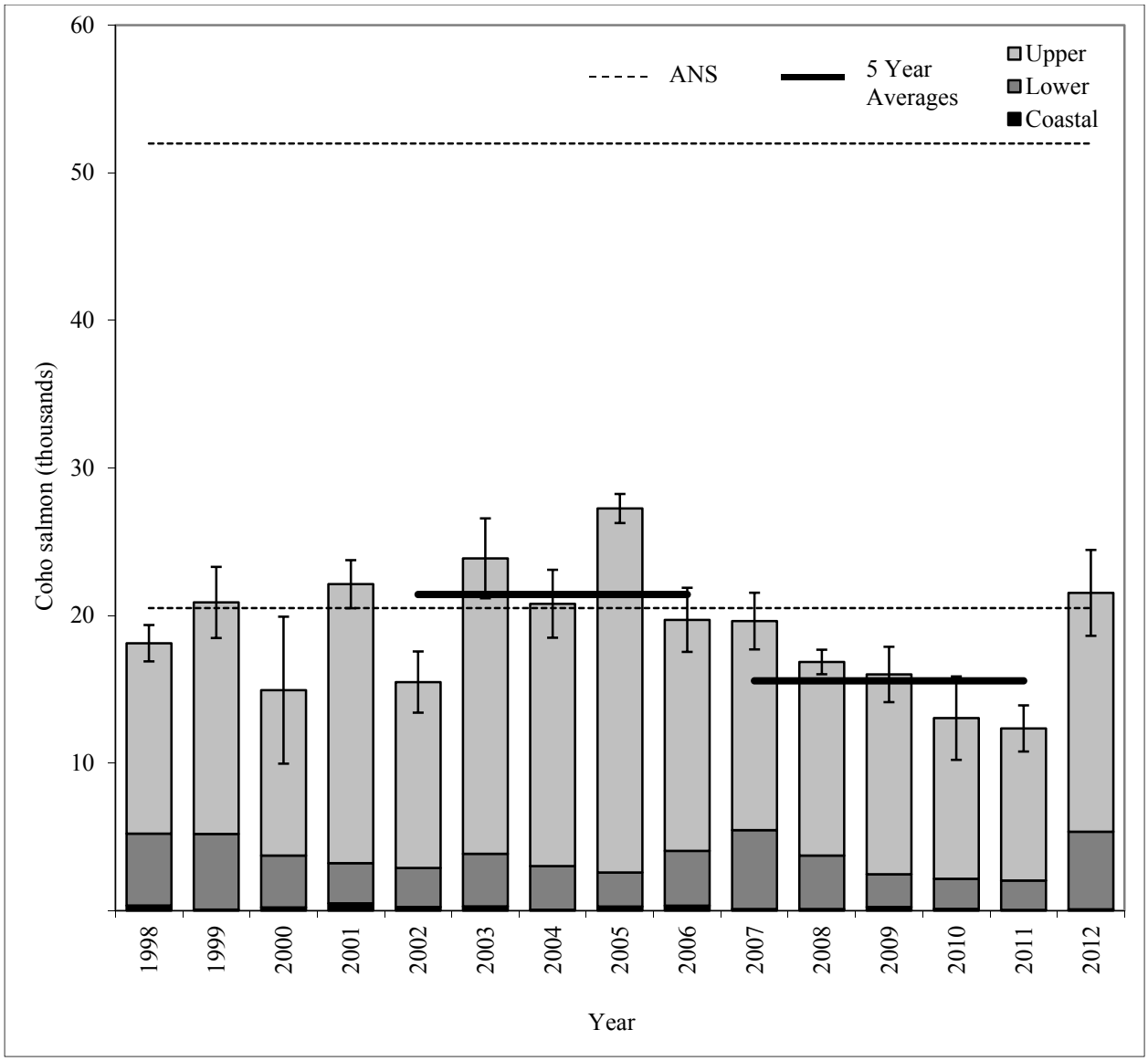


Figure 10.–Estimated coho salmon subsistence harvest, Yukon Area, 1998–2012.

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 2001 and 2003. ANS ranges and harvest amounts do not include salmon from the personal use fishery.

APPENDIX A. 2012 HARVEST INFORMATION

Appendix A1.–Estimated Chinook salmon subsistence harvest in surveyed communities, by harvest level, with community and district totals, Yukon Area, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	0.0	0.0	63	14	0.2	0.1	84	22	8.5	4.3	40	37	4.8	0.3	–	–	–	–	218	78	1,074	845
Scammon Bay	20	7	14.9	5.1	21	5	0.8	0.7	38	12	3.9	1.7	20	20	17.7	0.0	–	–	–	–	99	44	1,014	309
Coastal District	51	12	14.9	5.1	84	19	0.2	0.1	122	34	7.1	3.0	60	57	9.1	0.2	–	–	–	–	317	122	2,088	893
Nunam Iqua	9	1	0.0	–	9	9	1.1	0.0	12	12	4.3	0.0	12	12	7.6	0.0	–	–	–	–	42	34	195	0
Alakanuk	37	4	3.8	3.5	38	8	0.6	0.6	57	17	4.7	2.0	26	25	7.5	0.5	–	–	–	–	158	54	883	441
Emmonak	35	3	0.0	0.0	45	23	0.7	0.4	59	28	6.6	1.6	40	33	12.4	1.1	1	1	5.0	–	180	88	1,143	257
Kotlik	18	4	7.5	5.2	20	5	0.2	0.2	55	16	5.3	1.6	17	11	11.5	2.1	–	–	–	–	110	36	739	290
District 1	99	12	–	–	112	45	0.8	0.3	183	73	5.5	0.9	95	81	10.3	0.6	1	1	5.0	–	490	212	2,960	576
Mountain Village	12	5	5.2	1.4	37	6	3.3	3.1	66	16	5.6	2.0	37	29	15.4	1.5	–	–	–	–	152	56	1,320	375
Pitkas Point	2	0	–	–	5	4	0.0	0.0	14	13	9.5	1.0	6	5	18.0	3.2	–	–	–	–	27	22	261	53
St. Marys	19	1	0.0	–	21	4	52.5	45.7	58	18	18.9	9.3	29	26	17.2	1.2	–	–	–	–	127	49	2,327	1,586
Pilot Station	19	7	4.6	2.2	32	13	4.2	2.0	52	22	8.1	3.2	15	15	15.7	0.0	–	–	–	–	118	57	879	372
Marshall	3	2	0.0	0.0	15	4	1.3	1.1	35	8	16.0	5.3	16	12	24.3	4.1	–	–	–	–	69	26	1,409	491
District 2	55	15	4.4	1.3	110	31	3.6	1.8	225	77	10.6	3.1	103	87	17.5	0.9	–	–	–	–	493	210	6,196	1,708
Russian Mission	7	0	–	–	19	6	3.5	2.0	38	12	32.4	8.0	8	8	30.8	0.0	–	–	–	–	72	26	1,711	701
Holy Cross	1	0	–	–	17	8	0.0	0.0	24	11	11.5	2.7	13	11	22.2	2.6	–	–	–	–	55	30	576	151
Shageluk	11	2	0.0	0.0	8	4	0.0	0.0	6	2	0.0	0.0	3	2	13.5	3.8		1	6.0	–	29	11	75	40
District 3	19	2	–	–	44	18	1.5	0.9	68	25	22.2	4.6	24	21	24.0	1.5	1	1	6.0	–	156	67	2,362	698
Anvik	10	4	15.5	6.5	5	5	0.0	0.0	12	12	5.7	0.0	7	6	28.5	5.1 [1]	1	0	–	–	35	27	435	157
Grayling	8	1	20.0	–	4	1	0.0	–	26	7	10.6	3.6	9	9	23.0	0.0	–	–	–	–	47	18	1,081	0
Kaltag	3	0	–	–	12	1	0.0	–	38	9	25.2	9.1	5	5	23.2	0.0	–	–	–	–	58	15	1,346	0
Nulato	2	0	–	–	15	3	0.0	0.0	50	16	26.7	5.5	5	4	31.8	7.8	–	–	–	–	72	23	1,955	758
Koyukuk	11	6	6.5	2.8	14	5	3.8	1.9	18	7	12.7	4.4	5	3	52.0	21.6	1	1	0.0	–	49	22	614	290
Galena	21	5	0.4	0.3	70	16	0.0	0.0	67	20	8.9	2.6	8	8	3.9	0.0	3	2	7.5	0.3	169	51	742	396
Ruby	11	1	0.0	–	36	10	0.0	0.0	14	5	16.2	6.0	4	4	11.8	0.0	1	1	105.0	–	66	21	1,316	609
Huslia	26	9	0.9	0.4	48	11	0.3	0.2	13	4	9.3	7.4	6	6	0.2	0.0	2	2	4.0	0.0	95	32	165	199
Hughes	4	2	0.0	0.0	17	15	0.0	0.0	8	7	0.0	0.0	1	1	0.0	–	1	0	–	–	31	25	0	0
Allakaket	17	3	0.0	0.0	31	10	0.0	0.0	9	3	0.0	0.0	4	4	0.5	0.0	2	1	1.0	–	63	21	5	0
Alatna	5	0	–	–	3	2	0.0	0.0	2	2	0.0	0.0	–	–	–	–	–	–	–	–	10	4	0	0
Bettles	5	1	0.0	–	17	16	0.1	0.0	–	–	–	–	–	–	–	–	–	–	–	–	22	17	3	1
District 4	123	32	4.9	1.4	272	95	0.3	0.1	257	92	13.3	1.9	54	50	18.9	2.2	11	7	15.3	0.1	717	276	7,662	1,067

-continued-

Appendix A1.–Page 2 of 2.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined			
																					Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Tanana	11	8	2.4	0.8	43	16	3.8	2.5	31	13	14.9	4.6	8	7	65.1	9.7	10	8	92.9	13.7	103	52	2,100	477
Stevens Village	5	0	–	–	3	3	0.0	0.0	7	5	4.0	2.1	2	2	73.0	0.0	1	1	64.0	–	18	11	330	46
Birch Creek	4	2	0.0	0.0	9	8	0.0	0.0	3	2	0.0	0.0	–	–	–	–	–	–	–	–	16	12	0	0
Beaver	5	2	5.0	0.0	10	8	0.0	0.0	15	13	3.1	0.4	1	1	0.0	–	–	–	–	–	31	24	71	12
Fort Yukon	41	26	1.7	0.7	109	29	2.0	1.5	38	11	19.2	15.3	13	11	18.7	6.0	10	10	87.6	0.0	211	87	2,141	1,207
Venetie	13	7	0.0	0.0	45	10	0.3	0.3	13	4	0.0	0.0	3	2	11.5	6.6	1	1	0.0	–	75	24	86	103
Chalkyitsik	13	5	0.0	0.0	14	13	0.0	0.0	1	0	–	–	–	–	–	–	–	–	–	–	28	18	0	0
District 5	92	50	1.4	0.4	233	87	2.0	1.0	108	48	11.8	5.6	27	23	35.0	4.1	22	20	84.9	6.2	482	228	4,728	1,290
Survey total	439	123	4.3	0.7	855	295	1.2	0.4	963	349	10.7	1.2	363	319	16.1	0.6	35	29	61.1	4.2	2,655	1,115	25,996	2,693

Note: The number of Chinook salmon harvested was estimated using the total number of households (*N*), the number of households contacted (*n*), the average number of salmon harvested by households (Mean), 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, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	2.0	1.8	63	14	8.9	6.3	84	22	71.7	17.7	40	37	154.3	6.6	–	–	–	–	218	78	14,868	3,617
Scammon Bay	20	7	50.0	13.0	21	5	13.0	11.3	38	12	61.5	15.7	20	20	126.3	0.0	–	–	–	–	99	44	7,442	1,666
Coastal District	51	12	50.0	13.0	84	19	8.9	6.3	122	34	68.5	13.1	60	57	144.9	4.4	–	–	–	–	317	122	22,310	3,951
Nunam Iqua	9	1	0.0	–	9	9	2.8	0.0	12	12	59.9	0.0	12	12	67.4	0.0	–	–	–	–	42	34	1,977	0
Alakanuk	37	4	31.8	19.2	38	8	31.3	27.8	57	17	46.6	16.5	26	25	56.7	2.8	–	–	–	–	158	54	7,862	3,604
Emmonak	35	3	0.7	0.6	45	23	81.1	50.3	59	28	30.5	7.8	40	34	111.8	6.2	1	1	440.0	–	180	89	12,865	5,728
Kotlik	18	4	20.3	16.1	20	5	0.0	0.0	55	16	37.4	8.7	17	11	165.1	19.4	–	–	–	–	110	36	7,434	1,802
District 1	99	12	–	–	112	45	68.0	41.9	183	73	39.5	6.3	95	82	100.7	4.4	1	1	440.0	–	490	213	30,138	6,921
Mountain Village	12	5	34.0	12.3	37	6	33.3	30.5	66	16	38.2	11.9	37	29	98.7	5.8	–	–	–	–	152	56	8,695	2,193
Pitkas Point	2	0	–	–	5	4	0.0	0.0	14	13	61.2	6.6	6	5	35.0	6.9	–	–	–	–	27	22	1,153	227
St. Marys	19	1	0.0	–	21	4	126.3	99.2	58	18	73.9	22.3	29	26	106.5	5.4	–	–	–	–	127	49	10,763	3,827
Pilot Station	19	7	37.7	22.5	32	13	9.2	4.9	52	22	22.8	7.3	15	15	110.9	0.0	–	–	–	–	118	57	3,860	1,185
Marshall	3	2	0.0	0.0	15	4	17.5	15.0	35	8	108.9	53.7	16	12	101.6	15.0	–	–	–	–	69	26	5,903	1,786
District 2	55	15	33.1	13.3	110	31	8.0	4.2	225	77	46.6	8.2	103	87	99.4	3.5	–	–	–	–	493	210	30,374	4,805
Russian Mission	7	0	–	–	19	6	7.3	4.3	38	12	46.0	14.1	8	8	47.1	0.0	–	–	–	–	72	26	2,508	1,237
Holy Cross	1	0	–	–	17	8	0.0	0.0	24	11	34.4	20.0	13	11	23.2	3.5	–	–	–	–	55	30	1,147	1,005
Shageluk	11	2	5.0	4.5	8	4	0.0	0.0	6	2	10.0	8.2	3	2	1015.0	568.7	1	1	20.0	–	29	11	5,035	6,052
District 3	19	2	–	–	44	18	3.2	1.9	68	25	38.7	10.6	24	21	155.1	71.1	1	1	20.0	–	156	67	8,690	5,704
Anvik	10	4	51.0	38.5	5	5	0.0	0.0	12	12	22.9	0.0	7	6	78.2	14.1	1	0	–	–	35	27	1,371	839
Grayling	8	1	0.0	–	4	1	0.0	–	26	7	10.9	3.3	9	9	55.7	0.0	–	–	–	–	47	18	2,616	0
Kaltag	3	0	–	–	12	1	0.0	–	38	9	21.6	8.8	5	5	3.2	0.0	–	–	–	–	58	15	186	0
Nulato	2	0	–	–	15	3	133.3	119.3	50	16	3.8	2.2	5	4	1.3	0.3	–	–	–	–	72	23	254	292
Koyukuk	11	6	8.7	5.8	14	5	0.0	0.0	18	7	1.7	1.1	5	3	140.3	59.0	1	1	0.0	–	49	22	828	627
Galena	21	5	0.0	0.0	70	16	0.0	0.0	67	20	1.9	0.9	8	8	6.9	0.0	3	2	150.0	86.6	169	51	718	611
Ruby	11	1	0.0	–	36	10	23.0	19.5	14	5	20.0	16.0	4	4	43.8	0.0	1	1	665.0	–	66	21	3,891	1,622
Huslia	26	9	38.0	28.1	48	11	21.5	17.2	13	4	304.5	239.7	6	6	54.2	0.0	2	2	500.0	0.0	95	32	7,306	6,733
Hughes	4	2	0.0	0.0	17	15	21.0	6.8	8	7	7.1	1.7	1	1	0.0	–	1	0	–	–	31	25	428	249
Allakaket	17	3	0.0	0.0	31	10	0.0	0.0	9	3	2.7	1.1	4	4	153.3	0.0	2	1	1087.0	–	63	21	3,850	28
Alatna	5	0	–	–	3	2	0.0	0.0	2	2	25.0	0.0	–	–	–	–	–	–	–	–	10	4	100	0
Bettles	5	1	0.0	–	17	16	0.3	0.1	–	–	–	–	–	–	–	–	–	–	–	–	22	17	7	4
District 4	123	32	31.2	16.2	272	95	6.8	4.1	257	92	25.8	16.2	54	50	54.4	5.8	11	7	476.6	28.9	717	276	21,555	6,797

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	Unknown				Does Not Harvest Salmon				Light Harvester				Medium Harvester				Heavy Harvester				Combined Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Tanana	11	8	16.9	8.1	43	16	1.4	1.1	31	13	0.2	0.1	8	7	25.1	3.3	10	8	388.0	53.3	103	52	4,333	1,091
Stevens Village	5	0	–	–	3	3	0.0	0.0	7	5	0.0	0.0	2	2	34.0	0.0	1	1	68.0	–	18	11	188	0
Birch Creek	4	2	0.0	0.0	9	8	0.0	0.0	3	2	0.0	0.0	–	–	–	–	–	–	–	–	16	12	0	0
Beaver	5	2	0.0	0.0	10	8	0.0	0.0	15	13	1.8	0.3	1	1	0.0	–	–	–	–	–	31	24	27	10
Fort Yukon	41	26	0.0	0.0	109	29	0.0	0.0	38	11	0.0	0.0	13	11	0.0	0.0	10	10	0.0	0.0	211	87	0	0
Venetie	13	7	0.0	0.0	45	10	0.0	0.0	13	4	0.0	0.0	3	2	0.0	0.0	1	1	0.0	–	75	24	0	0
Chalkyitsik	13	5	0.0	0.0	14	13	0.0	0.0	1	0	–	–	–	–	–	–	–	–	–	–	28	18	0	0
District 5	92	50	2.1	1.0	233	87	0.3	0.3	108	48	0.3	0.1	27	23	10.0	1.0	22	20	179.5	24.2	482	228	4,548	1,071
Survey total	439	123	20.3	5.1	855	295	10.4	4.1	963	349	37.2	4.7	363	320	97.6	5.1	35	29	263.5	18.0	2,655	1,116	117,615	12,812

Note: The number of summer chum salmon harvested was estimated using the total number of households (*N*), the number of households contacted (*n*), the average number of salmon harvested by households (Mean), 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, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined			
																					Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	0.0	0.0	63	14	0.0	0.0	84	22	0.0	0.0	40	37	0.0	0.0	–	–	–	–	218	78	1	1
Scammon Bay	20	7	0.0	0.0	21	5	0.0	0.0	38	12	0.0	0.0	20	20	0.4	0.0	–	–	–	–	99	44	10	0
Coastal District	51	12	0.0	0.0	84	19	0.0	0.0	122	34	0.0	0.0	60	57	0.2	0.0	–	–	–	–	317	122	11	1
Nunam Iqua	9	1	0.0	–	9	9	3.7	0.0	12	12	3.8	0.0	12	12	7.3	0.0	–	–	–	–	42	34	210	0
Alakanuk	37	4	10.5	9.9	38	8	0.8	0.7	57	17	0.0	0.0	26	25	3.5	0.4	–	–	–	–	158	54	172	39
Emmonak	35	3	0.0	0.0	45	23	71.7	50.2	59	28	3.3	1.5	40	33	13.8	2.0	1	1	0.0	–	180	88	4,929	5,577
Kotlik	18	4	0.0	0.0	20	5	0.0	0.0	55	16	3.8	2.5	17	11	6.6	2.9	–	–	–	–	110	36	487	448
District 1	99	12	–	–	112	45	60.4	41.8	183	73	2.4	0.9	95	81	8.8	1.0	1	1	0.0	–	490	212	5,798	5,549
Mountain Village	12	5	0.0	0.0	37	6	0.0	0.0	66	16	0.9	0.8	37	29	8.6	3.5	–	–	–	–	152	56	500	372
Pitkas Point	2	0	–	–	5	4	0.0	0.0	14	13	0.2	0.1	6	5	0.8	0.3	–	–	–	–	27	22	9	5
St. Marys	19	1	0.0	–	21	4	0.0	0.0	58	18	9.1	5.6	29	26	15.5	2.4	–	–	–	–	127	49	1,423	977
Pilot Station	19	7	0.0	0.0	32	13	0.0	0.0	52	22	10.9	8.0	15	15	2.5	0.0	–	–	–	–	118	57	604	833
Marshall	3	2	0.0	0.0	15	4	0.0	0.0	35	8	11.6	8.7	16	12	3.2	1.2	–	–	–	–	69	26	184	144
District 2	55	15	0.0	0.0	110	31	0.0	0.0	225	77	6.1	2.8	103	87	8.3	1.4	–	–	–	–	493	210	2,720	1,321
Russian Mission	7	0	–	–	19	6	0.5	0.4	38	12	6.0	3.6	8	8	2.1	0.0	–	–	–	–	72	26	282	316
Holy Cross	1	0	–	–	17	8	0.0	0.0	24	12	8.3	4.9	13	11	10.2	1.8	–	–	–	–	55	31	339	248
Shageluk	11	2	0.0	0.0	8	4	0.0	0.0	6	2	0.0	0.0	3	2	0.0	0.0	1	1	10.0	–	29	11	16	0
District 3	19	2	–	–	44	18	0.2	0.2	68	26	6.3	2.7	24	21	6.2	1.0	1	1	10.0	–	156	68	637	391
Anvik	10	4	10.3	5.3	5	5	0.0	0.0	12	12	7.6	0.0	7	6	51.3	8.0	1	0	–	–	35	27	569	162
Grayling	8	1	0.0	–	4	1	0.0	–	26	7	15.3	7.0	9	9	17.1	0.0	–	–	–	–	47	18	804	0
Kaltag	3	0	–	–	12	1	0.0	–	38	9	24.6	11.9	5	5	48.8	0.0	–	–	–	–	58	15	2,830	0
Nulato	2	0	–	–	15	3	0.0	0.0	50	16	38.2	9.1	5	4	35.0	9.0	–	–	–	–	72	23	2,729	1,241
Koyukuk	11	6	0.0	0.0	14	5	2.6	1.9	18	7	12.9	5.2	5	3	192.7	55.1	1	1	100.0	–	49	22	1,331	607
Galena	21	5	0.0	0.0	70	16	4.1	2.8	67	20	17.1	6.3	8	8	31.8	0.0	3	2	300.0	28.9	169	51	2,947	1,083
Ruby	11	1	0.0	–	36	10	36.0	20.6	14	5	10.0	5.1	4	4	43.0	0.0	1	1	957.0	–	66	21	4,408	513
Huslia	26	9	20.8	10.6	48	11	0.0	0.0	13	4	63.0	52.4	6	6	58.3	0.0	2	2	100.0	0.0	95	32	1,909	1,498
Hughes	4	2	0.0	0.0	17	15	0.1	0.0	8	7	0.0	0.0	1	1	0.0	–	1	0	–	–	31	25	2	2
Allakaket	17	3	0.0	0.0	31	10	0.0	0.0	9	3	0.0	0.0	4	4	5.8	0.0	2	1	174.0	–	63	21	508	0
Alatna	5	0	–	–	3	2	3.0	1.7	2	2	0.0	0.0	–	–	–	–	–	–	–	–	10	4	18	29
Bettles	5	1	0.0	–	17	16	0.0	0.0	–	–	–	–	–	–	–	–	–	–	–	–	22	17	0	0
District 4	123	32	12.6	5.5	272	95	1.6	0.9	257	92	22.5	4.8	54	50	49.9	5.3	11	7	278.3	9.6	717	276	18,055	2,283

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	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined			
																					Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Tanana	11	8	137.8	71.9	43	16	0.0	0.0	31	13	0.0	0.0	8	7	119.9	32.2	10	8	1,799.1	253.5	103	52	20,465	5,354
Stevens Village	5	0	–	–	3	3	0.0	0.0	7	5	0.0	0.0	2	2	100.0	0.0	1	1	0.0	–	18	11	277	0
Birch Creek	4	2	0.0	0.0	9	8	0.0	0.0	3	2	0.0	0.0	–	–	–	–	–	–	–	–	16	12	0	0
Beaver	5	2	0.0	0.0	10	8	0.1	0.1	15	13	11.5	3.0	1	1	0.0	–	–	–	–	–	31	24	174	94
Fort Yukon	41	26	21.0	10.5	109	29	5.0	3.3	38	11	75.4	59.9	13	11	39.5	9.4	10	10	787.7	0.0	211	87	12,659	4,663
Venetie	13	7	0.0	0.0	45	10	3.0	2.6	13	4	0.0	0.0	3	2	6.0	3.5	1	1	100.0	–	75	24	295	54
Chalkyitsik	13	5	12.0	9.4	14	13	0.0	0.0	1	0	–	–	–	–	–	–	–	–	–	–	28	18	162	267
District 5	92	50	29.1	10.5	233	87	2.9	1.9	108	48	28.4	21.3	27	23	62.6	10.6	22	20	1180.4	115.2	482	228	34,032	7,006
Survey total	439	123	16.5	5.0	855	295	7.0	3.9	963	350	10.9	2.9	363	319	17.2	1.2	35	29	863.1	76.9	2,655	1,116	61,253	9,286

Note: The number of fall chum salmon harvested was estimated using the total number of households (*N*), the number of households contacted (*n*), the average number of salmon harvested by households (Mean), 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, 2012.

	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Combined Est.	Combined CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Hooper Bay	31	5	0.0	0.0	63	14	0.0	0.0	84	22	0.0	0.0	40	37	0.1	0.0	–	–	–	–	218	78	7	8
Scammon Bay	20	7	0.9	0.7	21	5	0.0	0.0	38	12	0.0	0.0	20	20	2.6	0.0	–	–	–	–	99	44	86	35
Coastal District	51	12	0.9	0.7	84	19	0.0	0.0	122	34	0.0	0.0	60	57	0.9	0.0	–	–	–	–	317	122	93	36
Nunam Iqua	9	1	0.0	–	9	9	0.6	0.0	12	12	0.6	0.0	12	12	0.2	0.0	–	–	–	–	42	34	18	0
Alakanuk	37	4	1.5	1.4	38	8	0.0	0.0	57	17	0.8	0.7	26	25	2.7	0.3	–	–	–	–	158	54	222	153
Emmonak	35	3	0.0	0.0	45	23	38.3	26.7	59	28	0.8	0.4	40	34	1.5	0.3	1	1	0.0	–	180	89	2,275	2,970
Kotlik	18	4	1.0	0.9	20	5	0.2	0.2	55	16	3.4	2.1	17	11	1.8	0.6	–	–	–	–	110	36	331	360
District 1	99	12	–	–	112	45	32.0	22.3	183	73	1.6	0.7	95	82	1.7	0.2	1	1	0.0	–	490	213	2,846	2,971
Mountain Village	12	5	0.0	0.0	37	6	0.0	0.0	66	16	0.3	0.3	37	29	2.2	1.0	–	–	–	–	152	56	137	106
Pitkas Point	2	0	–	–	5	4	0.0	0.0	14	13	0.2	0.0	6	5	7.8	3.2	–	–	–	–	27	22	53	43
St. Marys	19	1	0.0	–	21	4	0.0	0.0	58	18	0.7	0.5	29	26	1.9	0.4	–	–	–	–	127	49	141	89
Pilot Station	19	7	0.0	0.0	32	13	0.0	0.0	52	22	1.5	1.0	15	15	4.0	0.0	–	–	–	–	118	57	136	108
Marshall	3	2	0.0	0.0	15	4	0.0	0.0	35	8	0.0	0.0	16	12	9.8	2.7	–	–	–	–	69	26	567	327
District 2	55	15	0.0	0.0	110	31	0.0	0.0	225	77	0.7	0.3	103	87	3.9	0.6	–	–	–	–	493	210	1,034	360
Russian Mission	7	0	–	–	19	6	3.5	2.7	38	12	5.8	4.1	8	8	0.0	0.0	–	–	–	–	72	26	319	374
Holy Cross	1	0	–	–	17	8	0.0	0.0	24	12	5.2	2.5	13	11	8.4	2.5	–	–	–	–	55	31	237	141
Shageluk	11	2	0.0	0.0	8	4	0.0	0.0	6	2	0.0	0.0	3	2	0.0	0.0	1	1	0.0	–	29	11	0	0
District 3	19	2	–	–	44	18	1.5	1.2	68	26	5.1	2.5	24	21	4.5	1.3	1	1	0.0	–	156	68	556	389
Anvik	10	4	18.3	9.2	5	5	0.0	0.0	12	12	0.8	0.0	7	6	2.2	0.8	1	0	–	–	35	27	214	195
Grayling	8	1	0.0	–	4	1	0.0	–	26	7	0.0	0.0	9	9	0.6	0.0	–	–	–	–	47	18	26	0
Kaltag	3	0	–	–	12	1	0.0	–	38	9	0.0	0.0	5	5	16.0	0.0	–	–	–	–	58	15	928	0
Nulato	2	0	–	–	15	3	0.0	0.0	50	16	0.1	0.1	5	4	5.0	2.2	–	–	–	–	72	23	41	33
Koyukuk	11	6	0.0	0.0	14	5	0.0	0.0	18	7	0.0	0.0	5	3	12.3	2.5	1	1	0.0	–	49	22	62	26
Galena	21	5	0.0	0.0	70	16	0.0	0.0	67	20	1.6	0.7	8	8	2.3	0.0	3	2	40.0	5.8	169	51	276	116
Ruby	11	1	0.0	–	36	10	1.0	0.8	14	5	6.0	4.8	4	4	2.5	0.0	1	1	426.0	–	66	21	1,806	487
Huslia	26	9	2.4	1.8	48	11	0.0	0.0	13	4	0.5	0.4	6	6	12.5	0.0	2	2	10.0	0.0	95	32	165	95
Hughes	4	2	0.0	0.0	17	15	0.0	0.0	8	7	0.0	0.0	1	1	0.0	–	1	0	–	–	31	25	0	0
Allakaket	17	3	0.0	0.0	31	10	0.0	0.0	9	3	0.0	0.0	4	4	0.0	0.0	2	1	14.0	–	63	21	38	0
Alatna	5	0	–	–	3	2	0.0	0.0	2	2	0.0	0.0	–	–	–	–	–	–	–	–	10	4	0	0
Bettles	5	1	0.0	–	17	16	0.0	0.0	–	–	–	–	–	–	–	–	–	–	–	–	22	17	0	0
District 4	123	32	4.8	2.0	272	95	0.0	0.0	257	92	1.1	0.4	54	50	5.4	0.3	11	7	66.0	1.9	717	276	3,556	520

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	Unknown				Does not harvest salmon				Light harvester				Medium harvester				Heavy harvester				Combined Total		Est.	CI
Community	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Mean	SE	*N*	*n*	Total	95%
Tanana	11	8	3.5	1.8	43	16	0.0	0.0	31	13	0.0	0.0	8	7	0.0	0.0	10	8	302.1	62.8	103	52	3,060	1,261
Stevens Village	5	0	–	–	3	3	0.0	0.0	7	5	0.0	0.0	2	2	0.0	0.0	1	1	0.0	–	18	11	0	0
Birch Creek	4	2	0.0	0.0	9	8	0.0	0.0	3	2	0.0	0.0	–	–	–	–	–	–	–	–	16	12	0	0
Beaver	5	2	0.0	0.0	10	8	0.0	0.0	15	13	0.2	0.1	1	1	0.0	–	–	–	–	–	31	24	2	2
Fort Yukon	41	26	0.0	0.0	109	29	0.0	0.0	38	11	0.0	0.0	13	11	0.0	0.0	10	10	0.0	0.0	211	87	4	6
Venetie	13	7	0.0	0.0	45	10	0.0	0.0	13	4	0.0	0.0	3	2	0.0	0.0	1	1	0.0	–	75	24	0	0
Chalkyitsik	13	5	0.0	0.0	14	13	0.0	0.0	1	0	–	–	–	–	–	–	–	–	–	–	28	18	0	0
District 5	92	50	0.4	0.2	233	87	0.0	0.0	108	48	0.0	0.0	27	23	0.0	0.0	22	20	137.3	28.6	482	228	3,066	1,239
Survey total	439	123	1.6	0.6	855	295	3.0	2.0	963	350	1.1	0.3	363	320	2.8	0.2	35	29	109.6	19.0	2,655	1,117	11,151	3,288

Note: The number of coho salmon harvested was estimated using the total number of households (*N*), the number of households contacted (*n*), the average number of salmon harvested by households (Mean), standard error (SE), and includes 95% confidence interval (CI 95%). Dashes indicate indefinable values.

Appendix A5.–Estimated number of salmon provided to communities for subsistence use by test fishery programs, Yukon Area, 2012.

Yukon River test fishery sites	Community where fish were distributed	Chinook	Summer chum	Fall chum	Coho	Pink	Total
Lower Yukon test fish gillnet (LYTF)	Alakanuk	198	1,150	277	30	49	1,704
	Emmonak	721	2,964	961	385	113	5,144
	Hooper Bay	16	931	0	0	15	962
	Kotlik	434	1,118	586	89	32	2,259
	St. Marys	17	0	0	0	0	17
LYTF project subtotal:		1,386	6,163	1,824	504	209	10,086
Mountain village test fish drift gillnet	Mountain Village	469	336	185	119	0	1,109
Pilot station sonar test fish drift gillnet	Pilot Station	199	1,856	427	193	7	2,682
Eagle sonar test fish drift gillnet [a]	Eagle	3	0	2	0	0	5
Test fishery total [b]		2,057	8,355	2,438	816	216	13,882

[a] Eagle is a permit community and is not surveyed.

[b] Totals do not include donations of salmon from commercial fisheries or Kwikpak LLC.

Appendix A6.–Salmon reported lost in surveyed communities due to sick fish, weather, predators, and unknown causes, Yukon Area, 2012.

		Chinook salmon		Summer chum salmon		Fall chum salmon		Coho salmon		Total reported salmon lost	
Reasons given for salmon lost		Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Lost due to sick fish											
Cuts, bruises, rotten		1	2.0%	10	0.8%	0	0.0%	0	0.0%	11	0.8%
Disease [a]		0	0.0%	679	55.2%	[a] 5	4.9%	0	0.0%	684	47.5%
Worms, pus, parasites		0	0.0%	10	0.8%	0	0.0%	0	0.0%	10	0.7%
	Subtotal	1	2.0%	699	56.8%	5	4.9%	0	0.0%	705	49.0%
Lost due to weather / spoilage											
Spoilage		14	27.5%	100	8.1%	70	68.6%	6	0.0%	190	13.2%
Rain/bad weather		4	7.8%	157	12.8%	0	0.0%	0	0.0%	161	11.2%
Insects		1	2.0%	104	8.4%	0	0.0%	0	0.0%	105	7.3%
	Subtotal	19	37.3%	361	29.3%	70	68.6%	6	0.0%	456	31.7%
Lost due to theft/animals											
Theft		26	51.0%	0	0.0%	0	0.0%	0	0.0%	26	1.8%
Bears		5	9.8%	88	7.1%	23	22.5%	50	89.3%	166	11.5%
Birds		0	0.0%	48	3.9%	3	2.9%	0	0.0%	51	3.5%
Seal/whale		0	0.0%	13	1.1%	0	0.0%	0	0.0%	13	0.9%
	Subtotal	31	60.8%	149	12.1%	26	25.5%	50	0.0%	256	17.8%
Lost unknown	Subtotal	0	0.0%	22	1.8%	1	1.0%	0	0.0%	23	1.6%
Salmon reported lost	Total	51		1,231		102		56		1,440	
Use of lost salmon											
Salmon fed to dogs [b]		1	0.1%	234	16.3%	74	5.1%	6	0.4%	315	21.9%
Salmon lost to humans and dogs [c]		50	3.5%	997	69.2%	28	1.9%	50	3.5%	1,125	78.1%
Total salmon lost [d]		51	3.5%	1,231	85.5%	102	7.1%	56	3.9%	1,440	100.0%

[a] Includes 525 summer chum that smelled like gasoline or smelled bad according to several households in Hooper Bay.

[b] Salmon unfit for human consumption, but reported retained for dog food.

[c] Salmon lost and unfit for human and dog consumption.

[d] A total of 73 surveyed households reported losing salmon. Total does not include 72 pink salmon that were also reported as lost in 2012.

Appendix A7.–Subsistence salmon fishing closures and gear restrictions, Lower Yukon Area, 2012.

	Coastal District [a]				
	Southern [b]	Northern [c]	District 1	District 2	District 3
5/31	Start of regulatory schedule, implemented chronologically with the upriver migration of salmon.				
6/1	Open 7.5" mesh	Open	Open	Open	Open
6/2	Open	Open	Close 8 AM	Open	Open
6/3	Open	Open	Close	Open	Open
6/4	Open	Open	Open 8 PM	Open	Open
6/5	Open	Open	Open	Close 8 AM	Open
6/6	12 PM, 6" mesh	Open	Close 8 AM	Open 8 PM	Open
6/7	6" mesh	Open	Open 8 PM	Open	Open
6/8	6" mesh	Open	Open	Close 8 AM	Close 8 AM
6/9	6" mesh	Open	Close 8 AM	Closed	Closed
6/10	6" mesh	Open	Close	Open 8 PM	Open 8 PM
6/11	6" mesh	Open	Open 8 PM	Open	Open
6/12	12 PM, 7.5" mesh	Open	Open	Close 8 AM	Close 8 AM
6/13	Open 7.5" mesh	Open	Close 8 AM	Open 8 PM	Open 8 PM
6/14	Open	Open	Open 8 PM	Open	Open
6/15	Open	Open	Open	Close 8 AM	Close 8 AM
6/16	Open	Open	Close 8 AM	Closed	Close
6/17	Open	Open	Close	Open 8 PM	Open 8 PM
6/18	Open	Open	Open 8 PM 6" mesh	Open	Open
6/19	Open	Open	Open 6" mesh	Close 8 AM	Close 8 AM
6/20	Open	Close 8 PM	Close 8 AM	Open 8 PM 6" mesh	Open 8 PM
6/21	Open	Closed	Closed	Open 6" mesh	Open
6/22	Open	Closed	Closed	Close 8 AM	Close 8 AM
6/23	Open	Closed	Closed	Closed	Close
6/24	Open	Closed	Closed	Closed	Open 8 PM 6" mesh
6/25	8 PM 6" mesh	Closed	Closed	Closed	Close 2 PM
6/26	Open 6" mesh	Closed	Closed	Closed	Closed
6/27	Open 6" mesh	Closed	Closed	Closed	Closed
6/28	Open 6" mesh	Closed	Closed	Closed	Closed
6/29	Open 6" mesh	8 PM 6" mesh	Open 8 PM 6" mesh [d,e]	Closed	Closed
6/30	Open 6" mesh	Close 8AM	Close 8 AM	Closed	Closed
7/1	Open 6" mesh	8 PM 6" mesh	Open 8 PM 6" mesh [d,e]	Closed	Closed
7/2	Open 6" mesh	Close 8 AM	Close 8 AM [e]	Open 8 PM 6" mesh [d,f]	Closed
7/3	Open 6" mesh	Closed	Closed [e]	Closed 8 AM	Closed
7/4	Open 6" mesh	Closed	Closed	Open 8 PM 6" mesh	Closed
7/5	Open 6" mesh	8 PM 6" mesh	Open 8 PM 6" mesh [d, e]	Close 8AM	Open 8 PM 6" mesh
7/6	Open 6" mesh	Open 6" mesh	Close 2 PM [e]	Closed	Close 8 AM
7/7	Open 6" mesh	Open 6" mesh	Closed	Closed	Closed
7/8	Open 6" mesh	Open 6" mesh	Closed	Open 8 PM 6" mesh [d, g]	Open 8 PM 6" mesh
7/9	Open 6" mesh	Open 6" mesh	Open 8 PM 6" mesh [d, e]	Close 2 PM	Close 2 PM
7/10	Open 6" mesh	Open 6" mesh	Close 2 PM [h]	Closed	Closed
7/11	Open 6" mesh	Open 6" mesh	Closed	Open 8 PM 6" mesh [d,g]	Open 8 PM 6" mesh
7/12	Open 6" mesh	Open 6" mesh	Open 8 PM 6" mesh	Close 2 PM [i]	Open 6" mesh
7/13	Open 6" mesh	Open 6" mesh	Close 2 PM [h]	Closed	Close 8 AM
7/14	Open 6" mesh	Open 6" mesh	Closed	Open 6 PM 6" mesh	Closed
7/15	8 PM 7.5" mesh	8 PM 7.5" mesh	Open 8 PM, Close 10 PM	Close 6 AM [i, j]	Open 8 PM 6" mesh
7/16	Open	Open	Closed [h, j, k]	Open 11 AM 7.5"mesh	Open 6" mesh
7/17	Open	Open	Open 10 AM 7.5" mesh	Close 12 AM [i, j]	Close 8 AM
7/18	Open	Open	Close 10 PM [h, k, j]	Closed	Open 8 PM 7.5" mesh

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	Coastal District				
	Southern [a]	Northern [b]	District 1	District 2	District 3 [c]
7/19	Open 7.5" mesh	Open 7.5" mesh	Closed	Open 9 AM 7.5" mesh	Open 7.5" mesh
7/20	Open	Open	Open 10 AM 7.5" mesh	Open	Open
7/21	Open	Open	Open	Open	Open
7/22	Open	Open	Open	Close 3 AM [i, j]	Open
7/23	Open	Open	Close 1 AM [h, j, k]	Open 9 AM 7.5"mesh	Open
7/24	Open	Open	Open 10 AM 7.5" mesh	Open	Open
7/25	Open	Open	Open	Close 3 AM [i, j]	Open
7/26	Open	Open	Close 1 AM [h, j, k]	Open 9 AM 7.5" mesh	Open
7/27	Open	Open	Open 10 AM 7.5" mesh	Open	Open
7/28	Open	Open	Open	Open	Open
7/29	Open	Open	Open	Open	Open
7/30	Open	Open	Close 1 AM [h, j, k]	Closed 3 AM [i, j]	Open
7/31	Open	Open	Open 10 AM 7.5" mesh	Open 9 AM	Open
8/1	Open	Open	Open	Close 3 AM [i, j]	Open
8/2	Open	Open	Close 1 AM [h, j, k]	Open 9 AM	Open
8/3	Open	Open	Open 10 AM	Open	Open
8/4	Open	Open	Open	Close 3 AM [i, j]	Open
8/5	Open	Open	Close 5 PM [h, j, k]	Open 9 AM	Open
8/6	Open	Open	Open 10 AM	Close midnight	Open
8/7	Open	Open	Open	Closed [i, j]	Open
8/8	Open	Open	Close 10 PM [h, j, k]	Open 9AM	Open
8/9	Open	Open	Closed	Open	Open
8/10	Open	Open	Open 10 AM	Open	Open
8/11	Open	Open	Open	Open	Open
8/12	Open	Open	Open	Open	Open
8/13	Open	Open	Open	Open	Open
8/14	Open	Open	Open	Open	Open
8/15	Open	Open	Open	Open	Open
8/16	Open	Open	Open	Open	Open
8/17	Open	Open	Close 10 PM [h, j, k]	Open	Open
8/18	Open	Open	Closed	Open	Open
8/19	Open	Open	Open 7 AM, Close 10 PM	Close 12 AM [i, j]	Open
8/20	Open	Open	Closed [h, j, k]	Open 9 AM	Open
8/21	Open	Open	Open 10 AM	Open	Open
8/22	Open	Open	Close 9 PM [h, j, k]	Close 3 AM [i, j]	Open
8/23	Open	Open	Closed	Open 9 AM	Open
8/24	Open	Open	Open 9 AM	Open	Open
8/25	Open	Open	Open	Close 9 PM [i, j]	Open
8/26	Open	Open	Close 9 PM [h, j, k]	Closed	Open
8/27	Open	Open	Closed	Open 6 AM	Open
8/28	Open	Open	Open 9 AM	Close 9 PM [i, j]	Open
8/29	Open	Open	Close 9 PM [h, j, k]	Closed	Open
8/30	Open	Open	Closed	Open 6 AM	Open
8/31	Open	Open	Open 9 AM	Close 2 AM [i, j]	Open
9/1	Open	Open	Open	Open 6 AM	Open
9/2	Open	Open	Open	Open	Open
9/3	Open	Open	Open	Open	Open

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Note: Shaded areas indicate windowed fishery schedule of closures, outlined shaded days were closed to protect the first and second pulses of Chinook salmon. Dates with dark shaded areas indicate closures of subsistence fishing for 12 hours before, during and 12 hours after commercial fishing periods (typical when commercial fishing). Unless noted, mesh size was restricted to 7.5 inch or less in all districts and subdistricts. The Innoko River in District 3 remained open 24 hours a day 7 days a week, but was restricted to 6.0 inch or smaller mesh from 8:00 PM June 24 to 8:00 PM July 18.

[a] The Coastal District was split for management purposes based on which mouths various salmon species were entering the delta.

[b] The portion of the Coastal District from the Naskonat Peninsula north to 62 degrees North latitude, including communities of Chevak, Hooper Bay, and Scammon Bay.

[c] The portion of the Coastal District from 62 degrees North latitude to Point Romanoff and 3 miles offshore.

[d] Commercial opening concurrent with subsistence opening.

[e] Commercial fishing limited to the area within District 1 from the South Mouth down river of the lower point of Head of Passes to Chris Point. The area open to commercial fishing included Black River, Kwiguk Pass, and coastal waters from Chris Point to 1 mile north of Kwiguk Pass.

[f] Commercial fishing limited to the portion of District 2 downstream of the Andreafsky River Mouth and restricted to 6.0 inch or smaller mesh.

[g] Commercial fishing limited to the portion of District 2 downstream of Pilot Station Slough and restricted to 6.0 inch or smaller mesh.

[h] Commercial fishing open in the entire District 1 area during all or part of a subsistence fishery closure and restricted to 6.0 inch or smaller mesh.

[i] Commercial fishing open in the entire District 2 area during all or part of a subsistence fishery closure and restricted to 6.0 inch or smaller mesh.

[j] Commercial fishing during a subsistence closure.

[k] Commercial fishing in District 1 open only in the Coastal Set Net Only Area for all or part of a commercial period and restricted to 6.0 inch or smaller mesh.

Appendix A8.–Subsistence salmon fishing closures and gear restrictions (mainstem Yukon), Upper Yukon Area, 2012.

	Subdistrict 4-A [a]		Sub 4-B /	5-A/5-B /	Subdistrict 5-D [b]		
	Lower	Upper	4-C	5-C	Lower [c]	Middle [d]	Upper [e]
6/11	Open	Open	Open	Open	Open	Open	Open
6/12	Close 6 PM	Close 6 PM	Open	Open	Open	Open	Open
6/13	Open 6 PM	Open 6 PM	Open	Open	Open	Open	Open
6/14	Open	Open	Open	Open	Open	Open	Open
6/15	Close 6 PM	Close 6 PM	Open	Open	Open	Open	Open
6/16	Close	Close	Open	Open	Open	Open	Open
6/17	Open 6 PM	Open 6 PM	Open	Open	Open	Open	Open
6/18	Open	Open	Open	Open	Open	Open	Open
6/19	Close 6 PM	Close 6 PM	Close 6 PM	Open	Open	Open	Open
6/20	Open 6 PM	Open 6 PM	Open 6 PM	Open	Open	Open	Open
6/21	Open	Open	Open	Open	Open	Open	Open
6/22	Close 6 PM	Close 6 PM	Close 6 PM	Open	Open	Open	Open
6/23	Closed	Closed	Closed	Open	Open	Open	Open
6/24	Open 6 PM	Open 6 PM	Open 6 PM	Close 6 PM	Open	Open	Open
6/25	Open	Open	Open	Close	Open	Open	Open
6/26	Close 6 PM	Closed 6 PM	Close 6 PM	Open 6 PM	Open	Open	Open
6/27	Open 6 PM 6" mesh	Open 6 PM	Open 6 PM	Open	Open	Open	Open
6/28	Closed 6 PM	Open	Open	Close 6 PM	Open	Open	Open
6/29	Closed	Closed 6 PM	Closed 6 PM	Open 6 PM	Open	Open	Open
6/30	Closed	Closed	Closed	Open	Open	Open	Open
7/1	Closed [f]	Open 6 PM gear [f, g]	Open 6 PM	Close 6 PM	Open	Open	Open
7/2	Closed [f]	Close 6 PM [f]	Open	Closed	Open	Open	Open
7/3	Closed [f]	Closed [f]	Closed 6 PM	Open 6 PM	Open	Open	Open
7/4	Closed [f]	Closed [f]	Closed	Open	Open	Open	Open
7/5	Closed [f]	Closed [f]	Closed	Close 6 PM	Open	Open	Open
7/6	Closed [f]	Closed [f]	Closed	Closed	Open	Open	Open
7/7	Closed [f]	Closed [f]	Closed	Closed	Open	Open	Open
7/8	Closed [f]	Closed [f]	Closed	Closed	Open	Open	Open
7/9	Open 6 PM - gear [f, g]	Closed [f]	Closed	Closed	Open	Open	Open
7/10	Close 6 PM [f]	Closed [f]	Closed	Closed	Open	Open	Open
7/11	Closed [f]	Closed [f]	Closed	Closed	Open	Open	Open
7/12	Open 6 PM - gear [f,g]	Open 6 PM gear [f,g]	Closed	Closed	Close 7 PM	Open	Open
7/13	Close 6 PM [h]	Close 6 PM [h]	Closed	Closed	Closed	Open	Open
7/14	Closed [h]	Closed [h]	Closed	Closed	Closed	Open	Open
7/15	Open 6 PM - gear [g,h]	Closed [h]	Open 6 PM	Closed	Closed	Close 7 PM	Open
7/16	Open - gear [g, h]	Open 6 PM gear [g,h]	Close 12 PM	Closed	Closed	Closed	Open
7/17	Closed 6 PM [h]	Close 6 PM [h]	Closed	Closed	Closed	Closed	Close 7 PM
7/18	Open 6 PM [h, i]	Open 6 PM gear [g,h]	Open 6 PM	Open 6 PM	Closed	Closed	Closed
7/19	Open [h]	Open [g, h]	Close 12 PM	Close 12 PM	Closed	Closed	Closed
7/20	Close 6 PM [h]	Close 6 PM [h]	Closed	Closed	Closed	Closed	Closed
7/21	Closed [h]	Closed [h]	Closed	Closed	Closed	Closed	Closed
7/22	Open 6 PM [h]	Open 6 PM [h, i]	Open 6 PM	Closed	Open 8 AM	Closed	Closed
7/23	Open [h]	Open [h]	Close 12 PM	Closed	Close 8 PM	Closed	Closed
7/24	Close 6 PM [h]	Close 6 PM [h]	Closed 12 PM	Closed	Closed	Closed	Closed
7/25	Open 6 PM [h]	Open 6 PM [h]	Open 6 PM	Closed	Closed	Closed	Closed
7/26	Open [h]	Open [h]	Open	Closed	Closed	Open 8 AM	Closed
7/27	Open [h]	Open [h]	Close 6 PM	Open 6 PM	Closed	Close 8 PM	Closed
7/28	Open [h]	Open [h]	Closed	Open	Closed	Closed	Open 8 AM
7/29	Close 6 PM [h]	Close 6 PM [h]	Open 6 PM	Close 6 PM	Closed	Closed	Close 8 PM

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	Subdistrict 4-A [a]		Sub 4-B /	5-A/5-B /	Subdistrict 5-D [b]		
	Lower	Upper	4-C	5-C	Lower [c]	Middle [d]	Upper [e]
7/30	Closed [h]	Closed [h]	Open	Closed	Open 7 PM	Closed	Closed
7/31	Open 6 PM	Open 6 PM	Open	Open 6 PM	Open	Closed	Closed
8/1	Open	Open	Open	Open	Open	Closed	Closed
8/2	Open	Open	Open	Open	Open	Closed	Closed
8/3	Open	Open [j]	Close 6 PM	Open	Open	Closed	Closed
8/4	Open	Open	Closed	Open	Open	Closed	Closed
8/5	Close 6 PM	Close 6 PM	Open 6 PM	Close 6 PM	Open	Closed	Closed
8/6	Closed	Closed	Open	Closed	Open	Closed	Closed
8/7	Open 6 PM	Open 6 PM	Open	Open 6 PM	Open	Closed	Closed
8/8	Open	Open	Open	Open	Open	Closed	Closed
8/9	Open [k]	Open [k]	Open	Open	Open	Closed	Closed
8/10	Open [k]	Open [k]	Close 6 PM	Open	Open	Closed	Closed
8/11	Open [k]	Open [k]	Closed	Open	Open	Closed	Closed
8/12	Close 6 PM	Close 6 PM	Open 6 PM	Close 6 PM	Open	Closed	Closed
8/13	Closed	Closed	Open	Closed	Open	Closed	Closed
8/14	Open 6 PM [k]	Open 6 PM [k]	Open	Open 6 PM [l]	Open	Closed	Closed
8/15	Open [k]	Open [k]	Open	Open [l]	Open	Open 6 PM	Open 6 PM
8/16	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/17	Open [k]	Open [k]	Close 6 PM	Open [l]	Open	Open	Open
8/18	Open [k]	Open [k]	Closed	Open [l]	Open	Open	Open
8/19	Close 6 PM	Close 6 PM	Open 6 PM	Close 6 PM	Open	Open	Open
8/20	Closed	Closed	Open	Closed	Open	Open	Open
8/21	Open 6 PM [k]	Open 6 PM [k]	Open	Open 6 PM [l]	Open	Open	Open
8/22	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/23	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/24	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/25	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/26	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/27	Open [k]	Open [k]	Open	Open	Open	Open	Open
8/28	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/29	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/30	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
8/31	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/1	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/2	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/3	Open [k]	Open [k]	Open	Open	Open	Open	Open
9/4	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/5	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/6	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/7	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/8	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/9	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/10	Open	Open	Open	Open	Open	Open	Open
9/11	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/12	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/13	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/14	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/15	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/16	Open [k]	Open [k]	Open	Open [l]	Open	Open	Open
9/17	Open	Open	Open	Open	Open	Open	Open

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Note: Shaded areas indicate normal windowed fishery schedule of closures for Subdistricts 4-B, 4-C, 5-A, 5-B and 5-C, outlined shaded days were closed to protect the first and second pulses of Chinook salmon. Unless noted, mesh size was restricted to 7.5 inch or less in all districts and subdistricts.

[a] Subdistrict 4-A was divided into 2 separate areas above and below Stink Creek to protect the first pulse of Chinook salmon as it passed through this long section of river. By regulation drift gillnets are allowed in Subdistrict 4-A to harvest Chinook salmon from June 10 through July 14.

[b] Subdistrict 5-D was divided into 3 separate areas to protect the first pulse of Chinook salmon as it passed through this long section of river.

[c] Subdistrict 5-D Lower: from the ADF&G marker 2 miles downstream of Waldron Creek upstream to the Hadweenzic River.

[d] Subdistrict 5-D Middle: from the Hadweenzic River upstream to 22 Mile Slough.

[e] Subdistrict 5-D Upper: from 22 Mile Slough to the U.S./Canada border.

[f] Commercial fishing period in Subdistrict 4-A with fish wheels only. Fish wheels were required to be manned at all times and any Chinook salmon caught were to be immediately released alive. From July 1 to July 12, there were 12 commercial periods from 8:00 PM to 8:00 AM each day.

[g] Gear restrictions to conserve Chinook salmon in place for all or part of a subsistence opening. Gillnets restricted to mesh sizes of 6.0 inch or less to target chum salmon and nonsalmon. Fish wheels were required to be attended at all times while in operation and all Chinook salmon returned to the water alive.

[h] Commercial fishing period in Subdistrict 4-A with fish wheels only. Fish wheels were required to be attended at all times and all Chinook salmon were to be immediately released alive. Starting at 8:00 PM Friday July 13, commercial fishing was open continuously and extended until 8:00 PM Monday July 30.

[i] Subsistence fishing in a portion of Subdistrict 4-A returned to normal schedule with no additional gear restrictions.

[j] By regulation drift gillnets can be used to harvest chum salmon in the upper portion of Subdistrict 4-A from Stink Creek to Cone Point after August 2.

[k] Commercial fishing opening concurrent with subsistence periods and restricted to fish wheels or gillnets with 6.0 inch or smaller mesh.

[l] Commercial fishing periods open for 120 hours concurrent with subsistence periods in Subdistricts 5-B and 5-C and restricted to fish wheels or gillnets with 6.0 inch or smaller mesh.

Appendix A9.–Subsistence salmon fishing closures and gear restrictions, Tanana and Koyukuk rivers, 2012.

Date	Koyukuk River	Tanana River Subdistricts 6-A	6-B	6-C	Date	Koyukuk River	Tanana River Subdistricts 6-A	6-B	6-C
7/1	Open	Close 12 PM	Close 12 PM	Close 12 PM	8/1	Open	Close 12 PM [a]	Close 12 PM [a]	Close 12 PM [a]
7/2	Open	Open 6 PM	Open 6 PM	Open 6 PM	8/2	Open	Closed	Closed	Closed
7/3	6 PM, 6"mesh	Open	Open	Open	8/3	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
7/4	Open 6"mesh	Close 12 PM	Close 12 PM	Close 12 PM	8/4	Open	Open [b]	Open [b]	Open [b]
7/5	Open 6"mesh	Closed	Closed	Closed	8/5	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/6	Open 6" mesh	Open 6 PM	Open 6 PM	Open 6 PM	8/6	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
7/7	Open 6"mesh	Open	Open	Open	8/7	Open	Open [b]	Open [b]	Open [b]
7/8	Open 6" mesh	Close 12 PM	Close 12 PM	Close 12 PM	8/8	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/9	Open 6" mesh	Open 6 PM	Open 6 PM	Open 6 PM	8/9	Open	Closed	Closed	Closed
7/10	Open 6"mesh	Open	Open	Open	8/10	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
7/11	Open 6"mesh	Close 12 PM	Close 12 PM	Close 12 PM	8/11	Open	Open [b]	Open [b]	Open [b]
7/12	Open 6"mesh	Closed	Closed	Closed	8/12	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/13	Open 6"mesh	Open 6 PM	Open 6 PM	Open 6 PM	8/13	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
7/14	Open 6"mesh	Open	Open	Open	8/14	Open	Open [b]	Open [b]	Open [b]
7/15	Open 6"mesh	Close 12 PM	Close 12 PM	Close 12 PM	8/15	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/16	Open 6"mesh	Open 6 PM	Open 6 PM	Open 6 PM	8/16	Open	Closed	Closed	Closed
7/17	Open 6"mesh	Open	Open	Open	8/17	Open	Open 6 PM	Open 6 PM	Open 6 PM
7/18	Open 6"mesh	Close 12 PM	Close 12 PM	Close 12 PM	8/18	Open	Open	Open	Open
7/19	Open 6"mesh	Closed	Closed	Closed	8/19	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/20	Open 6" mesh	Open 6 PM [a, c]	Open 6 PM [a, c, d]	Closed [a]	8/20	Open	Open 6 PM	Open 6 PM	Open 6 PM
7/21	Open 6"mesh	Open [a, c]	Open [a, c, d]	Closed [a]	8/21	Open	Open	Open	Open
7/22	7.5" mesh, 6 PM	Close 12 PM [a, c]	Close 12 PM [a, c, d]	Closed [a]	8/22	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/23	Open	Open 6 PM [a, c]	Open 6 PM [a, c, d]	Closed [a]	8/23	Open	Closed	Closed	Closed
7/24	Open	Open [a, c]	Open [a, c, d]	Closed [a]	8/24	Open	Open 6 PM	Open 6 PM	Open 6 PM
7/25	Open	Close 12 PM [a]	Close 12 PM [a, d]	Closed [a]	8/25	Open	Open	Open	Open
7/26	Open	Closed [a]	Closed [a, d]	Closed [a]	8/26	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/27	Open	Open 6 PM [a, c]	Open 6 PM [a, c, e]	Closed [a]	8/27	Open	Open 6 PM	Open 6 PM	Open 6 PM
7/28	Open	Open, gear [a, c]	Open, gear [a, c]	Closed [a]	8/28	Open	Open	Open	Open
7/29	Open	Close 12 PM [a]	Close 12 PM [a]	Closed [a]	8/29	Open	Close 12 PM	Close 12 PM	Close 12 PM
7/30	Open	Open 6 PM [a]	Open 6 PM [a]	Open 6 PM [a]	8/30	Open	Closed	Closed	Closed
7/31	Open	Open [a]	Open [a]	Open [a]	8/31	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]

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Date	Koyukuk River	Tanana River Subdistricts 6-A	6-B	6-C	Date	Koyukuk River	Tanana River Subdistricts 6-A	6-B	6-C
9/1	Open	Open [b]	Open [b]	Open [b]	9/16	Open	Close 12 PM	Close 12 PM	Close 12 PM
9/2	Open	Close 12 PM	Close 12 PM	Close 12 PM	9/17	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
9/3	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]	9/18	Open	Open [b]	Open [b]	Open [b]
9/4	Open	Open [b]	Open [b]	Open [b]	9/19	Open	Close 12 PM	Close 12 PM	Close 12 PM
9/5	Open	Close 12 PM	Close 12 PM	Close 12 PM	9/20	Open	Closed	Closed	Closed
9/6	Open	Closed	Closed	Closed	9/21	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
9/7	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]	9/22	Open	Open [b]	Open [b]	Open [b]
9/8	Open	Open [b]	Open [b]	Open [b]	9/23	Open	Close 12 PM	Close 12 PM	Close 12 PM
9/9	Open	Close 12 PM	Close 12 PM	Close 12 PM	9/24	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
9/10	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]	9/25	Open	Open [b]	Open [b]	Open [b]
9/11	Open	Open [b]	Open [b]	Open [b]	9/26	Open	Close 12 PM [f]	Close 12 PM [f]	Close 12 PM [f]
9/12	Open	Close 12 PM	Close 12 PM	Close 12 PM	9/27	Open	Closed [f]	Closed [f]	Closed [f]
9/13	Open	Closed	Closed	Closed	9/28	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [b]
9/14	Open	Open 6 PM [b]	Open 6 PM [b]	Open 6 PM [\b]	9/29	Open	Open [b]	Open [b]	Open [b]
9/15	Open	Open [b]	Open [b]	Open [b]	9/30	Open	Close 12 PM	Close 12 PM	Close 12 PM

Note: Shaded areas indicate normal windowed fishery schedule of closures, outlined shaded days were closed to protect the first and second pulses of Chinook salmon. Unless noted, mesh size was restricted to 7.5 inch or less in all districts and subdistricts. The Old Minto Area of Subdistrict 6-B remained open for 5 days a week. The Kantishna River remained open 7 days a week.

[a] Commercial fishing restricted to continuously manned fish wheels and all Chinook salmon must be immediately returned to the water alive.

[b] Commercial fishing concurrent with subsistence openings (periods often occur together). No additional gear restrictions.

[c] Gillnets not allowed. Subsistence fishing restricted to fish wheels equipped with a chute that must be closely attended and all Chinook salmon caught must be returned to the water alive.

[d] The Old Minto Area of Subdistrict 6-B restricted to fish wheels with a chute and no retention of Chinook salmon from 6:00 PM Friday July 21 to 6:00 PM Friday July 27. For the remainder of the season fishermen could use gillnet with 7.5 inch or smaller mesh and fish wheels in the Old Minto Area.

[e] Gear restrictions discontinued at 6:00 PM in the Old Minto Area of Subdistrict 6-B.

[f] Commercial fishing period extended through a subsistence closure. No additional gear restrictions.

Appendix A10.–Months when households reported harvesting small whitefish species, Yukon Area, 2012.

District	Month												
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Coastal	3				1	3	2	21	22	5	6	5	68
District 1	18	18	8	5	5	6	5	6	75	48	25	23	242
District 2	6	5	5	2	1	1	1	1	5	5	8	10	50
District 3	1	1							1		1	1	5
District 4						3	1	3	6	2			15
District 5	1					2	7	6	2	2	1	1	22
Households	29	24	13	7	7	15	16	37	111	62	41	40	402

Note: In 2012, 175 surveyed households provided information for the question "When did you harvest small whitefish?"

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 fishery projects, Yukon Area, 2002–2012.

Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Hooper Bay	282	722	1,042	157	376	430	388	183	584	252	1,090	516	367
Scammon Bay	840	1,128	996	691	507	768	1,104	722	716	517	1,014	832	765
Coastal District total	1,122	1,850	2,038	848	883	1,198	1,492	905	1,300	769	2,104	1,465	1,156
Nunam Iqua	393	925	647	338	371	907	163	200	404	250	195	535	385
Alakanuk	1,773	1,707	1,317	860	690	1,257	1,238	634	944	1,464	1,081	1,269	1,107
Emmonak	1,751	2,763	2,768	1,730	2,311	2,326	2,696	1,634	2,194	2,172	1,864	2,265	2,204
Kotlik	1,686	937	1,148	2,130	1,750	1,569	2,066	1,657	2,314	2,369	1,173	1,530	1,995
District 1 subtotal	5,603	6,332	5,880	5,058	5,122	6,059	6,163	4,125	5,856	6,255	4,313	5,718	5,465
Mountain Village	1,523	2,174	2,362	2,383	1,659	2,077	1,645	1,482	1,601	2,063	1,789	2,020	1,774
Pitkas Point	566	633	609	618	274	320	544	265	580	246	261	540	391
St. Marys	2,045	1,916	2,357	2,693	2,233	3,573	1,756	1,929	2,800	1,734	2,344	2,249	2,358
Pilot Station	2,530	2,886	2,406	1,658	1,976	2,028	1,597	1,258	1,585	1,340	1,078	2,291	1,562
Marshall	2,290	2,059	1,990	1,804	1,897	2,555	3,284	1,201	2,110	2,686	1,409	2,008	2,367
District 2 subtotal	8,954	9,668	9,724	9,156	8,039	10,553	8,826	6,135	8,676	8,069	6,881	9,376	8,446
Russian Mission	1,887	2,057	2,337	1,894	1,851	1,301	2,949	978	924	1,550	1,711	2,005	1,540
Holy Cross	1,813	2,395	1,993	2,817	3,165	2,902	2,509	1,745	3,098	2,231	576	2,437	2,497
Shageluk	439	550	418	420	358	448	397	201	277	353	75	437	335
District 3 subtotal	4,139	5,002	4,748	5,131	5,374	4,651	5,855	2,924	4,299	4,134	2,362	4,755	4,621
Lower Yukon River total	18,696	21,002	20,352	19,345	18,535	21,263	20,844	13,184	18,831	18,458	13,556	19,849	18,531
Anvik	708	1,286	1,588	1,206	958	1,321	1,433	796	1,069	1,052	435	1,149	1,134
Grayling	2,249	1,613	1,869	1,878	1,702	1,500	1,761	1,133	2,122	1,374	1,081	1,862	1,578
Kaltag	1,435	1,838	1,656	3,367	2,833	1,456	2,403	1,970	3,191	2,488	1,346	2,226	2,302
Nulato	1,773	2,531	5,199	2,749	2,707	2,431	1,250	1,551	2,989	1,538	1,955	2,992	1,952
Koyukuk	323	860	400	396	835	811	513	982	867	1,349	614	563	904
Galena	1,522	3,112	3,296	2,864	2,380	2,511	2,232	1,370	1,357	1,434	742	2,635	1,781
Ruby/Kokrines	954	631	1,620	1,193	304	1,594	637	542	1,102	482	1,316	940	871
District 4 subtotal	8,964	11,871	15,628	13,653	11,719	11,624	10,229	8,344	12,697	9,717	7,489	12,529	10,923
Huslia	222	469	285	207	258	146	255	969	65	121	165	288	311
Hughes	67	113	291	33	8	8	61	101	63	10	0	102	49
Allakaket	200	306	65	68	23	53	58	90	63	42	5	132	61
Alatna	3	12	0	0	14	0	16	10	0	3	0	6	6
Bettles	0	0	0	3	0	0	0	0	0	0	3	1	0
Koyukuk River subtotal	492	900	641	311	303	207	390	1,170	191	176	173	586	452
District 4 total (Incl. Koyukuk R.)	9,456	12,771	16,269	13,964	12,022	11,831	10,619	9,514	12,888	9,893	7,662	13,115	11,375

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Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Tanana	2,379	5,332	2,689	3,729	3,794	5,498	3,981	2,950	3,215	2,936	2,100	3,585	3,716
Rampart [a]	852	1,411	287	411	429	250	136	528	262	201	190	678	275
Fairbanks [b]	1,767	1,932	1,997	2,584	2,184	2,510	1,898	1,509	1,670	2,186	558	2,093	1,955
Stevens Village	1,334	1,121	2,394	1,570	1,245	610	753	405	469	415	330	1,533	530
Birch Creek	67	78	82	131	174	113	32	15	73	49	0	106	56
Beaver	702	1,156	858	957	830	1,244	546	516	198	356	71	901	572
Fort Yukon	2,348	4,004	4,430	3,591	3,144	4,076	1,991	846	1,683	2,472	2,141	3,503	2,214
Circle	1,533	895	565	1,283	694	1,057	519	372	324	297	280	994	514
Central	58	144	83	175	130	334	48	167	90	66	66	118	141
Eagle	1,910	2,081	1,512	2,566	2,303	1,999	1,068	446	867	728	167	2,074	1,022
Other [c]	348	862	357	315	330	472	362	541	779	777	477	442	586
District 5 subtotal (Excluding Chandalar and Black Rivers)	13,298	19,016	15,254	17,312	15,257	18,163	11,334	8,295	9,630	10,483	6,380	16,220	12,536
Venetie	77	125	352	59	667	1,002	292	622	767	10	86	256	539
Chalkyitsik	26	50	60	53	0	0	0	0	0	0	0	38	0
Chandalar/Black River Subtotal	103	175	412	112	667	1,002	292	622	767	10	86	201	670
District 5 total	13,401	19,191	15,666	17,424	15,924	19,165	11,626	8,917	10,397	10,493	6,466	16,421	13,206
Manley	336	213	239	289	361	333	106	345	337	287	174	288	282
Minto	19	317	35	35	31	82	12	0	43	61	99	87	40
Nenana	509	1,193	633	533	712	893	322	458	658	681	296	716	602
Fairbanks [d]	159	392	449	971	125	409	108	396	91	330	58	419	267
Other [e]	44	30	32	0	0	0	57	86	14	8	0	21	33
District 6 Tanana R. total	1,067	2,145	1,388	1,828	1,229	1,717	605	1,285	1,143	1,367	627	1,607	1,196
Upper Yukon River total	23,924	34,107	33,323	33,216	29,175	32,713	22,850	19,716	24,428	21,753	14,755	31,143	25,776
Alaska, Yukon River total [f]	42,620	55,109	53,675	52,561	47,710	53,976	43,694	32,900	43,259	40,211	28,311	50,991	44,308
Alaska, Yukon Area total	43,742	56,959	55,713	53,409	48,593	55,174	45,186	33,805	44,559	40,980	30,415	52,456	45,463

Note: Does not include harvests from personal use permits on the Tanana River near Fairbanks.

[a] Rampart area harvest as reported from subsistence fishing permits. Subsistence surveys were conducted 2001–2003 and permits were used 2004 to present.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvest by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permit holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District for use in U.S./Canada negotiations.

Appendix B2.–Summer chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fishery projects, Yukon Area, 2002–2012.

Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Hooper Bay	9,780	10,658	3,242	9,771	19,468	12,234	12,007	9,195	17,020	13,460	15,799	10,584	12,783
Scammon Bay	5,016	3,310	5,020	4,586	4,703	3,887	6,113	3,602	5,405	4,845	7,442	4,527	4,770
Coastal District total	14,796	13,968	8,262	14,357	24,171	16,121	18,120	12,797	22,425	18,305	23,241	12,846	18,727
Nunam Iqua	1,897	2,561	2,698	2,794	2,903	2,325	1,949	2,280	2,267	2,077	1,977	2,571	2,180
Alakanuk	7,637	5,287	6,555	5,687	7,790	7,611	6,881	5,152	7,722	7,447	9,012	6,591	6,963
Emmonak	8,458	7,644	8,618	12,594	11,899	9,256	9,646	9,038	10,918	12,468	15,829	9,843	10,265
Kotlik	6,115	4,209	2,749	6,620	5,289	5,017	4,291	7,528	4,265	6,598	8,552	4,996	5,540
District 1 subtotal	24,107	19,701	20,620	27,695	27,881	24,209	22,767	23,998	25,172	28,590	35,370	23,031	24,805
Mountain Village	6,657	6,497	10,676	8,861	13,119	8,104	7,559	7,204	7,071	9,355	9,031	9,162	7,859
Pitkas Point	639	800	717	1,023	680	515	1,246	994	633	585	1,153	772	795
St. Marys	7,284	4,521	6,994	6,877	7,394	8,107	6,451	5,831	7,443	6,760	10,763	6,614	6,918
Pilot Station	6,490	4,163	5,779	4,333	6,070	3,711	6,012	4,888	6,196	4,182	5,716	5,367	4,998
Marshall	2,484	792	1,765	3,183	4,392	3,070	3,023	2,172	2,395	3,810	5,903	2,523	2,894
District 2 subtotal	23,554	16,773	25,931	24,277	31,655	23,507	24,291	21,089	23,738	24,692	32,566	22,634	24,856
Russian Mission	395	171	884	925	1,328	759	2,400	849	528	1,225	2,508	741	1,152
Holy Cross	155	214	276	760	825	320	441	194	463	363	1,147	446	356
Shageluk	1,956	5,473	1,798	4,081	1,381	977	130	103	350	1,145	5,035	2,938	541
District 3 subtotal	2,506	5,858	2,958	5,766	3,534	2,056	2,971	1,146	1,341	2,733	8,690	4,272	2,210
Lower Yukon River total	50,167	42,332	49,509	57,738	63,070	49,772	50,029	46,233	50,251	56,015	76,626	49,937	51,871
Anvik	1,089	844	248	529	387	5,250	340	277	451	220	1,371	619	1,308
Grayling	1,311	1,072	1,129	783	644	641	660	1,429	1,612	838	2,616	988	1,036
Kaltag	234	1,028	213	680	159	109	916	50	102	163	186	463	268
Nulato	269	180	198	634	838	356	468	133	416	246	254	424	324
Koyukuk	426	1,339	329	537	394	995	1,104	1,378	352	890	828	605	944
Galena	712	289	782	1,013	1,205	571	758	1,718	1,702	3,414	718	800	1,633
Ruby/Kokrines	1,406	876	2,010	967	1,714	416	655	603	1,971	775	3,891	1,395	884
District 4 subtotal	5,447	5,628	4,909	5,143	5,341	8,338	4,901	5,588	6,606	6,546	9,864	5,282	6,155
Huslia	3,178	6,187	3,844	2,433	1,122	3,243	4,377	2,554	1,349	3,166	7,306	3,353	2,938
Hughes	1,089	1,265	3,823	2,230	3,254	1,213	944	1,723	878	954	428	2,332	1,142
Allakaket	6,242	4,383	2,367	2,535	5,170	3,451	3,229	4,924	2,864	2,368	3,850	4,139	3,367
Alatna	15	50	16	5	110	11	66	163	23	132	100	39	79
Bettles	0	0	0	4	0	0	0	6	0	0	7	1	1
Koyukuk River subtotal	10,524	11,885	10,050	7,207	9,656	7,918	8,616	9,370	5,114	6,620	11,691	9,917	8,135
District 4 Total(Incl. Koyukuk R)	15,971	17,513	14,959	12,350	14,997	16,256	13,517	14,958	11,720	13,166	21,555	15,198	14,290

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Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Tanana	3,321	3,075	1,490	4,832	5,474	5,229	2,877	4,665	1,856	4,381	4,333	3,638	3,802
Rampart [a]	14	9	103	315	135	25	27	112	161	67	71	115	78
Fairbanks [b]	295	89	280	780	1,341	564	119	44	427	688	172	557	368
Stevens Village	12	0	108	442	972	254	163	6	28	43	188	307	99
Beaver	77	7	2	68	117	41	27	22	22	393	27	54	101
Fort Yukon	1,832	2,176	1,187	67	2,165	2,365	230	275	722	1,297	0	1,485	978
Circle	5	85	52	3	58	200	5	0	37	48	0	41	58
Central	0	0	0	5	2	0	0	2	0	0	0	1	0
Eagle	24	104	171	235	974	15	14	0	25	2	0	302	11
Other [c]	17	0	3	53	117	81	25	29	144	790	101	38	214
District 5 subtotal (Excluding Chandalar and Black Rivers)	5,597	5,545	3,396	6,800	11,355	8,774	3,487	5,155	3,422	7,709	4,892	5,335	6,439
Venetie	13	0	15	0	475	107	50	143	0	0	0	101	60
Chalkyitsik	0	0	0	0	0	0	0	0	133	0	0	0	27
Chandalar/Black River Subtotal	13	0	15	0	475	107	50	143	133	0	0	7	182
District 5 total	5,610	5,545	3,411	6,800	11,830	8,881	3,537	5,298	3,555	7,709	4,892	5,342	6,620
Manley	93	65	296	163	89	140	144	367	102	142	58	141	179
Minto	10	625	7	21	460	82	9	1	8	27	64	225	25
Nenana	360	2,193	1,171	1,771	388	1,419	753	506	83	471	370	1,177	646
Fairbanks [d]	47	31	308	45	73	255	94	372	183	185	114	101	218
Other [e]	2	0	11	14	0	0	311	7	46	0	72	5	73
District 6 Tanana R. total	512	2,914	1,793	2,014	1,010	1,896	1,311	1,253	422	825	678	1,808	1,178
Upper Yukon River total	22,093	25,972	20,163	21,164	27,837	27,033	18,365	21,509	15,697	21,700	27,125	22,348	22,088
Alaska, Yukon River total [f]	72,260	68,304	69,672	78,902	90,907	76,805	68,394	67,742	65,948	77,715	103,751	72,285	73,959
Alaska, Yukon Area total	87,056	82,272	77,934	93,259	115,078	92,926	86,514	80,539	88,373	96,020	126,992	85,130	92,686

Note: Does not include harvest from personal use permits on the Tanana River near Fairbanks.

[a] Rampart area harvest as reported from subsistence fishing permits. Subsistence surveys were conducted 2001–2003 and permits were used 2004 to present.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permit holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District for use in U.S./Canada negotiations.

Appendix B3.–Fall chum salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fishery projects, Yukon Area, 2002–2012.

Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Hooper Bay	44	40	264	1	146	64	329	41	116	267	1	99	163
Scammon Bay	240	106	56	69	41	170	57	117	70	48	10	102	92
Coastal District total	284	146	320	70	187	234	386	158	186	315	11	205	230
Nunam Iqua	284	127	49	310	735	152	59	41	143	51	210	301	89
Alakanuk	222	348	953	627	624	1,348	423	116	860	881	449	555	726
Emmonak	1,261	1,257	785	1,436	2,056	2,360	1,670	1,589	1,718	1,540	5,890	1,359	1,775
Kotlik	114	407	280	516	487	530	671	171	481	962	1,073	361	563
District 1 subtotal	1,881	2,139	2,067	2,889	3,902	4,390	2,823	1,917	3,202	3,434	7,622	2,244	3,247
Mountain Village	478	873	918	1,290	2,398	1,073	926	926	133	800	685	1,191	772
Pitkas Point	16	49	0	6	5	44	101	76	10	30	9	15	52
St. Marys	103	762	104	490	417	825	830	106	387	611	1,423	375	552
Pilot Station	680	823	1,108	838	785	741	917	265	833	575	1,031	847	666
Marshall	341	394	291	633	410	789	748	190	56	562	184	414	469
District 2 subtotal	1,618	2,901	2,421	3,257	4,015	3,472	3,522	1,563	1,419	2,578	3,332	2,549	2,798
Russian Mission	164	615	172	667	251	530	578	205	104	11	282	374	286
Holy Cross	0	9	76	582	224	248	920	627	21	94	339	178	382
Shageluk	0	114	50	55	5	147	323	105	1,200	249	16	45	74
District 3 subtotal	164	738	298	1,304	480	925	1,821	937	1,325	354	637	626	1,098
Lower Yukon River total	3,663	5,778	4,786	7,450	8,397	8,787	8,166	4,417	5,946	6,366	11,591	5,419	7,143
Anvik	401	179	398	497	118	429	317	176	169	202	569	319	259
Grayling	52	441	267	1,009	691	317	1,012	490	202	1,152	804	492	635
Kaltag	314	725	687	1,089	823	910	620	200	658	196	2,830	728	517
Nulato	0	1,341	1,246	421	751	1,345	729	552	1,049	652	2,729	752	865
Koyukuk	255	835	344	803	1,147	927	1,177	578	792	1,388	1,331	677	972
Galena	349	1,510	1,587	2,695	1,632	1,471	1,364	4,306	1,968	2,739	2,947	1,555	2,370
Ruby/Kokrines	78	2,331	1,064	559	227	1,959	657	134	1,026	592	4,408	852	874
District 4 subtotal	1,449	7,362	5,593	7,073	5,389	7,358	5,876	6,436	5,864	6,921	15,618	5,369	6,185
Huslia	0	1,786	1,139	1,614	313	272	64	86	403	183	1,909	970	202
Hughes	0	497	97	111	240	0	127	288	0	64	2	189	96
Allakaket	100	105	968	557	393	939	1,345	572	521	92	508	425	694
Alatna	0	0	0	0	0	7	0	0	0	0	18	0	1
Bettles	0	0	0	50	0	0	0	0	0	0	0	10	0
Koyukuk River subtotal	100	2,388	2,204	2,332	946	1,218	1,536	946	924	339	2,437	1,756	1,114
District 4 Total (Incl. Koyukuk R.)	1,549	9,750	7,797	9,405	6,335	8,576	7,412	7,382	6,788	7,260	18,055	7,125	7,299

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Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Tanana	6,255	14,308	23,118	20,545	23,167	21,596	17,478	19,595	14,984	21,728	20,465	17,479	19,076
Rampart [a]	0	365	0	358	250	250	1,000	1,000	735	340	190	195	665
Fairbanks [b]	0	105	43	1,682	5,269	2,126	659	229	822	1,696	793	1,420	1,106
Stevens Village	0	857	1,080	246	50	199	643	770	2,706	911	277	447	1,046
Beaver	1	192	48	179	0	354	13	120	37	122	174	84	129
Ft. Yukon	3,523	7,963	7,302	8,088	5,178	8,264	14,252	2,829	6,006	7,188	12,659	6,411	7,708
Circle	74	499	1,022	918	664	1,286	3,198	110	927	299	161	635	1,164
Central	0	0	0	36	0	0	0	0	0	0	0	7	0
Eagle	339	2,871	5,482	17,356	16,801	18,676	15,269	10,941	15,008	17,455	18,731	8,570	15,470
Other [c]	100	0	13	117	44	46	3,183	71	120	208	443	55	726
District 5 subtotal (Excluding Chandalar and Black Rivers)	10,292	27,160	38,108	49,525	51,423	52,797	55,695	35,665	41,345	49,947	53,893	31,271	47,385
Venetie	680	770	2,083	1,801	520	721	1,563	2,373	2,989	1,938	295	1,171	1,917
Chalkyitsik	4	340	479	337	215	213	0	45	0	0	162	275	52
Chandalar/Black River subtotal	684	1,110	2,562	2,138	735	934	1,563	2,418	2,989	1,938	457	1,624	1,728
District 5 total	10,976	28,270	40,670	51,663	52,158	53,731	57,258	38,083	44,334	51,885	54,350	32,895	49,113
Manley	947	1,303	1,504	2,985	3,374	3,419	2,490	4,126	2,696	2,333	2,164	2,023	3,013
Minto	100	675	0	600	242	155	28	0	70	1,500	2	323	351
Nenana	1,070	7,802	5,367	10,594	10,530	21,863	6,585	7,623	6,802	5,268	8,665	7,073	9,628
Fairbanks [d]	229	1,949	1,024	6,691	1,311	3,325	340	3,460	678	4,317	3,876	2,241	2,424
Other [e]	856	1,257	1,058	2,076	1,468	1,131	6,692	870	1,145	958	595	1,343	2,159
District 6 Tanana R. total	3,202	12,986	8,953	22,946	16,925	29,893	16,135	16,079	11,391	14,376	15,302	12,022	18,085
Upper Yukon River total	15,727	51,006	57,420	84,014	75,418	92,200	80,805	61,544	62,513	73,521	87,707	52,042	74,496
Alaska, Yukon River total [f]	19,390	56,784	62,206	91,464	83,815	100,987	88,971	65,961	68,459	79,887	99,298	57,461	81,639
Alaska, Yukon Area total	19,674	56,930	62,526	91,534	84,002	101,221	89,357	66,119	68,645	80,202	99,309	57,666	81,869

Note: Does not include harvest from personal use permits on the Tanana River near Fairbanks.

[a] Rampart area harvest as reported from subsistence fishing permits. Subsistence surveys were conducted 2001–2003 and permits were used 2004 to present.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permits holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District for use in U.S./Canada negotiations.

Appendix B4.–Coho salmon subsistence harvest totals by fishing district and community of residence, as estimated from postseason survey, returned permits and test fishery projects, Yukon Area, 2002–2012.

Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Hooper Bay	125	244	9	0	175	26	66	24	45	0	7	111	32
Scammon Bay	123	48	54	279	160	84	50	222	79	55	86	133	98
Coastal District total	248	292	63	279	335	110	116	246	124	55	93	221	186
Nunam Iqua	56	117	79	241	392	92	24	71	73	23	18	177	57
Alakanuk	183	193	207	322	101	857	157	194	449	431	252	201	418
Emmonak	514	547	296	191	450	1,032	717	401	362	472	2,660	400	597
Kotlik	542	403	593	222	234	284	313	181	238	201	420	399	243
District 1 subtotal	1,295	1,260	1,175	976	1,177	2,265	1,211	847	1,122	1,127	3,350	1,177	1,324
Mountain Village	361	745	521	246	1,856	1,027	518	413	127	261	256	746	469
Pitkas Point	47	130	0	30	16	38	130	45	116	37	53	45	73
St. Marys	209	276	258	252	171	97	591	151	92	230	141	233	232
Pilot Station	230	371	296	241	225	263	268	203	189	145	329	273	214
Marshall	386	64	425	341	191	922	490	245	33	150	567	281	368
District 2 subtotal	1,233	1,586	1,500	1,110	2,459	2,347	1,997	1,057	557	823	1,346	1,357	1,683
Russian Mission	115	178	151	133	19	259	372	96	300	0	319	119	205
Holy Cross	0	498	27	84	16	213	38	120	0	0	237	125	74
Shageluk	0	35	106	0	48	267	0	105	53	36	0	38	92
District 3 subtotal	115	711	284	217	83	739	410	321	353	36	556	332	381
Lower Yukon River total	2,643	3,557	2,959	2,303	3,719	5,351	3,618	2,225	2,032	1,986	5,252	2,866	3,389
Anvik	0	12	288	406	0	807	40	137	28	19	214	141	206
Grayling	30	559	233	234	224	271	25	318	132	119	26	256	173
Kaltag	212	463	138	307	106	204	45	40	0	258	928	245	109
Nulato	78	928	203	60	214	130	195	171	242	118	41	297	171
Koyukuk	249	1,155	166	37	330	189	84	198	254	137	62	387	172
Galena	169	1,507	1,307	607	137	425	558	2,353	549	1,013	276	745	980
Ruby/Kokrines	69	648	1,540	361	11	168	291	314	148	312	1,806	526	247
District 4 subtotal	807	5,272	3,875	2,012	1,022	2,194	1,238	3,531	1,353	1,976	3,353	2,992	1,868
Huslia	60	375	764	734	105	592	100	323	289	70	165	408	275
Hughes	100	20	110	20	150	100	0	89	0	13	0	80	40
Allakaket	56	99	17	205	25	66	152	43	88	13	38	80	72
Alatna	0	7	0	0	0	0	0	0	0	0	0	1	0
Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0
Koyukuk River subtotal	216	501	891	959	280	758	252	455	377	96	203	642	424
District 4 Total (Incl. Koyukuk R.)	1,023	5,773	4,766	2,971	1,302	2,952	1,490	3,986	1,730	2,072	3,556	3,633	2,292

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Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2002-2006 Average	2007-2011 Average
Tanana	2,032	3,480	1,049	1,616	3,619	2,369	1,511	2,373	2,314	312	3,060	2,359	1,776
Rampart [a]	0	0	0	10	0	50	0	0	24	0	0	2	15
Fairbanks [b]	0	120	91	10	79	26	7	13	2	2	0	60	10
Stevens Village	0	0	100	0	0	0	0	90	428	0	0	20	104
Beaver	17	0	0	0	0	354	6	0	1	0	2	3	72
Fort Yukon [c]	14	0	19	394	35	567	1,618	2	244	1,040	4	92	694
Circle	0	244	100	100	22	0	0	13	164	0	5	93	35
Central	0	0	0	1	0	0	0	0	0	0	0	0	0
Eagle	1	0	14	15	0	0	0	0	1	1	0	6	0
Other [c]	0	25	0	13	0	0	61	7	0	0	21	8	14
District 5 subtotal (Excluding Chandalar and Black rivers)	2,064	3,869	1,373	2,159	3,755	3,366	3,203	2,498	3,178	1,355	3,092	2,366	3,200
Venetie	12	11	5	0	24	0	0	0	159	34	0	10	39
Chalkyitsik	0	7	45	0	0	0	0	0	267	0	0	10	53
Chandalar/Black River Subtotal	12	18	50	0	24	0	0	0	426	34	0	20	90
District 5 total	2,076	3,887	1,423	2,159	3,779	3,366	3,203	2,498	3,604	1,389	3,092	2,386	3,290
Manley	1,617	886	1,384	2,510	1,671	1,126	1,901	2,308	1,832	1,482	1,374	1,614	1,730
Minto	250	423	5	0	14	155	0	0	0	0	0	138	31
Nenana	3,574	5,431	6,494	12,395	7,032	4,487	2,775	3,475	2,313	3,304	5,904	6,985	3,271
Fairbanks [d]	1,024	1,049	1,435	3,032	745	609	230	577	212	1,109	1,502	1,457	547
Other [e]	3,034	2,574	2,266	1,601	1,109	1,468	3,522	691	1,198	947	760	2,117	1,565
District 6 Tanana River total	9,499	10,363	11,584	19,538	10,571	7,845	8,428	7,051	5,555	6,842	9,540	12,746	7,890
Upper Yukon Area total	12,598	20,023	17,773	24,668	15,652	14,163	13,121	13,535	10,889	10,303	16,188	18,766	13,472
Alaska, Yukon River total [f]		23,580	20,732	26,971	19,371	19,514	16,739	15,760	12,921	12,289	21,440	21,631	16,861
Alaska, Yukon Area total	15,489	23,872	20,795	27,250	19,706	19,624	16,855	16,006	13,045	12,344	21,533	21,852	17,047

Note: Does not include harvest from personal use permits on the Tanana River near Fairbanks.

[a] Rampart area harvest as reported from subsistence fishing permits. Subsistence surveys were conducted 2001–2003 and permits were used 2004 to present.

[b] Harvests by Fairbanks subsistence permit holders who fished in District 5 near the Yukon River bridge crossing.

[c] Other permit holders who fished in District 5 but did not reside in the communities listed.

[d] Harvests by Fairbanks subsistence permit holders who fished in the Tanana River.

[e] Other permits holders who fished in District 6 but did not reside in the communities listed.

[f] Does not include the Coastal District for use in U.S./Canada negotiations.

Appendix B5.–Personal use salmon harvests taken under authority of a permit, Tanana River drainage, 2002–2012.

	Subdistrict 6-C personal use salmon fishery						
	Number of permits	Number of permits	Number reporting	Reported Harvest			
Year	issued [a]	returned [a]	harvest [a]	Chinook	Summer chum	Fall chum	Coho
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	78 [b]	70 [b]
2010	67	67	38	162	319	3,209 [c]	1,062
2011	67	64	33	89	439	347	232
2012	60	59	29	71	321	410	100
5-year average 2007-2011	60	59	30	128	242	795	319
10-year average 2002-2011	61	60	30	143	206	474	254

Note: Salmon permits began in 1987 and results prior to 2002 are presented in earlier years of this annual report (Busher et al. 2009). Reported harvest is not expanded.

[a] Does not include personal use Tanana River whitefish/sucker permits.

[b] Harvest includes 7 fall chum and 5 coho salmon incidentally harvested by a household with a personal use Tanana River whitefish/sucker permit.

[c] Harvest includes 1 fall chum salmon incidentally harvested by a household with a personal use Tanana River whitefish/sucker permit.

Appendix B6.–Subsistence salmon harvests taken under authority of a permit in portions of District 5, Yukon Area, 2002–2012.

	Yukon River Rampart Village Area subsistence salmon fishery [a]						
	Permits	Permits	Reporting	Reported harvest			
Year	issued	returned	harvest	Chinook	Summer chum	Fall chum	Coho
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
2010	28	27	22	1,344	304	1,235	24
2011	29	29	24	1,586	429	768	1
2012	32	31	28	575	197	1,161	21
5-year average							
2007-2011	25	23	19	1,425	286	1,225	16
	Yukon River Bridge Area subsistence salmon fishery [b]						
	Permits	Permits	Reporting	Reported harvest			
Year	issued	returned	harvest	Chinook	Summer chum	Fall chum	Coho
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
2010	85	81	43	1,300	448	422	2
2011	74	73	43	1,552	1,139	1,828	1
2012	63	61	26	629	147	259	0
5-year average							
2007-2011	77	74	44	1,448	384	915	28
10-year average							
2002-2011	74	71	49	1,803	420	970	47
	Upper Yukon River Circle-Eagle Area subsistence salmon fishery [c]						
	Permits	Permits	Reporting	Reported harvest			
Year	issued	returned	harvest	Chinook	Summer chum	Fall chum	Coho
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 [d]	96	87	50	1,808	19	18,496	0
2009 [d]	73	70	34	1,092	2	11,051	13
2010 [d]	93	89	56	1,415	62	15,955	165
2011 [d]	87	85	49	1,138	51	17,851	1
2012 [d]	68	66	32	545	0	18,896	5
5-year average							
2007-2011	85	80	48	1,800	70	16,672	36
10-year average							
2002-2011	88	82	50	2,589	207	12,996	45

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Note: Issuing permits began in 1974 and results prior to 2002 are presented in earlier years of this annual report (Busher et al. 2009). Reported harvest is not expanded. A permit area was established in 2004 for the South Fork of the Koyukuk River drainage upstream from the mouth of the Jim River, and the Middle Fork of the Koyukuk River upstream from the mouth of the North Fork, but no salmon have been harvested from this permit area.

[a] That portion of the Yukon River drainage from Garnet Island to Hess Creek. Permits were not required in this area until 2004 was a survey area associated with community of Rampart.

[b] That portion of the Yukon River drainage from Hess Creek to Dall River.

[c] That portion of the Yukon River drainage from the upstream mouth of Twenty-Two Mile Slough (downstream of Circle) to the U. S./Canada border.

[d] Beginning in 2008, permits were issued for subareas to record harvest taken upriver of the Eagle sonar site. These duplicate permits issued to households using both areas were included in the permit numbers. From 2008 to 2012, the number of households fishing above the sonar has ranged from 13 to 20 households.

Appendix B7.–Subsistence salmon harvests taken under authority of a permit, Tanana River drainage, 2002–2012.

	Subdistrict 6-A subsistence salmon fishery						
	Number	Number	Number	Reported harvest [a]			
	of permits	of permits	reporting		Summer	Fall	
Year	issued	returned	harvest	Chinook	chum	chum	Coho
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
2010	26	26	14	361	106	3,176	1,986
2011	30	29	19	331	147	5,263	1,540
2012	26	25	14	228	58	2,451	1,425
5-year average							
2007-2011	29	28	17	337	212	3,890	2,066
10-year average							
2002-2011	26	25	16	377	182	3,340	2,204

	Subdistrict 6-B subsistence salmon fishery						
	Number	Number	Number	Reported harvest [b]			
	of permits	of permits	reporting		Summer	Fall	
Year	issued	returned	harvest	Chinook	chum	chum	Coho
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 [c]	70	67	29	1,404	1,846	15,367	9,659
2006 [c]	78	76	42	423	896	13,053	7,899
2007 [c]	79	75	39	1,139	1,752	12,478	4,521
2008	73	71	35	486	854	7,815	4,009
2009 [c]	69	68	37	730	831	9,112	4,064
2010	93	85	32	583	316	7,625	3,429
2011	86	82	43	684	678	7,463	4,584
2012	85	79	39	375	436	10,430	6,674
5-year average							
2007-2011	80	76	37	724	886	8,899	4,121
10-year average							
2002-2011	75	71	35	886	1,222	9,245	6,363

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	Upper Tanana River drainage subsistence salmon fishery						
	Number	Number	Number	Reported harvest [d]			
Year	of permits issued	of permits returned	reporting harvest	Chinook	Summer chum	Fall chum	Coho
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
2010	41	34	19	10	0	12	0
2011	41	39	23	0	0	0	0
2012	58	49	22	0	0	0	0
5-year average 2007-2011	43	39	19	2	0	31	2
10-year average 2002-2011	37	34	17	4	0	21	1

Note: Permits began in 1988 and results prior to 2002 are presented in earlier years of this annual report (Busher et al. 2009).Reported harvest is not expanded.

[a] That portion of the Tanana River drainage from confluence with Yukon River upstream to the upstream edge of the confluence with the Kantishna River. Includes salmon harvests reported on permits for the Kantishna River proper.

[b] That portion of the Tanana River drainage upstream of the confluence of the Kantishna River to the upstream edge of the confluence of the Wood River.

[c] Includes small numbers of salmon harvested and reported on the Tolovana River drainage (Subdistrict 6-B) subsistence pike permit, established in 1993.

[d] That portion of the Tanana River drainage upstream of the mouth of the Volkmar River (including the Volkmar River) on the north bank and the Johnson River (including the Johnson River) on the south bank to the headwaters of the Tanana River. Harvest from this area consists mainly of whitefish and nonsalmon species.

Appendix B8.–Estimated pink salmon subsistence harvest by residents of surveyed communities, with community and district totals, Yukon Area, 2002–2012.

Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Estimated total Even year average	Odd year average	10 year average
Hooper Bay	5,475	473	5,418	860	1,433	113	1,013	957	219	210	1,101	2,712	523	1,617
Scammon Bay	417	997	2,508	1,645	1,381	1,435	2,766	1,186	2,245	1,888	1,343	1,863	1,430	1,620
Coastal District	5,892	1,470	7,926	2,505	2,814	1,548	3,779	2,143	2,464	2,098	2,444	4,575	1,953	3,393
Nunam Iqua	10	5	32	132	555	170	757	61	306	8	1,051	332	75	225
Alakanuk	130	0	233	49	115	32	494	24	151	13	174	225	24	136
Emmonak	39	4	32	54	225	51	641	5	206	0	199	229	23	140
Kotlik	849	198	318	155	219	129	1,161	42	124	32	195	534	111	355
District 1	1,028	207	615	390	1,114	382	3,053	132	787	53	1,619	1,319	233	856
Mountain Village	745	117	891	78	616	87	500	6	217	24	207	594	62	362
Pitkas Point	35	0	0	2	44	66	15	0	143	0	2	47	14	34
St. Marys	7	0	137	144	236	32	367	5	543	1	643	258	36	163
Pilot Station	22	0	5	0	1	0	34	3	22	0	23	17	1	10
Marshall	473	0	105	6	3	0	26	0	21	66	5	126	14	70
District 2	1,282	117	1,138	230	900	185	942	14	946	91	880	1,042	127	639
Russian Mission	0	0	6	0	8	3	436	0	2	0	76	90	1	51
Holy Cross	0	0	0	0	17	0	20	0	0	0	0	7	0	4
Shageluk	0	130	0	0	0	0	0	9	0	9	24	0	30	15
District 3	0	130	6	0	25	3	456	9	2	9	100	98	30	70
Anvik	0	240	0	0	0	0	23	2	0	0	0	5	48	29
Grayling	30	3	0	3	0	0	200	0	0	40	0	46	9	26
Kaltag	0	0	10	4	0	0	383	0	0	0	0	79	1	44
Nulato	50	0	0	0	1	0	35	0	0	0	0	17	0	10
Koyukuk	4	0	0	0	0	0	67	0	0	0	0	14	0	8
Galena	50	0	0	0	0	0	31	0	0	0	3	16	0	9
Ruby	87	0	2	0	0	0	184	0	0	0	0	55	0	30
Huslia	0	0	0	0	0	0	100	0	0	0	101	20	0	11
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
District 4	221	243	12	7	1	0	1,023	2	0	40	104	251	58	168

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Community	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	Estimated total Even year average	Odd year average	All years average
Tanana	0	0	0	0	0	0	80	0	0	0	3	16	0	9
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	196	0	0	0	0	39	0	22
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
District 5	0	0	0	0	0	0	276	0	0	0	3	55	0	31
Survey total	8,423	2,167	9,697	3,132	4,854	2,118	9,529	2,300	4,199	2,291	5,150	7,340	2,402	5,158
CI (95%)	4,091	964	2,829	1,521	990	739	1,818	1,184	1,209	918	1,155	–	–	–

Note: CI (95%) is the annual 95% confidence interval. Dashes indicate indefinable values. Averages do not include the current year. Pink salmon data has been collected since 1993. Districts 1 and 2 harvest may include small amounts of pink salmon donated to communities from test fisheries.

Appendix B9.–Households with dogs, number of dogs, and salmon fed to dogs, as estimated in surveyed communities or reported in permit areas, Yukon Area, 2007–2012.

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
2007						
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	26,600	2,763	36,596
District 5 permit [a, b]	52	567	–	–	–	17,891
District 6 permit [b]	175	890	–	–	–	15,945
Total	1,494	4,925	21,935	29,677	4,391	89,839
2008						
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 [a, b]	55	552	–	–	–	14,103
District 6 permit [b]	186	882	–	–	–	10,345
Total	1,726	5,279	14,367	38,588	3,132	80,535
2009						
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 [a, b]	47	522	–	–	–	7,649
District 6 permit [b]	155	630	–	–	–	14,253
Total	1,495	4,220	17,090	23,549	4,296	66,837
2010						
Coastal District survey	207	410	118	0	0	118
District 1 survey	299	595	20	0	0	20
District 2 survey	284	494	27	0	104	131
District 3 survey	85	235	63	61	183	307
District 4 survey	379	990	6,111	2,551	595	9,257
District 5 survey	255	910	2,024	21,167	2,207	25,398
District 5 Permit [a, b]	59	432	–	–	–	13,707
District 6 Permit [b]	184	998	–	–	–	12,011
Total	1,752	5,064	8,363	23,779	3,089	60,949

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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
2011						
Coastal District survey	174	341	0	0	0	0
District 1 survey	264	502	85	0	0	85
District 2 survey	275	524	111	70	115	296
District 3 survey	112	280	528	9	0	537
District 4 survey	413	1,028	9,743	1,359	1,150	12,252
District 5 survey	272	1,282	6,798	32,224	1,156	40,178
District 5 Permit [a, b]	55	363	–	–	–	15,759
District 6 Permit [b]	162	1,033	–	–	–	15,140
Total	1,727	5,353	17,265	33,662	2,421	84,247
2012						
Coastal District survey	181	397	524	0	0	524
District 1 survey	279	582	90	43	22	155
District 2 survey	211	508	396	5	51	452
District 3 survey	86	303	2,553	5	6	2,564
District 4 survey	440	2,037	19,719	6,680	84	26,483
District 5 survey	243	917	4,772	30,569	2,409	37,750
District 5 Permit [a, b]	48	288	–	–	–	16,404
District 6 Permit [b]	167	1,267	–	–	–	14,566
Total	1,655	6,299	28,054	37,302	2,572	98,898
5-year average 2007 to 2011						
Coastal District survey	154	285	80	0	0	80
District 1 survey	265	520	389	23	12	423
District 2 survey	274	508	211	87	168	466
District 3 survey	97	270	208	77	57	342
District 4 survey	373	1,023	10,514	3,983	1,199	15,695
District 5 survey	250	988	4,403	25,682	2,030	32,115
District 5 permit [a, b]	54	487	–	–	–	13,822
District 6 permit [b]	172	887	–	–	–	13,539
Total	1,639	4,968	15,804	29,851	3,466	76,481

Note: Harvest data back to 1992 are presented in earlier years of this annual report (Busher et al. 2009).Beginning in 1993, the estimated number of salmon includes those retained from subsistence and commercial related harvests. Dashes indicate information was not collected.

[a] Permit totals do not include the community of Stevens Village.

[b] Does not include duplicate information from households with more than 1 permit.

Appendix B10.–Estimated and reported subsistence and personal use harvest of miscellaneous fish species, Yukon Area, 2002–2012.

	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	5 Year Average 2002–2006	5 Year Average 2007–2011
Survey estimates [a]													
Whitefish [b]	78,489	68,416	64,039	48,862	60,923	64,338	54,729	51,778	50,232	44,890	70,486	64,146	53,193
Northern pike	18,906	22,341	18,738	29,799	28,133	25,947	16,053	8,061	14,086	14,270	18,450	23,583	15,683
Sheefish	15,960	14,280	16,896	13,764	12,745	13,203	10,154	7,861	9,231	10,139	17,094	14,729	10,118
Survey reported													
Burbot	5,809	3,000	2,628	3,138	5,069	3,500	3,273	2,027	2,743	2,477	2,422	3,929	2,804
Arctic lamprey [c]	623	29,886	33,919	38,115	2,092	12,584	803	1,699	10,863	6,037	1,243	20,927	6,397
Tomcod	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	3,978	6,797	4,023	6,679	5,399
Arctic grayling	1,408	2,421	1,645	1,258	1,145	2,296	857	667	1,571	1,273	2,674	1,575	1,333
Longnose suckers	546	234	178	1,452	105	225	25	59	273	286	95	503	174
Arctic char	198	376	116	217	345	181	184	43	148	205	216	250	152
Alaska blackfish	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	68,873	87,064	62,731	260,614	89,065
Sockeye salmon	–	–	787	648	333	493	213	216	263	279	405	589	293
Herring [d]	–	–	–	–	–	–	–	–	–	–	10,449	–	–
Halibut [d]	–	–	–	–	–	–	–	–	–	–	21	–	–
Permit reported													
Whitefish [b]	2,856	5,508	4,402	3,671	3,399	3,328	3,402	4,039	3,040	4,851	3,966	3,967	3,732
Northern pike	791	1,266	606	641	1,008	2,094	1,678	733	257	319	825	862	1,016
Sheefish	66	203	97	155	80	83	111	76	121	103	147	120	99
Burbot	65	129	127	78	127	99	89	119	45	140	58	105	98
Arctic grayling	138	1,228	1,032	800	507	525	488	363	201	475	104	741	410
Longnose suckers	344	978	341	694	770	243	298	518	170	414	396	625	329
Yukon Area total													
Whitefish [b]	81,345	73,924	68,441	52,533	64,322	67,666	58,131	55,817	53,272	49,741	74,452	68,113	56,925
Northern pike	19,697	23,607	19,344	30,440	29,141	28,041	17,731	8,794	14,343	14,589	19,275	24,446	16,700
Sheefish	16,026	14,483	16,993	13,919	12,825	13,286	10,265	7,937	9,352	10,242	17,241	14,849	10,216
Burbot	5,874	3,129	2,755	3,216	5,196	3,599	3,362	2,146	2,788	2,617	2,480	4,034	2,902
Arctic lamprey	623	29,886	33,919	38,115	2,092	12,584	803	1,699	10,863	6,037	1,243	20,927	6,397
Tomcod	4,497	4,608	5,649	4,988	13,652	7,121	6,391	2,709	3,978	6,797	4,023	6,679	5,399
Arctic grayling	1,546	3,649	2,677	2,058	1,652	2,821	1,345	1,030	1,772	1,748	2,778	2,316	1,743
Longnose suckers	890	1,212	519	2,146	875	468	323	577	443	700	491	1,128	502
Arctic char	198	376	116	217	345	181	184	43	148	205	216	250	152
Alaska blackfish	432,967	161,703	229,833	259,874	218,695	131,712	110,356	47,320	68,873	87,064	62,731	260,614	89,065
Sockeye salmon	–	–	787	648	333	493	213	216	263	279	405	589	293

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Note: Dashes indicate information was not collected.

[a] Subsistence whitefish, pike, and sheefish harvests are estimated by the annual subsistence household survey using methods targeted for salmon harvest estimates.

[b] Whitefish includes various *Coregonus* species and round whitefish (*Prosopium cylindraceum*). Categories of large (greater than 4 pounds) and small (less than 4 pounds) whitefish are combined.

[c] Harvest of lamprey reported on surveys is from October to December of the previous year.

[d] In 2012 households in the Coastal District and District 1were asked about harvest of halibut and herring during the postseason survey. Herring harvest information was previously collected using questionnaires (Estensen et al. 2013). Household harvest reports of flounder or smelt was included in halibut or herring reported numbers.

Appendix B11.–Households responses assessing their success of subsistence salmon needs being met (in percent), by species, Yukon Area, 2007–2012.

			Chinook salmon				
			Total number of household responses [a]	Household responses Indicated ≤ 50% needs met		Household responses Indicated > 50% needs met	
Year	Total households	Households contacted		Responses	Percent	Responses	Percent
2007	2,353	1,086	914	422	46%	492	54%
2008	2,470	1,153	970	488	50%	482	50%
2009 [b]	2,366	1,036	618	457	74%	161	26%
2010 [b]	2,528	1,153	517	317	61%	200	39%
2011 [b]	2,568	1,094	718	388	54%	330	46%
2012 [b]	2,655	1,125	723	513	71%	210	29%
2007-2011 Avg	2,457	1,104	747	414	57%	333	43%

			Summer chum salmon				
			Total number of household responses [a]	Household responses Indicated ≤ 50% needs met		Household responses Indicated > 50% needs met	
Year	Total households	Households contacted		Responses	Percent	Responses	Percent
2007	2,353	1,086	706	299	42%	407	58%
2008	2,470	1,153	685	265	39%	420	61%
2009 [b]	2,366	1,036	382	228	60%	154	40%
2010 [b]	2,528	1,153	363	203	56%	160	44%
2011 [b]	2,568	1,094	436	157	36%	279	64%
2012 [b]	2,655	1,125	494	198	40%	296	60%
2007-2011 Avg	2,457	1,104	514	230	47%	284	53%

			Fall Chum salmon				
			Total number of household responses [a]	Household responses Indicated ≤ 50% needs met		Household responses Indicated > 50% needs met	
Year	Total households	Households contacted		Responses	Percent	Responses	Percent
2007	2,353	1,086	580	396	68%	184	32%
2008	2,470	1,153	470	289	61%	181	39%
2009 [b]	2,366	1,036	196	165	84%	31	16%
2010 [b]	2,528	1,153	133	100	75%	33	25%
2011 [b]	2,568	1,094	253	139	55%	114	45%
2012 [b]	2,655	1,125	275	176	64%	99	36%
2007-2011 Avg	2,457	1,104	326	218	69%	109	31%

			Coho salmon				
			Total number of household responses [a]	Household responses Indicated ≤ 50% needs met		Household responses Indicated > 50% needs met	
Year	Total households	Households contacted		Responses	Percent	Responses	Percent
2007	2,353	1,086	399	283	71%	116	29%
2008	2,470	1,153	272	204	75%	68	25%
2009 [b]	2,366	1,036	103	90	87%	13	13%
2010 [b]	2,528	1,153	85	56	66%	29	34%
2011 [b]	2,568	1,094	112	55	49%	57	51%
2012 [b]	2,655	1,125	114	79	69%	35	31%
2007-2011 Avg	2,457	1,104	194	138	70%	57	30%

Note: Estimates from 2003 to 2006 are included in Busher et al. 2009.

[a] Total number of households surveyed who answered this question.

[b] Beginning in 2009 the question was changed from asking households to give a percentage of needs met, to asking households how many salmon they usually harvest or need to receive to meet subsistence needs. Percentage of needs met was calculated from the response and the number of salmon harvested or received.

APPENDIX C. HISTORY OF REGULATORY CHANGES

Appendix C1.–Definitions and a brief history of regulatory changes made to the Yukon Area Alaskan subsistence and personal use salmon fisheries since 1960.

State of Alaska Statutes 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.

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

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

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

Customary trade

5 AAC 39.010. Retention of fish taken in a commercial fishery. (a) A person engaged in commercial fishing may retain finfish from lawfully taken commercial catch for that person's own use, including for the use as bait in a commercial fishery. Finfish retained under this section may not be sold or bartered.

5 AAC 93.350. General authorizations for use of salmon:

(a) Notwithstanding AS 16.05.831(a) and 5 AAC 93.310, and unless otherwise prohibited by law, under the authorization of this subsection a person may use salmon taken in a hatchery cost recovery fishery, or in a commercial, sport, personal use, or subsistence fishery for bait.

5 AAC 39.130. (c) (See regulation for full text) At the time of delivery, or as otherwise directed by the department, fish tickets must include the following:

(10) the number of fish of any species retained by a commercial fisherman for that person's own use as specified in 5 AAC 39.010.

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Brief history of regulatory changes:

1960

- Alaska Department of Fish and Game is given responsibility to manage all Alaska subsistence and commercial fisheries.
- Commercial fishing is open 6 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 by splitting the size of the existing 4 districts.
- 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.

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.

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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.

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. Qualifications were based on where one fished and no longer based on where one lived.
- Upper Yukon Area commercial periods established inseason 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 allowed 5 days/week once commercial season ends.
- Regulatory *Anvik River Chum Salmon Fishery Management Plan* established.

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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 and is based on where one fished and no longer based on where one lived.
- 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 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.

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
- Feeding of Chinook salmon to dogs:
    - In the Yukon River drainage, king salmon must be used primarily for human consumption and may not be targeted for dog food. Dried king salmon may not be used for dog food throughout the Yukon River drainage, except that whole fish that are unfit for human consumption, scraps, and fish under 16 inches in length may be fed to dogs. Whole king salmon caught incidentally during a subsistence chum salmon fishery in the following areas may also be fed to dogs:
        - After July 10, in the Koyukuk River drainage;
        - After August 10, in Subdistrict 5-D, upstream of Circle City.

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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 7 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 PM Thursdays and from 6:00 PM Fridays until 6:00 PM 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 PM Fridays until 12:00 noon Sundays and from 6:00 PM Mondays until 12:00 Wednesdays, unless altered by emergency order. This allows for possible 7 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 PM Sundays until 6:00 PM Tuesdays and from 6:00 PM Wednesdays until 6:00 PM Fridays.
- 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.

2005

- Under federal regulation *100.27 (i) (3) (XV) (C)* In the Yukon River mainstem, Subdistricts 4-B and 4-C with a Federal subsistence fishing permit, you may take Chinook salmon during the weekly subsistence fishing opening(s) by drift gillnets no more than 150 feet long and no more than 35 meshes deep, from June 10 through July 14.

2007

- 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 directed coho salmon openings.
    - End dates of plan in districts and subdistricts were adjusted.

2011

- Fishermen in all districts and subdistricts of the Yukon River Area, including the Coastal District, may not use gillnets larger than 7.5 inch mesh.

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2012

- During times of Chinook salmon conservation, commercial fishing for summer chum salmon may be opened by emergency order in Subdistrict 4-A using fish wheels only. Fishermen are required to be present and attend the fish wheel at all times while in operation and immediately return all Chinook salmon to the water alive.