Fishery Data Series No. 25-38

Subsistence and Personal Use Salmon Harvests in the Alaska Portion of the Yukon River Drainage, 2022

by

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August 2025

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

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ABSTRACT

This annual report contains estimates of subsistence and personal use salmon and nonsalmon fish 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 most communities, harvest information was collected through voluntary postseason household interviews, follow-up telephone interviews, postal questionnaires, and harvest calendars. Stratified random sampling techniques were used to select households to be surveyed. Due to the ongoing COVID-19 pandemic, surveys were not conducted in person. To boost survey response rates, all available households were contacted. In 2022, a total of 1,320 households were surveyed in 33 communities. Data from surveyed households were expanded to estimate the total harvest, including that of unsurveyed households. In road-accessible portions of the Yukon Area, harvest must be documented on a subsistence or personal use permit. In 2022, a total of 605 subsistence and personal use permits were issued, of which 97% were returned. Of these returned permits, 258 reported fishing. The total subsistence and personal use harvest throughout the Yukon Area was estimated to be 1,764 Chinook (*Oncorhynchus tshawytscha*), 6,760 summer chum (*O. keta*), 2,794 fall chum (*O. keta*), 1,088 coho (*O. kisutch*), and 8.926 pink (*O. gorbuscha*) salmon. The primary fishing gear types used were drift gillnets (4%), set gillnets (89%), fish wheels (1%), and dip nets and other gear types (6%). Approximately 2,258 households owned 5,555 dogs, and 129 households fed an estimated 1,015 whole chum and coho salmon to dogs.

Keywords: Chinook *Oncorhynchus tshawytscha*, chum *O. keta*, coho *O. kisutch*, and pink *O. gorbuscha* salmon, northern pike *Esox lucius*, inconnu *Stenodus leucichthys*, sheefish, whitefish *Coregonus* spp., harvest, personal use, subsistence, Tanana River, Yukon River

INTRODUCTION

The Yukon River is Alaska's largest river and the fifth largest drainage system in North America. Originating in British Columbia, Canada, within a mere 30 miles of the Gulf of Alaska, it stretches over 3,190 km (1,980 mi) through Yukon Territory, Canada, and Alaska, United States, before ultimately reaching the Bering Sea at the Yukon–Kuskokwim Delta. Oversight of Alaska subsistence, personal use, and commercial fisheries within the Yukon Area, encompassing all waters of the Yukon River drainage in Alaska and coastal waters from Point Romanof southward to the Naskonat Peninsula, falls under the purview of the Alaska Department of Fish and Game (ADF&G), Division of Commercial Fisheries. Insights into the bilateral management of Canadian-origin Yukon River salmon stocks and fisheries management in the Canadian section of the Yukon River drainage are available in the annual Yukon River Panel Joint Technical Committee (JTC) reports (e.g., JTC 2023).

Since 1961, ADF&G has gathered data on subsistence salmon harvests in the Alaska segment of the Yukon River drainage (Yukon Area 5 AAC 05.100). These annual estimates serve as a historical record, enabling observation of harvest trends over time. The documentation of subsistence salmon harvests is utilized alongside commercial, sport, and personal use harvest data, as well as escapement estimates from both the U.S. and Canada, to calculate the total annual run size in the Yukon Area (JTC 2023). This harvest and escapement data, combined with age composition information, are employed to construct brood tables. These brood tables estimate the productivity, or the number of returning offspring per spawner, for certain stocks, aiding in the formulation of forecasts and preseason outlooks for fisheries (e.g., JTC 2023).

The Yukon River drainage produces 5 species of Pacific salmon that contribute to subsistence and personal use harvests: Chinook salmon (*Oncorhynchus tshawytscha*), chum (*O. keta*), coho (*O. kisutch*), pink (*O. gorbuscha*), and sockeye (*O. nerka*) salmon. Subsistence and personal use harvests primarily consist of Chinook, chum, and coho salmon. The chum salmon return includes 2 temporally and genetically distinct stocks: summer chum and fall chum salmon. Chinook and summer chum salmon are the first to enter the Yukon River, peaking in June, followed by fall

chum (early August) and coho salmon (mid to late August). Pink salmon peak in mid-July and are more abundant in even-numbered years, typically being available for harvest only in the coastal, lower, and middle reaches of the Yukon River up to the community of Anvik (river mile 315). Sockeye salmon are present in small numbers in the Yukon River, with an average subsistence harvest of fewer than 400 fish per year (Jallen et al. 2017).

In addition to salmon, the Yukon River hosts numerous other fish species, including both resident and anadromous types. Some of these species, such as whitefish (*Coregonus* and *Prosopium cylindraceum*), inconnu (*Stenodus leucichthys*, commonly referred to as sheefish), burbot (*Lota lota*), northern pike (*Esox lucius*), Alaska blackfish (*Dallia pectoralis*), Arctic grayling (*Thymallus arcticus*), Arctic lamprey (*Lethenteron camtschaticum*), saffron cod (*Eleginus gracilis*, locally referred to as tomcod), and Pacific herring (*Clupea pallasii*), are significant for subsistence use.

Families in the Yukon Area have a longstanding tradition of harvesting salmon for subsistence purposes. Subsistence salmon fishing typically begins in late May and continues through early October, with fishing in May and October, dependent on river ice conditions. Extended family groups, representing 2 or more households, often collaborate in harvesting, processing, and preserving salmon for subsistence use. Fishing activities are frequently centered around fish camps or home communities within the drainage. Some households from tributary communities along the Yukon River, like Shageluk and Venetie, may operate or share fish camps along the mainstem Yukon River. Subsistence-caught salmon are commonly dried, smoked, canned, or frozen for human consumption, and those destined for dogs are usually dried or cribbed (i.e., whole fish air-frozen and stacked).

Subsistence and personal use fisheries in the Yukon Area typically employ drift gillnets, set gillnets, and fish wheels for salmon harvest. Set gillnets are used throughout the area, but drift gillnets are restricted from the mouth of the Yukon River to near Tanana (river mile 530). Alaska regulations for gear (5 AAC 01.220 and 5 AAC 77.717) were based on traditional practices. Although fish wheels were permitted for subsistence fishing throughout the drainage, they were predominantly used in the upper portion of the Yukon River, where driftwood availability, river conditions, and fishing locations are more favorable.

Estimates of subsistence and personal use harvests were obtained through a combination of voluntary harvest surveys and mandatory fishing permit reports. Roughly two-thirds of the Yukon Area lacks connection to the main Alaska road system. In these remote areas, voluntary household surveys were conducted in each community to estimate the subsistence harvest. Fishing permits for subsistence or personal use were obligatory in the remaining road accessible regions of the Yukon Area, including sections of the Koyukuk, Tanana, and upper Yukon Rivers (Figure 1). Permit holders were required to submit their harvest records annually.

Within the Fairbanks Nonsubsistence Area established in 1992 (Figure 2), personal use fishing permits and resident sport fish licenses were necessary for fishing. Nonsubsistence areas were defined as regions where subsistence was not a principal characteristic of the economy, culture, and way of life (Alaska Statute 16.05.258(c)). Since 1995, personal use fishing has been open in nonsubsistence areas to all Alaska residents, regardless of their place of residence. The Fairbanks Nonsubsistence Area personal use fishery imposes limits of 750 Chinook and 5,000 chum salmon until August 15, and 5,200 chum and coho salmon combined after August 16.

Alaska law prioritizes subsistence as the highest use of salmon, influencing fishery management decisions. Consequently, commercial, personal use, and sport harvests have lower priority than

subsistence fishing. In some parts of the Yukon Area, commercial fishing occurs alongside subsistence fishing, with many locals participating in both activities. A valid limited entry commercial fishing permit is required for commercial fisheries, but any Alaska resident can participate in subsistence salmon fisheries. Income generated from commercial fishing is often utilized by households to procure items associated with subsistence harvesting, such as fuel and fishing equipment. Salmon caught during subsistence openings cannot be legally bought or sold; however, commercially harvested salmon may be retained for subsistence use. In certain areas, subsistence fishing periods are separated from commercial fishing through closures before, during, and after commercial periods, but in other areas, subsistence and commercial fishing take place simultaneously.

Subsistence-caught salmon are primarily intended for human consumption, although a significant portion is fed to dogs. During the active fishing season, households throughout the Yukon Area feed salmon scraps to dogs. Harvesting salmon for sled dog consumption is prevalent in the Upper Yukon Area, where sled dogs are commonly used for recreation and transportation. This practice is less common in the Lower Yukon Area, resulting in fewer whole salmon being fed to dogs. Information collected about dogs in the household survey project has not been categorized by their use for transportation or as pets. Andersen and Scott (2010) found that salmon accounted for 25% to 92% of all fish species fed to sled dogs among 6 Yukon River communities. However, due to the high value of Chinook salmon for human consumption, a regulation was adopted in 2001 stipulating that only Chinook salmon under 16 inches in length or unfit for human consumption may be fed to dogs (5 AAC 01.240(d)). Most of the subsistence salmon used for dog food are summer chum salmon, dried, and fall chum and coho salmon, usually cribbed. The average number of salmon fed to dogs has declined since the late 1990s, attributable to various factors including poor chum salmon runs from 1998 to 2002, reduced carcasses from roe fisheries, increased costs of equipment needed for fish harvesting, and decreased reliance on dogs for transportation.

The 2022 subsistence salmon harvest survey and permit programs collected quantitative information on salmon harvests by species. The primary method for estimating subsistence harvest in the Yukon Area was the annual postseason salmon harvest survey. In addition to salmon harvests, the survey gathered data on gear types used, harvest distribution, nonsalmon species harvests, number of dogs, and number of salmon fed to dogs. Qualitative information regarding salmon health and quality, subsistence fishing success, and fishery concerns was also obtained from households. Over time, changes have been made to the survey project, including refinements to questions designed to estimate gear and mesh size-specific harvests of Chinook and summer chum salmon (see Methods: COVID-19 Method Modifications). This report presents estimates of subsistence and personal use salmon and nonsalmon fish harvests within the Alaska portion of the Yukon River drainage during the 2020 season.

STUDY AREA

The study area encompassed the Yukon Area, including all waters of Alaska within the Yukon River drainage and coastal waters extending from Point Romanof southward to the Naskonat Peninsula (Figure 1). Postseason harvest interviews were conducted in 33 communities located off the road system. Harvests from Yukon communities accessible by road (portions of District 5), upper Subdistrict 4-A in the Koyukuk River drainage, and all communities along the Tanana River (District 6) were documented through mandatory fishing permits and were therefore excluded from the household surveys (Figure 1).

Harvest results are summarized for the Coastal District, Lower Yukon Area, and Upper Yukon Area in Alaska. The Lower Yukon Area encompasses coastal waters and the Yukon River drainage from its mouth upstream to Old Paradise Village (river mile 301), including management Districts 1–3. The Upper Yukon Area includes the Yukon River drainage from Old Paradise Village upstream to the Canada border (river mile 1,224), encompassing management Districts 4–6. Additionally, the Upper Yukon Area includes 3 major tributaries where harvests occur: the Koyukuk, Tanana, and Porcupine Rivers. The Coastal District covers the remaining coastal waters of the Yukon Area not included in District 1 and includes the communities of Scammon Bay and Hooper Bay (Figure 1). Harvests from Coastal District communities may include fish not necessarily bound for the Yukon River (Kerkvliet 1986). The communities of Chevak and Arctic Village were not included in this harvest survey due to their distance from the Yukon River mainstem and their historically low salmon harvests. In this report, the term Yukon Area encompasses Districts 1–6 and the Coastal District.

OBJECTIVES

The objectives of the study were as follows:

1. Estimate and record the number of salmon harvested for subsistence and personal use by community, district, and subdistrict in the Yukon Area.
2. Document gear types used in subsistence and personal use fisheries and estimate the percentage of Chinook and summer chum salmon harvested by gear types in surveyed communities.
3. Document and estimate the number of dogs and salmon fed to dogs within Yukon Area communities.
4. Estimate and record the number of nonsalmon fish species harvested for subsistence and personal use purposes by community, district, and subdistrict.

METHODS

The overall number of salmon harvested in subsistence and personal use fisheries was estimated by utilizing data gathered from household surveys, permits for subsistence and personal use, test fishery information provided by research projects, harvest calendars (Appendix B1), and fish retained from commercial fishing activities and recorded on fish tickets. In surveyed localities, data were acquired from designated households and extrapolated to estimate the total community harvest. For communities falling within permit required areas, the total harvests reported on returned permits were aggregated, albeit without expansion to adjust for any harvest linked to unreturned permits (see Methods: Permit Program).

COVID-19 METHOD MODIFICATIONS

Due to the COVID-19 pandemic, significant concerns arose regarding the potential transmission of the virus to communities. Prior to the survey season, outreach was conducted with all 33 communities to ascertain the specific COVID-19 measures expected to be implemented during September and October. It was determined that the range of measures (such as testing, public masking, travel restrictions/bans, etc.) and the potential for surveyors to act as vectors between communities necessitated a shift to remote operations. Instead of traveling to communities for in-person surveys, surveyors conducted interviews via phone, mail, and online platforms.

Consequently, survey methods were adapted to accommodate anticipated low response rates for telephone (e.g., no answer, incorrect numbers, etc.) and mail (e.g., incorrect addresses, lack of response, etc.) surveys. To enhance response rates, attempts were made to survey all households in all harvest groups, regardless of their initial selection for sampling (see Methods: Household Subsistence Surveys: Survey Design). Each community was scheduled to be surveyed within a similar period and order as in previous years, based on cessation of fishing during the onset of winter.

Digital survey forms were used to provide additional options for data collection, enhance efficiency, and minimize data entry errors. ArcGIS Survey123 was used to create a comprehensive digital version of the survey, which surveyors accessed on computers and tablets. Additionally, a web-based survey was made available online to allow households the opportunity to self-administer the survey. Every household unreachable via telephone received a paper mail survey, along with a letter containing a link to the web survey and a unique survey ID for accessing it. Furthermore, the web survey link was advertised on the ADF&G Facebook page to promote its availability.

HOUSEHOLD SUBSISTENCE SURVEYS

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 consisted of 1 or more people living together in a dwelling and sharing the same phone number or mailing address. Multiple generations living in 1 dwelling were 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, or distributing resources, and they shared contact information.

Under the survey design, each household was stratified into 5 harvest groups based on the average combined total harvest of Chinook, summer chum, fall chum, and coho salmon during the most recent 2 surveys conducted within the previous 5 years. The pink salmon and sockeye salmon harvest was not considered when assigning households to a harvest group. When 2 recent years of harvest data were unavailable, the household's harvest group designation remained the same as the previous year. If subsistence restrictions were in place during the previous 5 years, a household may have been unable to harvest as many salmon as usual. Restrictions were in place during at least part of the 2016–2022 fishing seasons. As a result, 2022 households may have been moved from a lower harvest group to a higher harvest group but were not downgraded to a lower harvest group based on their 2016–2021 harvest data.

The harvest groups and survey coverages were as follows (i.e., percentages of households selected to be surveyed within the group):

1. Unknown: Unknown harvest level; survey coverage 100%.
2. Do not fish: Households that do not harvest salmon; survey coverage 100%.
3. Light harvester: Harvest of 1–100 total salmon; survey coverage 100%.
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%.

Pre-COVID-19 sampling included the same 5 harvest groups; however, the survey coverages for *do not fish* and *light harvester* groups were different (Padilla et al. 2024)

The household stratification was updated prior to the survey and was not re-stratified during or after the survey, except for the unknown harvest group. New households (e.g., moved into the community, formation of households due to marriage or independence) that were discovered prior to or during the survey were classified as unknown.

Survey Questionnaire

To ensure data comparability across years, the subsistence survey questions have generally remained consistent over time (Appendix B3). In 2022, the survey was conducted digitally using Survey123.

The total number of salmon harvested was determined by querying households about their group harvests, the harvest area, and the salmon retained. Starting in 2020, households were not directly asked whether salmon was retained from a commercial fishery. Instead, they were prompted to confirm all harvests, including salmon retained from commercial sources or fish intended for dog food, shared with other families, or lost. If a household reported a portion of their subsistence catch as lost, surveyors verified that these fish were included in the total harvest. If the fish were utilized as dog food, they were allocated to questions pertaining to dog food, even if the original intent differed. Households were also queried about their primary gear (i.e., the gear that caught the most fish) and whether they used a secondary gear type. If a household harvested Chinook or summer chum salmon, they were asked about the gear types and mesh size used for each species (Appendix B3).

To ascertain the distribution of salmon within a community and corroborate responses from related households, the survey included inquiries about group harvests and shared harvests. Additionally, households were asked about the number of salmon received from commercial, subsistence, or test fishery harvests from assessment projects, to validate the accuracy of harvest reports between recipients and donors. Salmon received from test fishery projects were documented to indicate that they were received by, but not harvested by, subsistence fishery participants.

Further demographic and clarifying questions were posed, including the number of people in the household, the number of dogs, and the harvest of nonsalmon species throughout the preceding 12 months. For instance, households reported harvesting Arctic lamprey during October–December of 2021 or sheefish in May 2022, during the survey interviews in September 2022. Responses regarding quantities of fish harvested in relation to the herring question were recorded as herring; however, this category encompassed misidentified species such as rainbow smelt (*Osmerus mordax*) or capelin (*Mallotus villosus*). Only households in coastal and lower river communities were questioned about harvesting herring roe on kelp. In 2022, subsistence fishing opportunities were delayed (Jallen 2022), and households were asked if they still intended to fish for salmon. If affirmative, surveyors made 3 attempts to contact households to ascertain whether additional harvests occurred, and surveys were updated accordingly.

Survey Implementation

Participation in survey interviews was voluntary, and confidentiality regarding household harvest information was strictly maintained throughout the process. The interviews were strategically scheduled, starting in the Coastal District and Lower Yukon Area in September, and moving upstream to Grayling, with subsequent interviews conducted in communities upstream of Grayling in October. This chronological sequence ensured comprehensive coverage of the salmon harvest

season (Figure 1). The interviews were primarily conducted by 2 ADF&G technicians to uphold consistency across all survey activities.

During community visits, household lists were updated to reflect any changes, including relocations, deaths, or the formation of new households. Local community members played a crucial role in assisting with this task. Moreover, additional sources such as cooperation with other agencies and the utilization of phone directories and online resources such as tribal and corporation websites were used to maintain and update these household lists. The 2022 lists were developed based on information collected in 2021, ensuring continuity and accuracy in the survey data.

Interviews were strategically timed for September and October, coinciding with the conclusion of salmon fishing activities. This timing facilitated the easy recall of harvest numbers by participants. Surveyors made attempts to contact all households via phone, making at least 3 attempts before resorting to mail surveys. These mail surveys contained concise versions of the household survey focused specifically on individual household harvests, thereby ensuring comprehensive data collection, even from households initially unreachable by phone.

Before conducting interviews, surveyors underwent comprehensive training in interviewing techniques and were briefed on current fishery issues to ensure they were well-prepared to engage effectively with household members. They were trained to ask questions consistently and create a cooperative atmosphere conducive to accurate information recall. Additionally, community residents employed by YRDFA (Yukon River Drainage Fisheries Association) were instrumental in updating household lists and community information documents, further enhancing the efficiency and accuracy of the survey process. In instances where these residents were unavailable, surveyors collaborated with local sources such as tribal administrators or school principals to gather contact information for household members.

Following the interviews, editing of digital survey data was conducted to ensure clarity and completeness, thereby guaranteeing the accuracy of the final dataset. Notably, when participants reported harvest amounts in nonstandard terms, a conversion sheet based on local measures was utilized to estimate the number of fish harvested accurately. Furthermore, follow-up calls were occasionally made for further clarification or to reconcile information among households that harvested or shared salmon, thereby enhancing data consistency and reliability.

DATA ANALYSIS AND ESTIMATION METHODS

Denote that:

i = individual household,

j = harvest group (j = 1 … 5),

k = community,

l = harvest location,

m = harvest gear, and

a = specific attributes.

Survey responses were denoted by:

y_{ijkl} = the number of fish (e.g., Chinook, chum, coho, pink, whitefish, sheefish, northern pike) harvested by sampled household (i) in harvest group (j) of community (k), at location (l),

y_{ijkm} = the number of Chinook or summer chum salmon harvested by sampled household (i) in harvest group (j) of community (k) with fishing gear (m),

y_{ijk} = response of sampled household (i) in harvest group (j) of community (k),

n_{jk} = the number of sampled households in harvest group (j) of community (k);

$n_{kj(a)}$ = the number of sampled households having a specific attribute (a) in harvest group (j) of community (k),

N_{jk} = the total number of households in harvest group (j) of community (k), and

N_k = the total number of households in surveyed community (k).

Estimates of Population and Harvests

The following equations were used to estimate populations (the number of people and dogs), harvests (the number of fish harvested by subsistence fisheries), and uses of salmon harvested (kept for household use, given away, or fed to dogs). In this method, total numbers for each community (Y_k) were estimated by expanding mean responses ($\bar{y}_{jk}$; e.g., the number of people or harvest) of sampled households at each harvest group with total number of households in each harvest group (N_{jk}), and summing across the harvest groups as:

$$\hat{Y}_k = \sum_{j=1}^{5} N_{jk}\bar{y}_{jk} \quad \text{where} \quad \bar{y}_{jk} = \frac{\sum_i y_{ijk}}{n_{jk}} . \tag{1}$$

A 95% confidence interval (95% CI) for the population and harvest were calculated as:

$$95\%\text{CI}_k = t_{(0.025, df=n_k-1)} \cdot \sqrt{\hat{V}(\hat{Y}_k)} \ ,$$

$$\text{where} \quad \hat{V}(\hat{Y}_k) = \sum_{j=1}^{5} N_{jk}^2 V(\bar{y}_{jk}) \quad \text{and} \quad V(\bar{y}_{jk}) = \left(\frac{N_{jk} - n_{jk}}{n_{jk}}\right) \frac{\sum_j \left(y_{ijk} - \bar{y}_{jk}\right)^2}{n_{jk}(n_{jk} - 1)} . \tag{2}$$

When responses of a harvest group(s) were not collected (e.g., no households were surveyed or all surveyed households declined to answer), response of the harvest group(s) of a community ($\bar{y}_{jk}$) was treated as missing. In this case, response of the missing harvest group was assumed to be an average of the rest of the harvest groups, so that the total response of the community ($\hat{Y}_k$) was calculated as:

$$\hat{Y}_k = \frac{N_k}{\sum_{j=1} N_{jk}} \sum_{j=1} N_{jk}\bar{y}_{jk} \ . \tag{3}$$

A 95% confidence interval (95% CI$_k$) for the total response of the community was calculated as:

$$95\%\mathrm{CI}_k = t_{(0.025,df=n_k-1)} \cdot \sqrt{\hat{V}(\hat{Y}_k)} \quad \text{where} \quad \hat{V}(\hat{Y}_k) = \left(\frac{N_k}{\sum_{j=1} N_{jk}} \right)^2 \sum_{j=1} N_{jk}^2 V_{jk}(\overline{y}_{jk}) \cdot \tag{4}$$

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

$$. \hat{Y} = \sum_{k=1} \hat{Y}_k \tag{5}$$

A 95% confidence interval (95% CI) for the surveywide total was calculated as:

$$95\%\mathrm{CI} = t_{(0.025,df=n-1)} \cdot \sqrt{\hat{V}(\hat{Y})} \quad \text{where} \quad \hat{V}(\hat{Y}) = \sum_{k=1} \hat{V}(\hat{Y}_k) \quad . \tag{6}$$

Harvest estimates by harvest group were not presented for reasons of confidentiality.

Estimates of the Number of Households with a Specific Attribute

Equations 7 and 8 were used to estimate the number of households with the following specific attributes (*a*): subsistence fished, owned dogs, or fed whole salmon to their dogs. In this method, the number of households in a community with the above attribute ($\hat{N}_{k(a)}$) was estimated by expanding the proportion of sampled households having the above attribute ($p_{jk(a)}$) with the total number of households in each harvest group and summing across the harvest groups.

$$\hat{N}_{k(a)} = \sum_{j=1}^{5} N_{jk} p_{jk(a)} \quad \text{where} \quad p_{jk(a)} = \frac{n_{jk(a)}}{n_{jk}} \quad . \tag{7}$$

A 95% confidence interval (95% CI$_k$) for the number of households with a specific attribute was calculated as:

$$95\%\mathrm{CI}_k = t_{(0.025,df=n-1)} \cdot \sqrt{\hat{V}(\hat{N}_{k(a)})} \quad \text{where} \quad \hat{V}(\hat{N}_{k(a)}) = \sum_{j=1}^{5} N_{jk}^2 V(p_{jk(a)}) \quad ,$$
$$V(p_{jk(a)}) = \left(\frac{N_{jk} - n_{jk}}{N_{jk}} \right) \left(\frac{p_{jk(a)}(1 - p_{jk(a)})}{n_{jk} - 1} \right). \tag{8}$$

Correction for the missing harvest groups and total number of households with each characteristic in the surveywide ($\hat{N}_{(s)}$) and its 95% confidence interval (95% CI) were calculated using Equations 3, 4, 5, and 6.

Estimates of Primary Gear Type Usage by Community

Estimates of primary gear type usage were calculated using information from a subset of households that had the attribute subsistence fished (*s*). The number of households that used a specific primary gear (e.g., gillnet, fish wheel) for subsistence fishing was estimated by expanding the proportion of sampled households that used a specific gear type (*m*) for subsistence fishing

($\hat{q}_{jkm(s)}$) with the proportion of households that subsistence fished ($p_{jk(s)}$) by Equation 7 and total households in each harvest group and summing across the harvest groups,

$$\hat{N}_{km(s)} = \sum_j N_{jk} p_{jk(s)} q_{jkm(s)} \quad \text{where} \quad q_{jkm(s)} = \frac{n_{jkm(s)}}{n_{jk(s)}}. \tag{9}$$

A 95% confidence interval (95% CI$_k$) for the number of households using a specific gear was estimated as:

$$95\%\text{CI}_k = t_{(0.025, df=n_k-1)} \cdot \sqrt{\hat{V}(\hat{N}_{km})}$$
$$\text{where} \quad \hat{V}(\hat{N}_{km(s)}) = \sum_{j=1}^{5} N_{jk}^2 V(p_{jkm(s)}). \tag{10}$$

Variance of proportion for households that subsistence fished was calculated following Goodman (1960):

$$V(p_{jkm(s)}) = (p_{jk(s)})^2 V(q_{jkm(s)}) + (q_{jkm(s)})^2 V(p_{jk(s)}) - V(q_{jkm}) V(p_{jk(s)})$$
$$\text{where } V(q_{jkm(s)}) = \frac{q_{jkm(s)} \cdot (1 - q_{jkm(s)})}{n_{jk(s)} - 1}. \tag{11}$$

Correction for the missing harvest groups and total number of households with each characteristic in the entire survey ($\hat{N}_{(s)}$) and its 95% confidence interval (95% CI) were calculated using Equations 3, 4, 5, and 6.

Estimates of Salmon Harvest by Gear Type or Location

The harvest of Chinook and summer chum salmon was further estimated by harvest gear or mesh size (e.g., 6-inch, 7.5-inch, fish wheel, etc.) and by fishing location (i.e., district, subdistricts, or river drainage where fish were caught). In these estimations, *l* and *m* are interchangeable depending on which is being estimated. The number of salmon harvested at each community ($\hat{Y}_{km}$) was estimated by expanding the proportion of salmon harvested by sampled households ($\hat{p}_{jkm}$) with each gear type or location (*m* or *l*) within a harvest group (*j*) with mean harvest ($\overline{y}_{jk}$) estimated in Equation 1 and total number of households in each harvest group (N_{jk}), and summing across the harvest groups:

$$\hat{Y}_{km} = \sum_{j=1}^{5} N_{jk} \overline{y}_{jkm}$$
$$\text{where} \quad \overline{y}_{jkm} = \overline{y}_{jk} p_{jkm} \;,\; p_{jkm} = \frac{\sum_i y_{ijkm}}{\sum_i \sum_m y_{ijkm}}. \tag{12}$$

A 95% confidence interval (95% CI$_k$) for the gear or location-specific Chinook and summer chum salmon harvest was estimated as:

$$95\%\text{CI}_k = t_{(0.025, df=n_k-1)} \cdot \sqrt{\hat{V}(\hat{Y}_{km})} \tag{13}$$

where $\hat{V}(\hat{Y}_{km}) = \sum_{j=1}^{5} N_{jk}^2 V(\overline{y}_{jkm})$.

Variance of mean harvest by gear type or location was calculated following Goodman (1960):

$$V(\overline{y}_{jkm}) = (\overline{y}_{jk})^2 V(p_{jkm}) + (p_{jkm})^2 V(\overline{y}_{jk}) - V(p_{jkm}) V(\overline{y}_{jk})$$

$$\text{where} \quad V(p_{jkm}) = \frac{p_{jkm} \cdot (1 - p_{jkm})}{\sum_i \sum_m y_{ijkm} - 1}. \tag{14}$$

Correction for the missing harvest groups and total number of households with each characteristic in the entire survey ($\hat{Y}_m$) and its 95% confidence interval (95% CI) were calculated using Equations 3, 4, 5, and 6. Harvests by harvest group were not presented for reasons of confidentiality.

Unexpanded Totals

The reported catches of Alaska blackfish, Arctic char, Arctic grayling, Arctic lamprey, burbot, Pacific herring, tomcod and saffron cod, and roe on kelp remained unexpanded due to restricted harvest data and project design constraints.

Confidentiality

The harvests from the communities of Huslia and Hughes, Allakaket, Alatna, and Bettles, Rampart and Stevens Village, Fort Yukon, and Birch Creek, as well as Circle and Central, were consolidated, partly to uphold the confidentiality of smaller communities. These communities were grouped based on their proximity and shared fishing areas. Combined harvests and confidence intervals were calculated using the equations outlined in Methods: Data Analysis and Estimation Methods.

SUBSISTENCE HARVEST CALENDARS

Subsistence harvest calendars were mailed to households in communities included in the Yukon Area surveys to gather daily harvest data, enhance the accuracy of harvest reporting, and generate insights into harvest timing. Additionally, calendars were mailed to select households outside of surveyed communities who had been previously identified as traveling to the survey area to engage in subsistence fishing. Calendars were distributed in May 2022 before the salmon fishing season commenced. All harvest groups were mailed a calendar, except those designated as nonfishing. The purpose was to enhance the accuracy of harvest reporting and offer insights into harvest timing.

Notifications and prizes were used to encourage calendar returns and ensure a comprehensive collection of harvest data from the surveyed communities. Before community surveys commenced in the fall, flyers were disseminated to post offices, stores, schools, or city offices, serving as reminders to have harvest calendars ready for pickup during the household interviews. Households that returned a completed 2022 harvest calendar by January 1, 2023, stood a chance to win 1 of 12 $50 cash prizes. This initiative aimed to ensure the comprehensive collection of harvest data from the surveyed communities.

PERMIT PROGRAM

Subsistence and personal use permits were available from ADF&G offices in Fairbanks, Delta Junction, and Tok. Permit applications were sent out with a postage-paid return envelope to households that had submitted their permits the previous year. Since 2018, permits have been accessible online through the ADF&G website (https://store.adfg.alaska.gov/).

Permit holders were obliged to log their daily fish catch on the permit and return it to ADF&G within 10 days of its expiration date. Harvests recorded on permits were tallied but not extrapolated, aiming for a return rate exceeding 95%. Various methods were employed to prompt permit returns, including advisory and radio announcements. Nonreporting households received up to 2 reminder letters, followed by contact via telephone or email if necessary. Subsequent follow-up calls were made to clarify harvest details, gear types, and harvest locations by species.

Households fishing in multiple permit areas were counted only once to determine the total number of fishing households. Additionally, households permitted to harvest northern pike in the Tolovana River were excluded from the total number of salmon fishing households unless they also harvested salmon. Stevens Village, traditionally surveyed, was included in the annual household harvest survey, and permit information supplemented the data collected from the survey.

Permit holders in the upper portion of Subdistrict 5-D were required to indicate their daily fishing location as above or below the sonar project near the community of Eagle. This distinction was vital for deducting harvests above the sonar from the sonar estimate to determine U.S./Canada border passage for Chinook and fall chum salmon (JTC 2022). Similarly, permits for the northern pike fishery in the Tolovana River drainage contain fishing locations to differentiate between fishing inside or outside of the Chatanika Harvest Area.

RESULTS

OVERALL ESTIMATION OF HARVEST

An estimated total of 1,764 Chinook, 6,760 summer chum, 2,794 fall chum, 1,088 coho, and 8,926 pink salmon were harvested for subsistence and personal use by 415 households in the Yukon Area (Table 1). These overall subsistence harvest totals included survey estimates, subsistence permits, donations from test fisheries, and funerary permits. The subsistence fishery accounted for 100% of the total harvest, with an estimated 21,332 salmon caught (Figure 3). No salmon were harvested in the personal use fishery in 2022.

Chinook salmon accounted for 8% of the total subsistence salmon harvest (excluding minor harvests of sockeye salmon). Summer chum accounted for 32% of the total, fall chum 13%, coho 5%, and 42% pink salmon (Figure 3).

OVERALL GEAR USAGE

The number of households that reported primary gear types used to harvest all salmon species consisted of 360 set gillnets (89%); 24 other gears including dip nets, beach seines, or hook and line (6%); 17 drift gillnets (4%); and 4 fish wheels (<1%; Table 2). Within the subset of surveyed communities, an estimated 465 (61%) subsistence-caught Chinook salmon were harvested by 4-inch gillnets; 137 (18%) by 6-inch gillnets, 116 (15%) by 7.5-inch gillnets, 45 (6%) by dip nets or beach seines, and 0 by fish wheels (Appendix A5; not including test fishery donations). Within the subset of surveyed communities, 4,599 (85%) of subsistence-caught summer chum salmon were

caught by 4-inch gillnets, and 535 (10%) were harvested by 6-inch gillnets; 250 (5%) by dip nets, beach seines, or other gear types; 11 (<1%) by 7.5-inch gillnets; and 0 (0%) by fish wheels (Appendix A6).

SALMON HARVEST FOR DOG FOOD

Households owned an estimated 5,555 dogs, and approximately 129 households reported feeding whole salmon to their dogs (Table 3). An estimated total of 1,015 summer chum, fall chum, and coho salmon were utilized for dog food by subsistence and personal use households combined (Table 3; Appendix C6). The number of salmon fed to dogs from surveyed communities does not include an estimated 3,823 pink salmon that were also fed to dogs (Table 3). The number of salmon fed to dogs represented that an estimated 3% of the salmon harvested in the Yukon Area were fed to dogs (summer chum, fall chum, and coho salmon).

SUBSISTENCE SURVEYS

All 2,544 households identified within the 33 Yukon Area communities were selected to be surveyed (Table 4). ADF&G Division of Commercial Fisheries surveyors surveyed all 33 communities between September 5 and November 4, 2022. Of the surveyed households, there were 57 households (4.3%) that traveled to the Yukon River to fish in or near surveyed communities but resided outside surveyed communities. In total, information was collected from 1,320 households (52% of the total identified households in the survey area; Table 4).

Approximately 57% of the *heavy harvester* households were surveyed, and 61% of the *medium harvester* households were successfully surveyed. Of the *light harvester* households, 50% were surveyed. Of the *unknown* households, 43% were surveyed. Of the households identified as *do not fish*, 48% were surveyed. A portion of *do not fish* households are surveyed each year to accurately represent all types of households in the sample and to maintain accuracy in the household database and strata (Appendix A7). Based on responses to the survey questions, an estimated 370 households participated in the subsistence fishery in 2022 (Table 4).

Harvest by Location

Households did not always harvest fish in the district where their community was located. Therefore, the estimated total from a community's district did not always equal the total from the harvest district (Table 5). Households make this choice to take advantage of harvest opportunities for different salmon stocks or legal gear types. The greatest number of Chinook salmon were harvested in District 1 (44%). Most summer chum (47%) and pink salmon (35%) were harvested in the Coastal District. Most fall chum (43%) and coho salmon (38%) were harvested in District 1. The largest tributary harvests of all salmon species combined were from the Teedriinjik (497 salmon) and Koyukuk (287 salmon) Rivers. Harvests from Subdistricts 4-C and 5-A are thought to include primarily salmon oriented to the Tanana River (Buklis 1981; Spearman and Miller 1997); however, there was no salmon harvest in these areas in 2022 (Table 5). Salmon harvests by location were estimated with error (Appendix A8).

Test Fishery Donations and Funerary Permit Harvest

In addition to subsistence fishing, some households were able to receive salmon through other means. A total of 11 surveyed communities (Scammon Bay, Alakanuk, Emmonak, Kotlik, Mountain Village, Pilot Station, Russian Mission, Tanana, Steven's Village/Rampart, Eagle, and Nenana/Healy) received salmon from test fishery projects, which were added to community

harvest estimates (Appendix A2). Salmon caught in test fisheries made up 28% of the total Chinook salmon subsistence harvest. Summer chum made up 19%, fall chum 42%, and coho salmon 23% of test fisheries subsistence harvest from surveyed communities (Appendix A2 and Appendices C1–C5).

Funerary permits were issued to 6 communities (Emmonak, St. Mary's, Grayling, Galena, Huslia/Hughes, and Beaver) to provide for salmon harvests used in ceremonial potlaches. These salmon harvests were added to their respective communities. In 2022, a total of 25 Chinook, 35 summer chum, 5 fall chum, and 1 coho salmon were harvested by permit holders (Appendix A3).

Nonsalmon Fish Species

The estimated subsistence harvest of other fish species in Yukon Area surveyed communities included 5,055 broad whitefish, 8,324 humpback whitefish, 15,905 small whitefish, 28,834 northern pike, and 8,738 sheefish (Table 6). The majority of estimated sheefish (36%) were harvested by District 1 households, and small whitefish (26%) were harvested by District 4. In previous reports, broad and humpback whitefish were considered large whitefish; this report breaks out harvest by species. The majority of the estimated humpback whitefish (36%) were harvested by District 2 households. Small whitefish are least cisco, Bering cisco, and round whitefish (Table 6).

Unexpanded harvest estimates were produced for 3 resident, 2 marine, and 1 anadromous nonsalmon species. Resident freshwater species such as Alaska blackfish, burbot, and Arctic grayling were widely distributed, but they were not harvested throughout the drainage (Table 7). Marine species such as Pacific herring and tomcod were only available to communities located near the coast, such as the Coastal District and Districts 1–2. In the Coastal District and District 1, 5 communities also reported the harvest of 549 pounds of herring roe. Households also reported harvesting 12 Arctic lamprey for subsistence purposes (Table 7).

Survey Comments

At the end of each survey, households had the opportunity to comment on any topic related to fishing they felt was important. The most numerous comment category (405 responses) was related to dissatisfaction with management, such as a desire to have longer subsistence openings. The second largest group of comments (107 responses) related to dissatisfaction with the salmon runs. The third largest group of comments (49 responses) stated personal circumstances that affected an individual household's fishing effort, such as health problems, work schedules, and time conflicts with other activities. Comments discussing satisfaction with management actions (29 responses) were the fourth largest group. Issues related to equipment, such as boats or nets (24 responses), was the fifth largest group of comments. Expenses were mentioned by 15 households. Diseases found in harvested fish, such as tumors, pus, and tapeworms, were mentioned by 17 households. River conditions, such as high water, drifting wood, and poor weather, affected several households (21 responses). Some households (2 responses) were concerned about conserving salmon, and supported ADF&G conservation measures, or mentioned their efforts to conserve.

PERMITS

Subsistence Permits

The 2022 subsistence permit harvest information was based on permits returned by July 13, 2023 (Tables 8–10). Subsistence fishing permits were required in upper Subdistrict 4-A (Koyukuk River

drainage), a portion of District 5 (Yukon River), and District 6 (Tanana River; Figure 1). Of the 569 subsistence permits issued, 552 (97%) were returned, and 254 reported subsistence fishing for salmon and nonsalmon (Table 8). Total subsistence harvests of 339 Chinook, 15 summer chum, 202 fall chum, and 86 coho salmon were reported (Table 9). The total harvest of other fish species included: 3,326 whitefish, 67 sheefish, 95 burbot, 3,917 northern pike, 87 longnose suckers, and 37 Arctic grayling (Table 9; Appendices C7–C11).

Personal Use Permits

In 2022, all 36 personal use permits issued were returned (Table 8). A total of 5 households were issued both subsistence and personal use permits, and 4 households were issued both types of personal use permits (salmon and nonsalmon). Harvest was reported on 4 personal use fishing permits, 1 of which were issued for salmon and 3 were issued for nonsalmon species. Personal use permit holders reported no salmon harvest. The total harvest of nonsalmon fish species included 38 whitefish and 44 longnose suckers (Table 9; Appendix C12).

HARVEST TIMING FROM CALENDAR AND PERMIT DATA

Subsistence calendar and permits, where harvests were recorded by day, provide timing of harvest within portions of the Yukon Area. In 2022, households returned 94 subsistence harvest calendars (approximately 5% of the total distributed). A total of 18 calendars (19% of those returned) documented salmon harvest information. The remaining households that returned harvest calendars in 2022 indicated they did not fish or returned a blank calendar (81%). In 2022, combined permit and calendar data suggested very few people fished, with most reported harvest from late May through early October (Figure 4).

DISCUSSION

In 2022, fishing restrictions were imposed on subsistence fisheries in the Yukon Area to protect runs of Chinook, summer chum, and fall chum salmon for escapement. These restrictions affected fishing time and gear usage (Gleason et al. 2023; Jallen 2022). The overall subsistence salmon harvest in 2022 (including Chinook, chum, coho, and pink salmon) was approximately 76% below the 2017–2021 average of 137,951 and 86% below the 2012–2016 average (Figure 3). These averages represent years with fishing restrictions, including the closures during the Chinook salmon run from 2012–2021 (Figures 3 and 5). Specifically, the 2022 Chinook salmon harvest in the Yukon River decreased by 92% compared to the 2017–2021 average and was 84% below the 2012–2016 average (Figure 5; Appendix C1). Furthermore, harvests decreased for summer chum (82%), fall chum (92%), and coho salmon (66%) harvests in 2022, when compared to their individual 2017–2021 averages (Figure 5; Appendices C2–C4). Additionally, the total pink salmon harvest in 2022 was above the 2012–2020 even-year average (Figure 5; Appendix C5).

AMOUNTS NECESSARY FOR SUBSISTENCE

The amounts necessary for subsistence (ANS) ranges for the Yukon Area are as follows: Chinook (45,500–66,704), summer chum (83,500–142,192), fall chum (89,500–167,900), coho (20,500–51,980), and pink salmon (2,100–9,700). These ANS ranges were established in 2001 for Chinook, summer and fall chum, and coho salmon based on subsistence harvest data from 1990 to 1999 (excluding 1993 and 1998 for fall season restrictions; ADF&G 2001). The ANS range for pink salmon was established in 2013 (Brown and Jallen 2012). ANS was developed as an index to help evaluate if a reasonable opportunity was provided in the subsistence fishery. In 2022, Chinook,

summer chum, fall chum, and coho salmon harvests fell below their respective ranges of ANS (Figure 5). Pink salmon met ANS in 2022 (Figure 5).

The subsistence harvest has traditionally included a significant portion of salmon, primarily used as dog food. The failure to meet ANS levels may be attributed in part to changes in the utilization of subsistence salmon harvests and a decrease in the number of dogs and salmon used for this purpose. Prior to the establishment of ANS ranges, the 1992–2021 average number of salmon fed to dogs was 190,612 chum and coho salmon (Borba and Hamner 2001). In comparison, the 2017–2021 average number of salmon fed to dogs was 38,831 chum and coho salmon (Appendix C6). Fluctuations in the number of salmon fed to dogs were probably influenced by owners providing alternative food sources to fluctuating dog populations, such as nonsalmon fish species, meat, or commercial dog food. The absence of large commercial salmon roe fisheries and the emergence of commercial fishery participants operating as catcher–sellers in District 6 have further affected the variation in levels and patterns for summer and fall chum and coho salmon harvest. These changes may warrant a review of ANS requirements (Brown and Jallen 2012).

NONSALMON FISH SPECIES

The harvest estimates of nonsalmon fish species derived from this project provide valuable insights, despite the likelihood of underestimation in the reported values. The data collected on nonsalmon species have contributed to documenting the locations of harvests and identifying the species that hold significance for communities in the Yukon Area. The combined total harvest of nonsalmon fish species from surveys and permits in 2022 was 15% lower than the 2017–2021 average harvest (Appendix C13).

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TABLES AND FIGURES

Table 1.–Subsistence and personal use salmon harvest estimates, including commercially related, test fishery, and funerary permit harvests provided for subsistence use, Yukon Area, 2022.

Community	Number of fishing households [a]	Estimated salmon harvest				
		Chinook	Summer chum	Fall chum	Coho	Pink
Hooper Bay	65	55	1,999	130	94	1,596
Scammon Bay [b]	55	116	1,142	106	197	1,297
Coastal District total	120	171	3,141	236	291	2,893
Nunam Iqua	8	106	187	14	31	612
Alakanuk [b]	54	87	402	165	88	392
Emmonak [b, c]	35	208	1,811	948	178	823
Kotlik	14	0	60	81	4	671
District 1 subtotal	111	401	2,460	1,208	301	2,498
Mountain Village [b]	24	35	135	143	85	684
Pitkas Point	8	11	18	0	5	67
St. Mary's [c]	31	59	97	0	0	676
Pilot Station [b]	3	251	453	369	70	0
Marshall [b, c]	11	56	137	0	112	20
District 2 subtotal	77	412	840	512	272	1,447
Russian Mission [b]	10	10	50	16	26	2,088
Holy Cross	ND	ND	ND	ND	ND	ND
Shageluk	6	5	9	9	4	0
Other District 3 [d]	0	0	0	0	0	0
District 3 subtotal	16	15	59	25	30	2,088
Lower Yukon River total	204	828	3,359	1,745	603	6,033
Anvik	3	0	0	12	24	0
Grayling [c]	ND	ND	ND	ND	ND	ND
Kaltag	ND	ND	ND	ND	ND	ND
Nulato	ND	ND	ND	ND	ND	ND
Koyukuk	ND	ND	ND	ND	ND	ND
Galena [c]	ND	ND	ND	ND	ND	ND
Ruby	ND	ND	ND	ND	ND	ND
Other District 4 [e]	8	75	56	12	0	0
District 4 Yukon River subtotal	11	75	56	24	24	0
Huslia/ Hughes [c]	9	0	146	62	84	0
Allakaket/Alatna/Bettles	0	0	0	0	0	0
Koyukuk River subtotal	9	0	146	62	84	0
District 4 subtotal	20	75	202	86	108	0

-continued-

Table 1.–Page 2 of 2.

Community	Number of fishing households [a]	Estimated salmon harvest				
		Chinook	Summer chum	Fall chum	Coho	Pink
Tanana [b]	11	196	3	23	0	0
Rampart/Stevens Village [b, f, g]	5	86	0	15	12	0
Fairbanks (FNSB) [f, h]	17	277	15	132	15	0
Beaver [c]	0	0	0	0	0	0
Fort Yukon/Birch Creek	5	4	4	0	0	0
Circle/Central [f]	1	0	0	0	0	0
Eagle [b, f]	3	52	0	41	0	0
Other District 5 [f, i]	5	73	0	0	0	0
District 5 Yukon River subtotal	47	688	22	211	27	0
Venetie/Chalkyitsik	4	0	0	497	0	0
Teedriinjik/Draanjik Rivers subtotal	4	0	0	497	0	0
District 5 subtotal	51	688	22	708	27	0
Manley [f]	ND	ND	ND	ND	ND	ND
Minto [f]	ND	ND	ND	ND	ND	ND
Nenana/Healy [f]	1	0	36	12	47	0
Fairbanks (FNSB) [f, h]	5	1	0	0	0	0
Other District 6 [f, j]	14	1	0	7	12	0
District 6 Tanana River subtotal	20	2	36	19	59	0
Upper Yukon River total	91	765	260	813	194	0
Alaska, Yukon Area total	415	1,764	6,760	2,794	1,088	8,926
AK, Yukon Area percentages of the total	NA	8.3%	31.7%	13.1%	5.1%	41.8%

Note: NA indicates not applicable. ND indicates no data available due to confidentiality.

[a] Did not include 209 households that fished with a Tolovana River northern pike permit, or 5 households that fished in more than 1 permit area.

[b] Included salmon distributed from test fishery projects (added to community estimates).

[c] Included salmon harvested under a funerary permit (added to community estimates).

[d] Other District 3 included residents of Holy Cross that fished in District 3. Combined due to confidentiality of low number of households fished.

[e] Other District 4 included residents of Grayling, Kaltag, Nulato, Koyukuk, Galena, and Ruby that fished in District 4. Combined due to confidentiality of low number of households fished.

[f] Permit data from permits returned by July 13, 2023.

[g] Included the community of Rampart permit data because it was historically a survey community.

[h] Fairbanks North Star Borough (FNSB) included Fairbanks, Ester, North Pole, Salcha, and Two Rivers. Did not include 1 household(s) that fished more than 1 permit.

[i] Other District 5 included residents of Manley, Wasilla, and Wiseman residents that fished in a permit area of District 5. Did not include 1 household(s) that fished more than 1 permit.

[j] Other District 6 included residents of Anchorage, Delta Junction, Lake Minchumina, Tok and Wasilla residents that fished in District 6. Did not include 1 household(s) that fished more than 1 permit. Manley and Minto combined with Other District 6 due to low number of households fished, combined to preserve confidentiality.

Table 2.–Subsistence and personal use salmon gear estimates, Yukon Area, 2022.

	Primary gear used [a]			
	Gillnets		Fish	
Community	Set	Drift	wheel	Other
Hooper Bay	63	2	0	0
Scammon Bay	51	0	0	3
Coastal District total	114	2	0	3
Nunam Iqua	6	0	0	2
Alakanuk	48	0	0	6
Emmonak	32	0	0	2
Kotlik	13	0	0	0
District 1 subtotal	99	0	0	10
Mountain Village	22	0	0	2
Pitkas Point	7	0	0	2
St. Mary's	17	14	0	0
Pilot Station	1	0	0	2
Marshall	10	1	0	0
District 2 subtotal	57	15	0	6
Russian Mission	10	0	0	0
Holy Cross	ND	ND	ND	ND
Shageluk	6	0	0	0
Other District 3 [b]	0	0	0	0
District 3 subtotal	16	0	0	0
Lower Yukon River total	172	15	0	16
Anvik	3	0	0	0
Grayling	ND	ND	ND	ND
Kaltag	ND	ND	ND	ND
Nulato	ND	ND	ND	ND
Koyukuk	ND	ND	ND	ND
Galena	ND	ND	ND	ND
Ruby	ND	ND	ND	ND
Other District 4 [c]	0	0	0	2
District 4 Yukon River subtotal	3	0	0	2
Huslia/ Hughes	9	0	0	0
Allakaket/Alatna/Bettles	0	0	0	0
Koyukuk River subtotal	9	0	0	0
District 4 subtotal	12	0	0	2

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Community	Primary gear used [a]			
	Gillnets		Fish wheel	Other
	Set	Drift		
Tanana	11	0	0	0
Rampart/Stevens Village [d, e]	5	0	0	0
Fairbanks (FNSB) [d, f]	17	0	0	0
Beaver	0	0	0	0
Fort Yukon/Birch Creek	5	0	0	0
Circle/Central [d]	0	0	1	0
Eagle [d]	1	0	2	0
Other District 5 [d, g]	3	0	0	0
District 5 Yukon River subtotal	42	0	3	0
Venetie/Chalkyitsik	4	0	0	0
Teedriinjik/Draanjik Rivers subtotal	4	0	0	0
District 5 subtotal	46	0	3	0
Manley [d]	ND	ND	ND	ND
Minto [d]	ND	ND	ND	ND
Nenana/Healy [d]	0	0	1	0
Fairbanks (FNSB) [d, f]	4	0	0	1
Other District 6 [d, h]	12	0	0	2
District 6 Tanana River subtotal	16	0	1	3
Upper Yukon River total	74	0	4	5
Alaska, Yukon Area total	360	17	4	24
AK, Yukon Area percentages of the total	89%	4%	1%	6%

Note: ND = data not available.

[a] Primary gear was the gear type used to harvest the largest number of salmon by each household. Other gear types included dip nets, fyke nets, jigging, spear, and beach seines. Discrepancies between gear and household totals were due to estimate rounding.

[b] Other District 3 included residents of Holy Cross that fished in District 3. Combined due to confidentiality of low number of households fished.

[c] Other District 4 included residents of Grayling, Kaltag, Nulato, Koyukuk, Galena, and Ruby that fished in District 4. Combined due to confidentiality of low number of households fished.

[d] Permit data from permits returned by July 13, 2023.

[e] Included the community of Rampart permit data because it was historically a survey community.

[f] Fairbanks North Star Borough (FNSB) included Fairbanks, North Pole, Salcha and Two Rivers residents.

[g] Other District 5 included Manley, Wasilla, and Wiseman residents that fished in a permit area of District 5. Did not include 1 household(s) that fished more than 1 permit.

[h] Other District 6 included Anchorage, Delta Junction, Lake Minchumina, Tok and Wasilla residents that fished in District 6. Did not include 1 household(s) that fished more than 1 permit. Manley and Minto are combined with District 6 due to low number of households fished, combined to preserve confidentiality.

Table 3.–Harvest of salmon for dogs from surveys and permits by community of residence, Yukon Area, 2022.

	Number of dogs		Households feeding salmon to dogs		Number salmon fed to dogs						
					Summer chum		Fall chum		Coho		
Community	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total
Hooper Bay	405	71	2	1	0	0	0	0	0	0	0
Scammon Bay	154	50	3	0	0	0	0	0	22	25	22
Nunam Iqua	33	8	1	0	0	0	0	0	0	0	0
Alakanuk	242	46	8	1	0	0	0	0	0	0	0
Emmonak	332	48	7	1	0	0	25	39	0	0	25
Kotlik	212	47	12	3	0	0	0	0	0	0	0
Mountain Village	217	41	0	0	0	0	0	0	0	0	0
Pitkas Point	53	16	0	0	0	0	0	0	0	0	0
St. Mary’s	171	28	0	0	0	0	0	0	0	0	0
Pilot Station	212	33	0	0	0	0	0	0	0	0	0
Marshall	250	63	6	3	0	0	0	0	21	32	21
Russian Mission	222	174	4	2	0	0	0	0	0	0	0
Holy Cross	48	16	0	0	0	0	0	0	0	0	0
Shageluk	103	46	2	1	7	10	0	0	0	0	7
Anvik	58	15	4	2	0	0	11	17	0	0	11
Grayling	91	27	0	0	0	0	0	0	0	0	0
Kaltag	75	64	0	0	0	0	0	0	0	0	0
Nulato	117	46	0	0	0	0	0	0	0	0	0
Koyukuk	55	42	0	0	0	0	0	0	0	0	0
Galena	176	26	0	0	0	0	0	0	0	0	0
Ruby	60	16	0	0	0	0	0	0	0	0	0
Huslia/Hughes	348	111	3	3	107	175	43	70	64	105	214
Allakaket/Alatna/Bettles	168	91	0	0	0	0	0	0	0	0	0

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Table 3.–Page 2 of 2.

Community	Number of dogs		Households feeding salmon to dogs		Number salmon fed to dogs						
					Summer chum		Fall chum		Coho		
	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total
Tanana	132	54	9	3	3	6	3	6	0	0	6
Stevens Village/Rampart [a]	35	8	2	0	0	0	0	0	0	0	0
Beaver	74	54	0	0	0	0	0	0	0	0	0
Fort Yukon/Birch Creek	441	124	6	7	0	0	0	0	0	0	0
Venetie/Chalkyitsik	361	38	14	6	0	0	546	635	0	0	546
Survey total	4,845	311	83	11	117	166	628	614	107	107	852
Subsistence/personal use permits											
Fairbanks (FNSB) [b]	141	NA	9	NA	NA	NA	NA	NA	NA	NA	137
Circle/Central	53	NA	2	NA	NA	NA	NA	NA	NA	NA	0
Eagle	108	NA	7	NA	NA	NA	NA	NA	NA	NA	20
Other District 5 [c]	19	NA	3	NA	NA	NA	NA	NA	NA	NA	0
District 5 permit subtotal	321	NA	21	NA	NA	NA	NA	NA	NA	NA	157
Manley	14	NA	2	NA	NA	NA	NA	NA	NA	NA	0
Nenana/Healy	11	NA	6	NA	NA	NA	NA	NA	NA	NA	0
Fairbanks (FNSB) [b]	287	NA	7	NA	NA	NA	NA	NA	NA	NA	0
Other District 6 [c]	67	NA	9	NA	NA	NA	NA	NA	NA	NA	6
District 6 permit subtotal	389	NA	25	NA	NA	NA	NA	NA	NA	NA	6
Total survey and permit	5,555	NA	129	NA	NA	NA	NA	NA	NA	NA	1,015

Note: Information from permits returned as of July 13, 2023. Does not include pink salmon fed to dogs. NA = not applicable. Information about salmon fed to dogs by species was not collected on permits.

[a] Rampart permit data added to Stevens Village survey data for reasons of confidentiality. Total salmon fed to dogs included Rampart permit data.

[b] Fairbanks North Star Borough (FNSB) may include Fairbanks, Ester, North Pole, Salcha, and Two Rivers.

[c] Households from other communities included Anchorage, Auke Bay, Chicken, Delta Junction, Eagle, Eagle River, Fort Yukon, Haines, Joint Base Elmendorf-Richardson, Lake Minchumina, Nome, Northway, Palmer, Steward, Tok, and Wasilla who were issued a permit.

Table 4.–Estimated total number of households, fished households, and people in surveyed communities, including community and district totals, Yukon Area, 2022.

	Total households				Total fished			Total people		
Community	*N*	*S*	*n*	*%S*	*n*	Est total	CI 95%	*np*	Est total	CI 95%
Hooper Bay	235	235	96	41	91	65	6	92	1083	114
Scammon Bay	114	114	74	65	64	55	3	72	549	66
Coastal District	349	349	170	49	155	120	6	164	1,632	131
Nunam Iqua	37	37	29	78	27	8	1	29	173	15
Alakanuk	143	143	76	53	75	54	2	75	669	54
Emmonak	197	197	118	60	114	35	2	112	804	55
Kotlik	122	122	57	47	50	14	3	50	559	77
District 1	499	499	280	56	266	111	4	266	2,205	108
Mountain Village	155	155	82	53	79	24	1	79	683	65
Pitkas Point	23	23	18	78	18	8	1	18	89	10
St. Mary's	129	129	62	48	56	31	2	58	482	60
Pilot Station	128	128	78	61	74	3	1	74	588	51
Marshall	94	94	50	53	49	11	1	49	409	44
District 2	529	529	290	55	276	77	3	278	2,252	110
Russian Mission	71	71	40	56	39	10	1	40	395	41
Holy Cross	51	51	29	57	25	0	0	26	104	21
Shageluk	29	29	16	55	13	6	2	15	76	23
District 3	151	151	85	56	77	16	2	81	574	50
Anvik	25	25	23	92	23	3	0	23	58	2
Grayling	49	49	24	49	22	2	1	23	134	30
Kaltag	48	48	20	42	20	2	1	20	126	28
Nulato	76	76	36	47	33	0	0	33	212	27
Koyukuk	38	38	17	45	15	2	1	14	98	29
Galena	127	127	70	55	66	2	0	68	355	35
Ruby	43	43	27	63	26	0	0	25	77	10
Huslia	76	76	33	43	25	3	3	26	261	64
Hughes	28	28	9	32	6	6	8	6	66	27
Allakaket	47	47	19	40	15	0	0	19	161	45
Alatna	9	9	3	33	1	0	0	1	9	0
Bettles	17	17	11	65	10	0	0	10	32	10
District 4	583	583	292	50	262	20	14	268	1,589	102

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	Total households				Total fished			Total people		
Community	*N*	*S*	*n*	*%S*	*n*	Est total	CI 95%	*np*	Est total	CI 95%
Tanana	87	87	48	55	45	11	2	46	171	29
Stevens Village	19	19	10	53	5	4	4	8	23	7
Birch Creek	13	13	7	54	5	0	0	6	19	5
Beaver	29	29	16	55	16	2	1	16	66	11
Fort Yukon	189	189	78	41	73	5	2	72	407	57
Venetie	70	70	32	46	30	4	1	31	185	39
Chalkyitsik	26	26	12	46	9	0	0	9	58	28
District 5	433	433	203	47	183	26	5	188	930	78
Survey totals	2,544	2,544	1,320	52	1,219	370	12	1,245	9,182	244

Note: The following notations were used in the above table: *N* = the total number of households, *S* = the number of households selected, *n* = the number of households contacted, and %*S* = the percent of the selected households that were contacted in each harvest group in surveyed communities. In most communities a smaller number of households provided information about the number of people (*np*) in their households. Estimated total households that fished, and number of people included a 95% confidence interval (CI 95%).

Table 5.–Estimated subsistence harvest of salmon species, not including test fishery catches, by fishing location in surveyed districts, Yukon Area, 2022.

		Harvest districts/subdistricts [a]													Harvest river drainages					
												5D								Total by district
Species	District of residence	Coastal	1	2	3	4A	4B	4C	5A	5B	5C	down	up	6	Innoko	Koyukuk	Teedriinjik	Porcupine	Draanjik	of residence
Chinook	Coastal	101	69	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	170
	1	0	290	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	290
	2	0	3	199	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	202
	3	0	0	0	10	0	0	0	0	0	0	0	0	0	5	0	0	0	0	15
	4	0	0	0	0	32	25	0	0	0	0	0	0	0	0	0	0	0	0	57
	5	0	0	0	0	0	0	0	0	43	0	49	4	0	0	0	0	0	0	96
Survey totals		101	362	199	10	32	25	0	0	43	0	49	4	0	5	0	0	0	0	830
Summer chum	Coastal	2,536	599	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3,135
	1	0	1,649	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,649
	2	0	14	390	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	404
	3	0	0	0	50	0	0	0	0	0	0	0	0	0	9	0	0	0	0	59
	4	0	0	0	0	0	36	0	0	0	0	0	0	0	0	141	0	0	0	177
	5	0	0	0	0	0	0	0	0	3	0	4	0	0	0	0	0	0	0	7
Survey totals		2,536	2,262	390	50	0	36	0	0	3	0	4	0	0	9	141	0	0	0	5,431
Fall chum	Coastal	193	42	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	235
	1	4	585	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	589
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	9
	4	0	0	0	0	25	0	0	0	0	0	0	0	0	0	62	0	0	0	87
	5	0	0	0	0	0	0	0	0	23	0	5	0	0	0	0	497	0	0	525
Survey totals		197	627	0	0	25	0	0	0	23	0	5	0	0	9	62	497	0	0	1,445

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Species	District of residence	Harvest districts/subdistricts [a]													Harvest river drainages					Total by district of residence
												5D								
		Coastal	1	2	3	4A	4B	4C	5A	5B	5C	down	up	6	Innoko	Koyukuk	Teedriinjik	Porcupine	Draanjik	
Coho	Coastal	240	51	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	291
	1	4	248	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	252
	2	0	0	123	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123
	3	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	4
	4	0	0	0	0	24	0	0	0	0	0	0	0	0	0	84	0	0	0	108
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey totals		244	299	123	0	28	0	0	0	0	0	0	0	0	0	84	0	0	0	778
Pink	Coastal	2,539	354	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,893
	1	536	1,930	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,466
	2	0	107	1,338	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1,445
	3	0	0	0	2,088	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2,088
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey totals		3,075	2,391	1,338	2,088	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8,892

Note: Totals may not add in both directions due to estimate decimal rounding.

[a] Harvest near Fort Yukon was divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine and Yukon Rivers.

Table 6.–Estimated subsistence harvest of whitefish, northern pike, and sheefish by surveyed communities, Yukon Area, 2022.

	Broad whitefish		Humpback whitefish		Small whitefish		Northern pike		Sheefish	
Community	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%	Est total	CI 95%
Hooper Bay	142	144	30	50	2,251	1,082	838	696	166	239
Scammon Bay	389	189	391	150	1,492	522	1,241	285	23	19
Coastal District	531	236	421	156	3,743	1,192	2,079	745	189	238
Nunam Iqua	128	83	171	74	234	115	255	141	375	112
Alakanuk	712	224	982	814	1,423	1,294	1,095	443	854	253
Emmonak	119	177	454	199	967	503	1,409	436	1,380	842
Kotlik	94	101	9	15	1,202	1,174	1,473	903	552	408
District 1	1,053	309	1,616	831	3,826	1,790	4,232	1,084	3,161	964
Mountain Village	30	36	653	372	181	112	611	211	258	91
Pitkas Point	88	138	95	47	22	34	102	78	55	35
St. Mary's	281	190	869	421	0	0	907	513	310	170
Pilot Station	4	5	499	214	32	30	323	127	298	139
Marshall	599	694	921	663	145	158	1,241	596	597	677
District 2	1,002	711	3,037	877	380	193	3,184	811	1,518	700
Russian Mission	63	79	144	147	2,470	3,693	9,192	14,055	2,623	4,023
Holy Cross	75	128	18	28	0	0	114	72	33	51
Shageluk	94	74	284	303	107	85	2,220	2,243	146	168
District 3	232	160	446	314	2,577	3,607	11,526	13,900	2,802	3,939
Anvik	3	4	165	55	0	0	66	36	46	17
Grayling	0	0	0	0	0	0	10	9	51	57
Kaltag	0	0	0	0	0	0	0	0	16	26
Nulato	101	147	209	170	0	0	2	3	246	179
Koyukuk	0	0	0	0	0	0	24	42	14	24
Galena	0	0	47	65	47	65	0	0	81	79
Ruby	0	0	0	0	0	0	2	3	9	7
Huslia/Hughes	1,433	2,176	1,345	2,176	4,024	6,500	7,207	10,797	234	235
Allakaket/Alatna/Bettles	0	0	88	98	0	0	47	2	40	42
District 4	1,537	2,086	1,854	2,087	4,071	6,230	7,358	10,398	737	305

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Community	Broad whitefish Est total	Broad whitefish CI 95%	Humpback whitefish Est total	Humpback whitefish CI 95%	Small whitefish Est total	Small whitefish CI 95%	Northern pike Est total	Northern pike CI 95%	Sheefish Est total	Sheefish CI 95%
Tanana	700	1,030	690	714	1,300	2,058	146	137	134	152
Stevens Village/Rampart	0	0	0	0	8	15	66	73	0	0
Beaver	0	0	0	0	0	0	0	0	0	0
Fort Yukon/Birch Creek	0	0	241	263	0	0	181	156	188	113
Venetie/Chalkyitsik	0	0	19	30	0	0	62	103	9	15
District 5	700	1,008	950	746	1,308	2,013	455	237	331	187
Survey totals	5,055	2,449	8,324	2,537	15,905	7,723	28,834	17,225	8,738	4,069

Note: Estimates included 95% confidence interval (CI 95%). Confidence intervals were based on survey estimates and do not include test fishery catch. In previous reports, broad and humpback whitefish were considered large whitefish. Small whitefish include least cisco, Bering cisco, and round whitefish.

Table 7.–Reported subsistence harvest of nonsalmon fish species, by surveyed communities, Yukon Area, 2022.

Community	Alaska blackfish	Arctic grayling	Arctic lamprey	Burbot	Pacific herring	Tomcod
Hooper Bay [a]	3,102	0	0	2	940	2,312
Scammon Bay [a]	6,095	0	0	31	4,717	183
Coastal District	9,197	0	0	33	5,657	2,495
Nunam Iqua	400	0	0	122	0	63
Alakanuk [a]	560	0	12	11	46	70
Emmonak [a]	6,654	0	0	52	15	30
Kotlik [a]	50	0	0	37	0	0
District 1	7,664	0	12	222	61	163
Mountain Village	560	4	0	35	0	0
Pitkas Point	434	8	0	12	0	0
St. Mary's	0	5	0	16	0	0
Pilot Station	3,540	0	0	28	0	0
Marshall	1,400	0	0	25	0	0
District 2	5,934	17	0	116	0	0
Russian Mission	280	0	0	500	0	0
Holy Cross	0	0	0	0	0	0
Shageluk	0	0	0	2	0	0
District 3	280	0	0	502	0	0
Anvik	0	0	0	1	0	0
Grayling	0	0	0	0	0	0
Kaltag	0	51	0	0	0	0
Nulato	0	274	0	0	0	0
Koyukuk	0	0	0	0	0	0
Galena	90	0	0	30	0	0
Ruby	0	6	0	0	0	0
Huslia	0	5	0	2	0	0
Hughes	0	5	0	0	0	0
District 4	90	341	0	33	0	0
Tanana	0	0	0	4	0	0
Stevens Village/Rampart	0	0	0	0	0	0
Beaver	0	0	0	0	0	0
Fort Yukon/Birch Creek	0	0	0	52	0	0
Venetie/Chalkyitsik	0	81	0	3	0	0
District 5	0	81	0	59	0	0
Survey totals	23,165	439	12	965	5,718	2,658

[a] A total of 14 households from 5 communities reported harvesting 549 pounds of herring roe.

Table 8.–Number of permits issued, returned, and fished listed by permit area, Yukon Area, 2022.

Permit fishing area	Permit [a] Type	Issued [b]	Returned	Percent returned	Location	Number of permits fished [c]
Koyukuk Middle and South Fork Rivers	SF	8	7	88%	NA	1
Yukon River Rampart Area	SR	22	21	95%	NA	3
Yukon River near Haul Road Bridge [d]	SY	53	50	94%	NA	16
Yukon River near Circle and Eagle	SE	34	33	97%	Below sonar	3
					Above sonar	4
Tanana River Subdistrict 6-A	SA	12	12	100%	NA	1
Tanana River Subdistrict 6-B	SB	37	35	95%	NA	6
Tanana River Upstream of Subdistrict 6-C	SU	43	42	98%	NA	10
Kantishna River Subdistrict 6-A	SK	11	8	73%	NA	1
Tolovana River Pike Subdistrict 6-B	ST	349	344	99%	CHA[e]	205
					Non-CHA	4
Subsistence permit subtotals		569	552	97%		254

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Table 8.–Page 2 of 2.

Personal use permit fishing area	Permit [a] Type	Issued [b]	Returned	Percent returned	Location	Number of permits fished [c]
Tanana River salmon Subdistrict 6-C	PC	24	24	100%	NA	1
Tanana River whitefish upstream of Subdistrict 6-C	PW	12	12	100%	NA	3
Personal use permit subtotals		36	36	100%	NA	4
All permit totals		605	588	97%	NA	258

Note: The first letter of a permit type refers to the fishery type (S = subsistence or P = personal use), the second letter refers to a particular fishing area or targeted species (F = Middle and South Forks of Koyukuk River, R = Yukon River near Rampart, Y = Yukon River near Haul Road Bridge, E = Yukon River near Circle and Eagle, A = Tanana River Subdistrict 6-A, B = Tanana River Subdistrict 6-B, U = Tanana River upstream of Subdistrict 6-C, K = Kantishna River, T = Tolovana River northern pike permit, C = Tanana River Subdistrict 6-C, W = Tanana River whitefish or sucker permit. CHA means Chatanika Harvest Area. NA means not applicable. Permit area descriptions are officially described in Alaska State statutes. Did not include salmon retained from test fishery projects.

[a] Permit data from permits returned by July 13, 2023.

[b] Included 32 households that were issued permits for more than 1 area.

[c] Included 5 households that fished in 2 different permit areas.

[d] Included permits issued to residents of Stevens Village.

[e] Harvest occurred in the upper portion of the river between the mainstem Yukon River sonar project located near the community of Eagle and the U.S./Canada border.

Table 9.–Reported subsistence and personal use fish harvested under the authority of a permit, listed by permit area, Yukon Area, 2022.

Permit fishing area	Permit [a] type	Location	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Koyukuk Middle and South Fork Rivers	SF	NA	0	0	0	0	1	0	5	0	12	14
Yukon River Rampart Area	SR	NA	7	0	10	12	40	4	0	0	1	0
Yukon River near Haul Road Bridge [b]	SY	NA	327	15	132	15	437	21	14	198	2	0
Yukon River near	SE	Below sonar	1	0	0	0	1	2	0	0	0	0
Circle and Eagle [c]		Above sonar	2	0	41	0	36	29	1	7	0	6
Tanana River Subdistrict 6-A	SA	NA	0	0	0	0	3	0	0	15	0	0
Tanana River Subdistrict 6-B	SB	NA	0	0	18	59	97	2	1	12	34	1
Tanana River Upstream of Subdistrict 6-C	SU	NA	0	0	0	0	1,314	0	41	252	1	16
Kantishna River Subdistrict 6-A	SK	NA	1	0	1	0	1,284	0	30	134	37	0
Tolovana River Pike	ST	CHA	0	0	0	0	0	0	0	1,419	0	0
Subdistrict 6-B		Non-CHA	1	0	0	0	113	9	3	1,880	0	0
Subsistence permit subtotals			339	15	202	86	3,326	67	95	3,917	87	37

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Table 9.–Page 2 of 2.

Personal use permit fishing area	Permit [a] type	Location	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Tanana River salmon Subdistrict 6-C	PC	NA	0	0	0	0	0	0	0	0	0	0
Tanana River whitefish upstream of Subdistrict 6-C	PW	NA	0	0	0	0	38	0	0	0	44	0
Personal use permit subtotals			0	0	0	0	38	0	0	0	44	0
All permit totals			339	15	202	86	3,364	67	95	3,917	131	37

Note: The first letter of a permit type refers to the fishery type (S = subsistence or P = personal use), the second letter refers to a particular fishing area or targeted species (F = Middle and South Forks of Koyukuk River, R = Yukon River near Rampart, Y = Yukon River near Haul Road Bridge, E = Yukon River near Circle and Eagle, A = Tanana River Subdistrict 6-A, B = Tanana River Subdistrict 6-B, U = Tanana River upstream of Subdistrict 6-C, K = Kantishna River, T = Tolovana River northern pike permit, C = Tanana River Subdistrict 6-C, W = Tanana River whitefish or sucker permit. CHA means Chatanika Harvest Area. NA indicates not applicable. Permit area descriptions are officially described in Alaska State statutes. Did not include salmon retained from test fishery projects.

[a] Permit data from permits returned by July 13, 2023.

[b] Included salmon reported on permits issued to residents of Stevens Village.

[c] Harvest occurred in the upper portion of the river between the mainstem Yukon River sonar project located near the community of Eagle and the U.S./Canada border.

Table 10.–Estimated subsistence and personal use harvest of salmon species by fishing location in permit districts, Yukon Area, 2022.

		Harvest subdistrict/districts						
			5D [a]			River drainages		
Species	Community district	5C	Below sonar	Above sonar	6	Tolovana	Kantishna	Total by district
Chinook	5	334	1	2	0	0	0	337
	6	0	0	0	0	1	1	2
	Permit totals	334	1	2	0	1	1	339
Summer chum	5	15	0	0	0	0	0	15
	6	0	0	0	0	0	0	0
	Permit totals	15	0	0	0	0	0	15
Fall chum	5	142	0	41	0	0	0	183
	6	0	0	0	18	0	1	19
	Permit totals	142	0	41	18	0	1	202
Coho	5	27	0	0	0	0	0	27
	6	0	0	0	59	0	0	59
	Permit totals	27	0	0	59	0	0	86

[a] Harvest subdistrict was divided downstream (5D-Below sonar) or upstream (5D-Above sonar) of the Yukon River sonar near the community of Eagle.

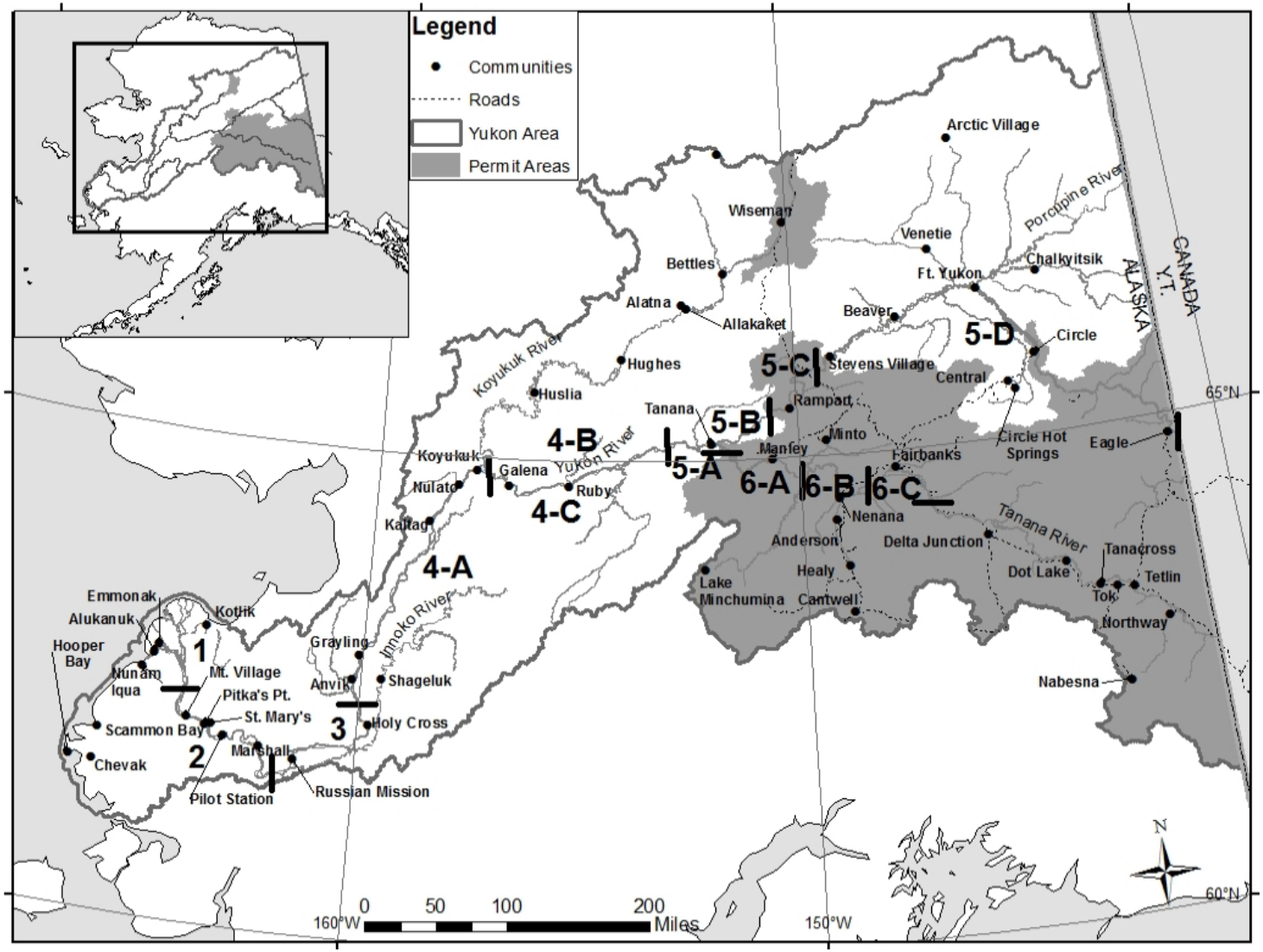

Figure 1.–Map of Alaska portion of the Yukon River drainage showing communities and subsistence and personal use permit areas.

Note: Subsistence and personal use permit areas are shaded.

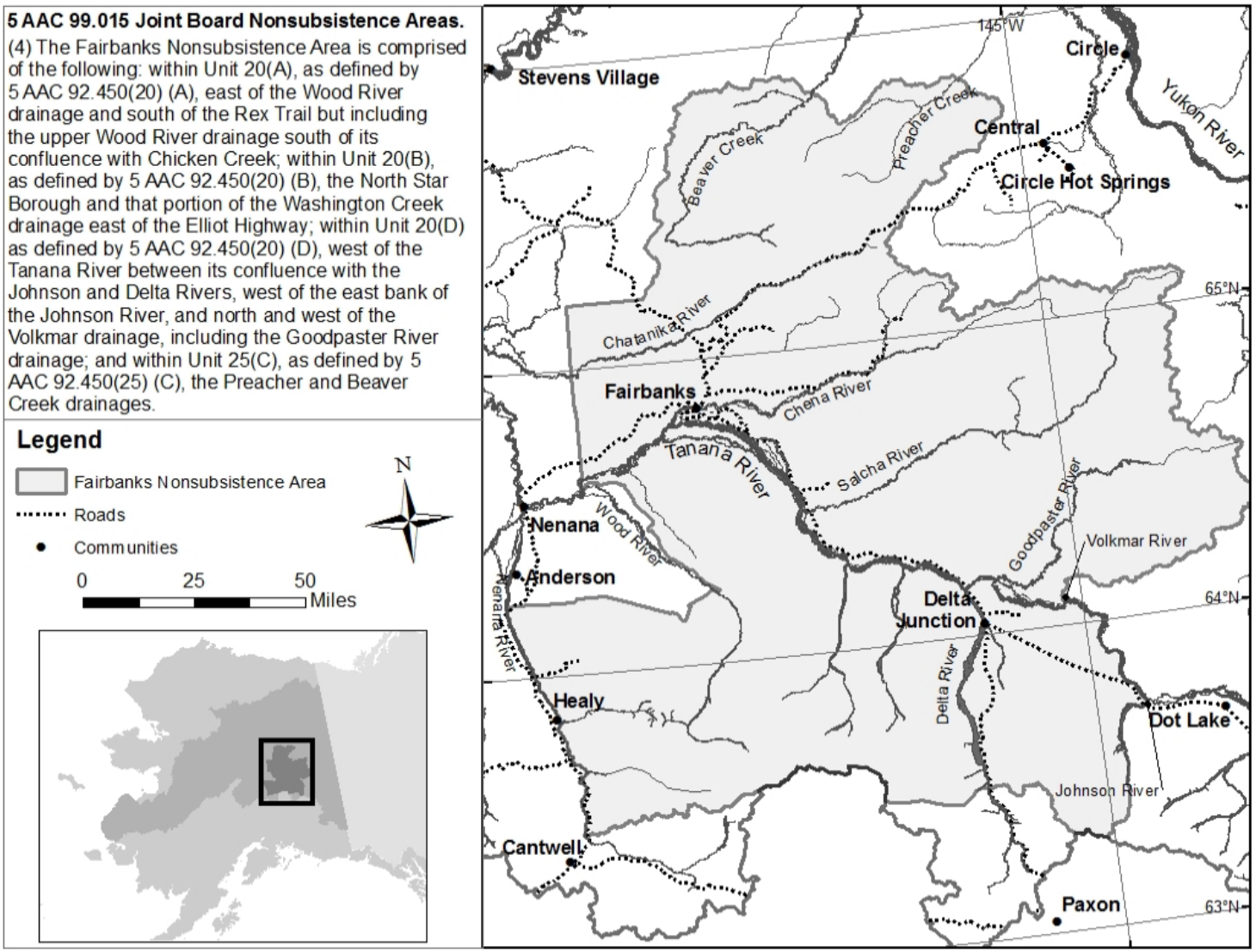

Figure 2.–Map of the Fairbanks Nonsubsistence Area.

Note: Households must have a personal use permit and sport fish license to fish in the Nonsubsistence Area.

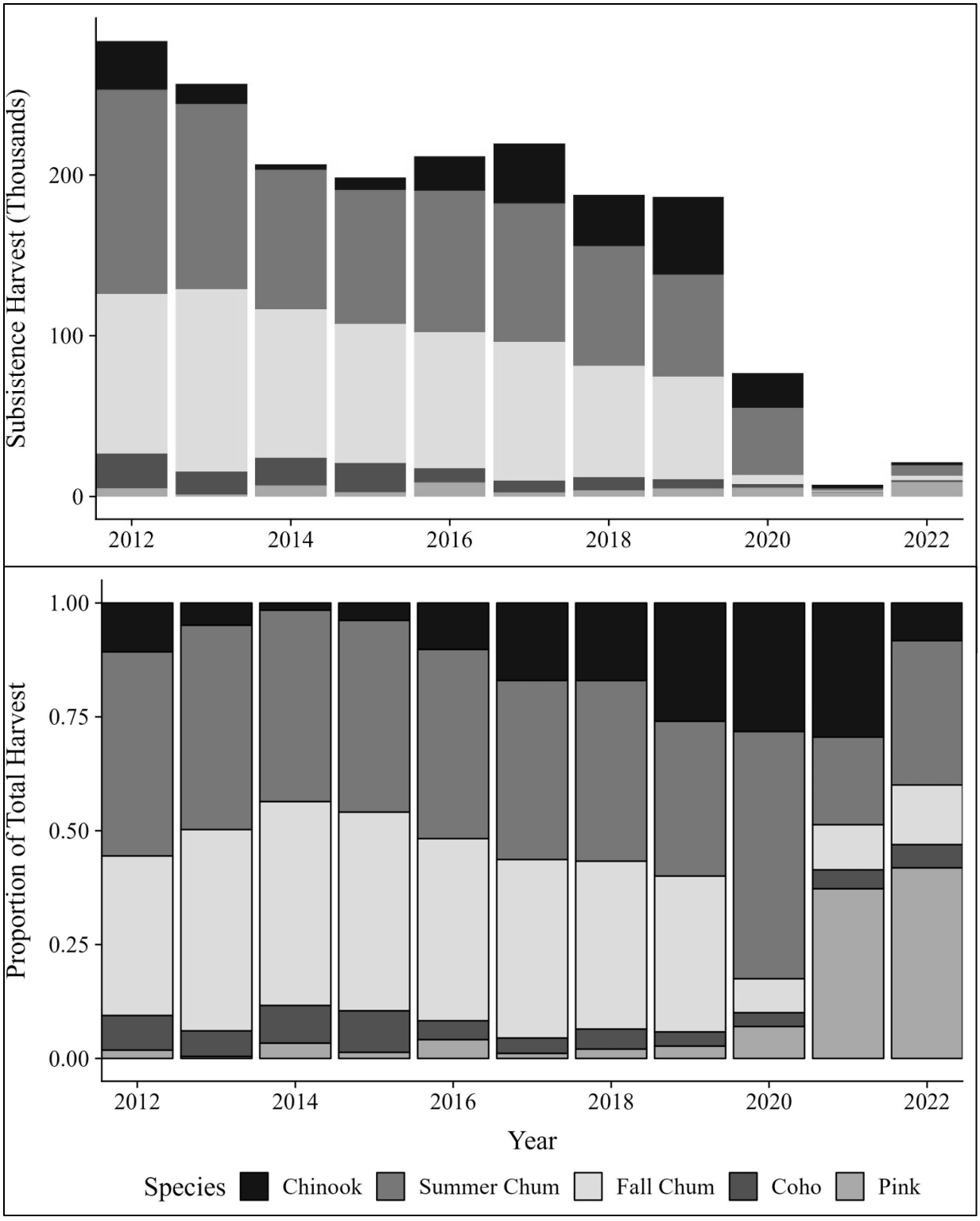

Figure 3.–Estimated total subsistence salmon harvest by species, Yukon Area, 2012–2022.

Note: Harvest of salmon species by number (top) and proportion (bottom). Totals include survey, permit, test fishery and retained from commercial. Does not include salmon caught in the personal use fishery.

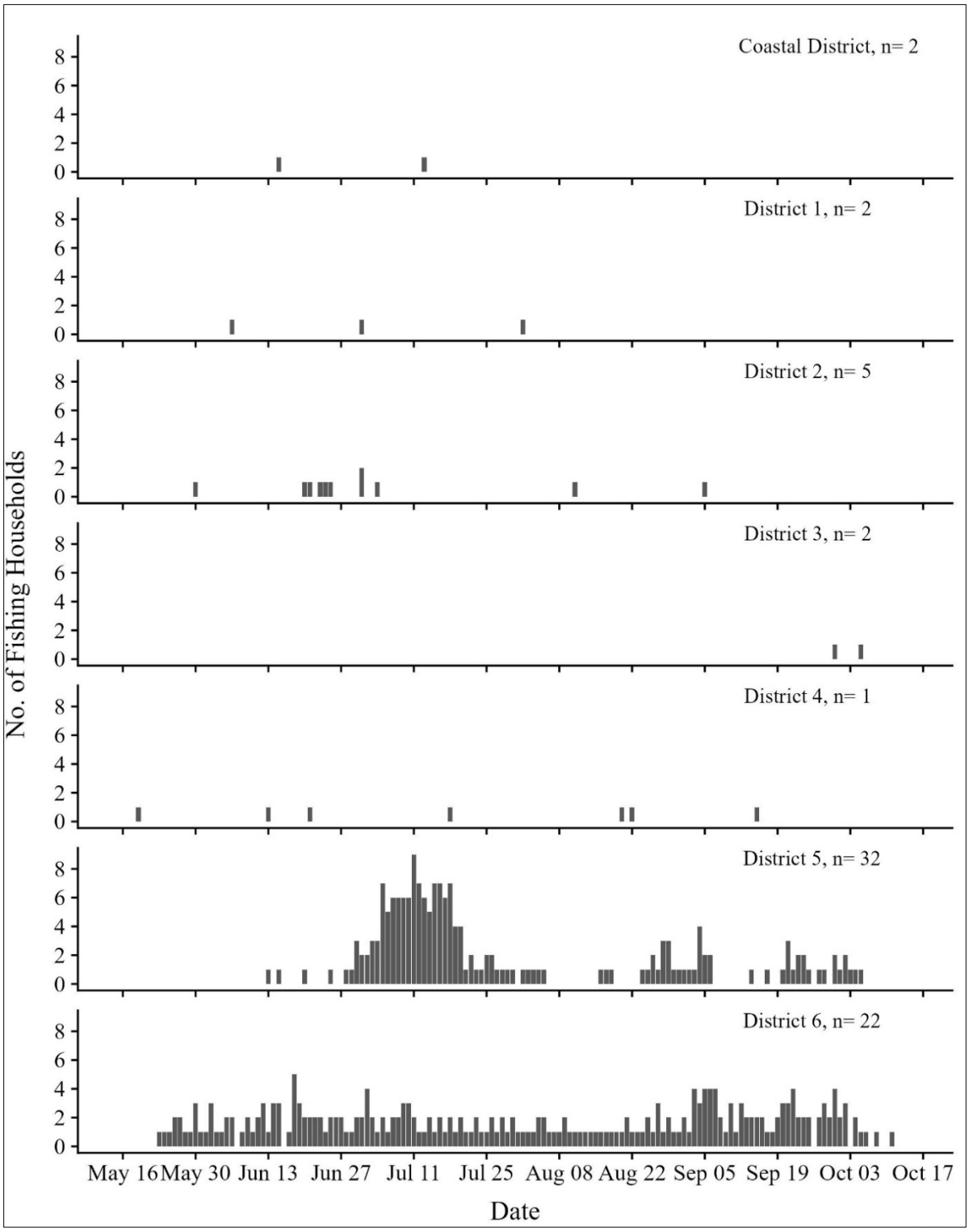

Figure 4.–Number of fishing households reporting harvest on calendars or permits by day and by district, 2022.

Note: Bars represent the number of fishing households in each district that recorded harvest by day on calendars and permits. Does not include permit types primarily issued in District 6 for the harvest of nonsalmon species such as whitefish or northern pike.

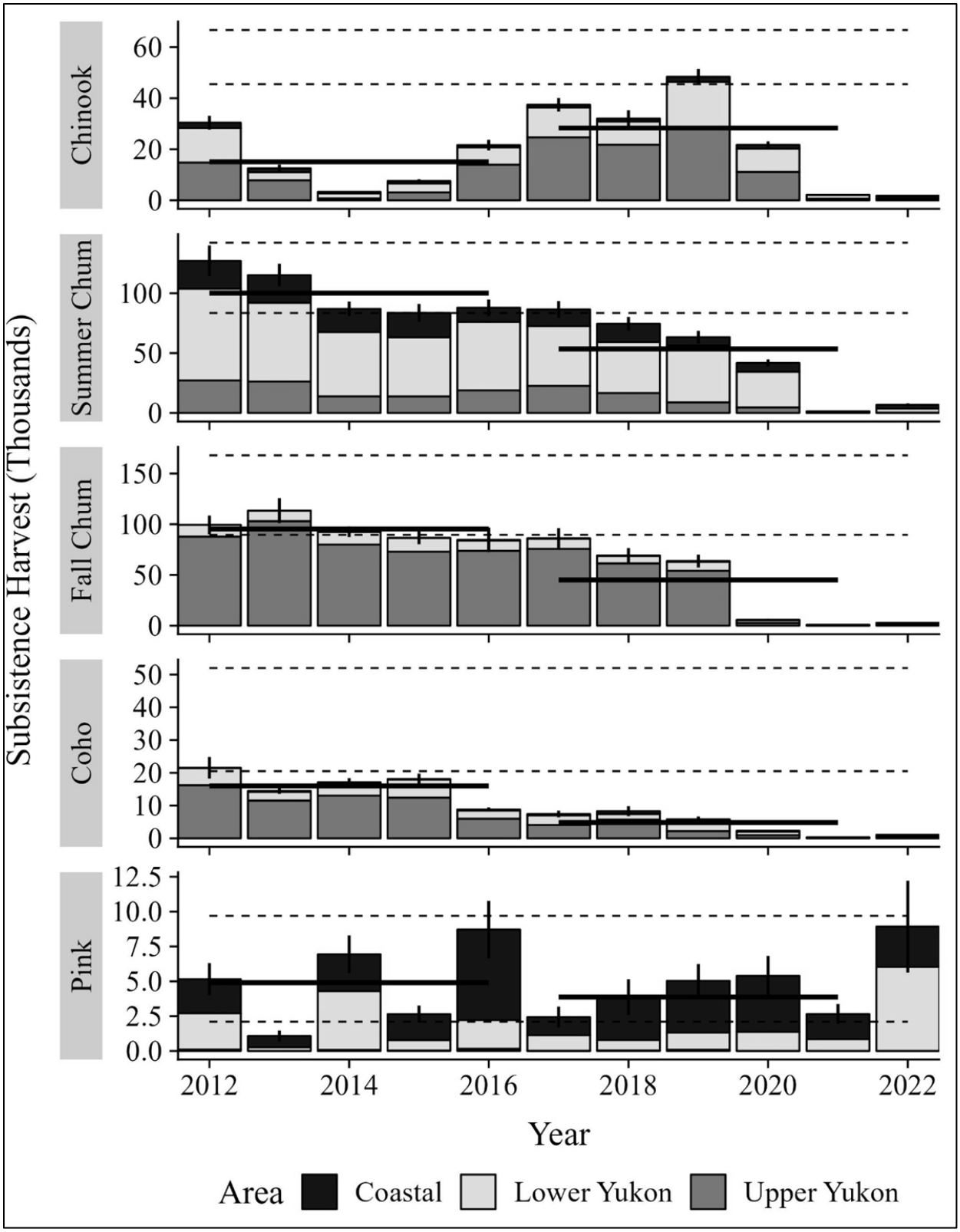

Figure 5.–Estimated salmon subsistence harvest Yukon Area, 2012–2022.

Note: Harvest estimates and 95% confidence interval (black vertical lines) were provided. Black horizontal lines are 5-year averages and amounts necessary for subsistence ranges are dashed lines.

APPENDIX A: 2022 HARVEST INFORMATION

Appendix A1.–Estimated (Est) subsistence harvest of salmon and 95% confidence interval (CI) in surveyed communities, including community and district totals, Yukon Area, 2022.

	Chinook		Summer chum		Fall chum		Coho		Pink	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Hooper Bay	55	33	1,999	891	130	119	94	79	1,596	870
Scammon Bay	115	34	1,137	258	106	68	197	102	1,297	396
Coastal District total	169	47	3,135	922	235	136	291	128	2,893	949
Nunam Iqua	106	74	187	105	14	9	31	21	612	325
Alakanuk	86	50	338	192	57	57	87	50	388	256
Emmonak	98	43	1,067	922	438	346	130	86	795	444
Kotlik	0	0	57	91	79	96	4	5	671	924
District 1 total	290	97	1,649	945	588	361	252	101	2,465	1,085
Mountain Village	30	14	66	49	0	0	6	8	683	444
Pitkas Point	11	7	18	16	0	0	5	4	67	30
St. Mary's	57	33	92	56	0	0	0	0	676	445
Pilot Station	47	46	90	113	0	0	0	0	0	0
Marshall	56	39	137	86	0	0	112	142	20	3
District 2 total	202	69	404	159	0	0	123	139	1,445	620
Russian Mission	10	12	50	36	0	0	0	0	2,088	2,989
Holy Cross	0	0	0	0	0	0	0	0	0	0
Shageluk	5	7	9	12	9	12	4	6	0	0
District 3 total	16	14	59	37	9	11	4	5	2,088	2,940
Anvik	0	0	0	0	12	5	24	0	0	0
Grayling	8	11	0	0	0	0	0	0	0	0
Kaltag	24	38	0	0	0	0	0	0	0	0
Nulato	0	0	0	0	0	0	0	0	0	0
Koyukuk	0	0	0	0	12	20	0	0	0	0
Galena	25	32	36	46	0	0	0	0	0	0
Ruby	0	0	0	0	0	0	0	0	0	0
Huslia/Hughes	0	0	141	228	62	92	84	137	0	0
Allakaket/Alatna/Bettles	0	0	0	0	0	0	0	0	0	0
District 4 total	57	49	176	224	87	90	108	131	0	0
Tanana	43	39	3	4	23	9	0	0	0	0
Rampart/Stevens Village	38	62	0	0	5	8	0	0	0	0
Beaver	11	17	0	0	0	0	0	0	0	0
Fort Yukon/Birch Creek	4	6	4	6	0	0	0	0	0	0
Venetie/Chalkyitsik	0	0	0	0	497	582	0	0	0	0
District 5 total	97	68	7	7	524	568	0	0	0	0
Survey total	831	153	5,430	1,343	1,444	689	779	250	8,893	3,291

Note: The number of salmon harvested was estimated using the total number of households and the maximum number of households contacted, and includes 95% confidence interval (CI).

Appendix A2.–Estimated number of salmon provided to communities for subsistence use by test fishery programs, Yukon Area, 2022.

Yukon River test fishery sites	Community	Chinook	Summer chum	Fall chum	Coho	Pink [a]
Lower Yukon test fishery (LYTF)	Scammon Bay	1	5	0	0	0
	Alakanuk	1	64	108	1	4
	Emmonak	110	739	505	47	28
	Kotlik	0	3	2	0	0
	Mountain Village	5	69	0	0	0
	Nenana/Healy	0	36	0	0	0
LYTF project subtotal:		117	916	615	48	32
Mountain Village test fishery	Mountain Village	0	0	143	79	1
Pilot Station sonar test fishery	Pilot Station	204	363	369	70	0
Radiotelemetry	Russian Mission	0	0	16	26	0
Ichthyophonus	Tanana	153	0	0	0	0
	Stevens Village/Rampart	47	0	0	0	0
	Eagle	50	0	0	0	0
Other projects subtotal		454	363	528	175	1
Test fishery totals		571	1,279	1,143	223	33

[a] Pink salmon harvested and distributed from test fishery projects were not always recorded. The harvest shown here is a minimum.

Appendix A3.–Estimated number of salmon provided to communities for subsistence use by funerary permits, Yukon Area, 2022.

Community	Chinook	Summer chum	Fall chum	Coho	Total
Emmonak	0	5	5	1	11
St. Mary's	2	5	0	0	7
Grayling	4	0	0	0	4
Galena	14	20	0	0	34
Huslia/Hughes	0	5	0	0	5
Beaver	5	0	0	0	5
Total	25	35	5	1	66

Appendix A4.–Estimated number (Est) of primary gear and 95% confidence interval (CI) in surveyed communities, Yukon Area, 2022.

	Setnet		Driftnet		Fish wheel		Dip net		Hook & Line	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Hooper Bay	63	7	2	0	0	0	0	0	0	0
Scammon Bay	51	5	0	0	0	0	3	1	0	0
Coastal District total	114	8	2	0	0	0	3	1	0	0
Nunam Iqua	6	2	0	0	0	0	2	2	0	0
Alakanuk	48	6	0	0	0	0	6	1	0	0
Emmonak	32	5	0	0	0	0	2	1	0	0
Kotlik	13	3	0	0	0	0	0	0	0	0
District 1 total	98	8	0	0	0	0	9	2	0	0
Mountain Village	22	4	0	0	0	0	2	1	0	0
Pitkas Point	7	2	0	0	0	0	0	0	2	1
St. Mary's	17	5	14	5	0	0	0	0	0	0
Pilot Station	1	0	0	0	0	0	2	0	0	0
Marshall	10	1	1	0	0	0	0	0	0	0
District 2 total	57	6	15	5	0	0	4	1	2	1
Russian Mission	10	1	0	0	0	0	0	0	0	0
Holy Cross	0	0	0	0	0	0	0	0	0	0
Shageluk	6	2	0	0	0	0	0	0	0	0
District 3 total	16	2	0	0	0	0	0	0	0	0
Anvik	3	0	0	0	0	0	0	0	0	0
Grayling	0	0	0	0	0	0	0	0	0	0
Kaltag	0	0	0	0	0	0	0	0	2	1
Nulato	0	0	0	0	0	0	0	0	0	0
Koyukuk	0	0	0	0	0	0	0	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0
Ruby	0	0	0	0	0	0	0	0	0	0
Huslia/Hughes	9	7	0	0	0	0	0	0	0	0
Allakaket/Alatna/Bettles	0	0	0	0	0	0	0	0	0	0
District 4 total	17	7	0	0	0	0	0	0	3	1
Tanana	11	2	0	0	0	0	0	0	0	0
Rampart/Stevens Village	4	4	0	0	0	0	0	0	0	0
Beaver	0	0	0	0	0	0	0	0	0	0
Fort Yukon/Birch Creek	5	2	0	0	0	0	0	0	0	0
Venetie/Chalkyitsik	4	1	0	0	0	0	0	0	0	0
District 5 total	27	4	0	0	0	0	0	0	0	0
Survey total	329	16	18	5	0	0	17	2	4	1

Appendix A5.–Estimated number (Est) of Chinook salmon harvested and 95% confidence interval (CI) by gear type in surveyed communities, Yukon Area, 2022.

	Gillnet mesh size													
	4-inch or less		6-inch		7.5-inch		Fish wheel		Dip net		Beach seine		Other gear	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Hooper Bay	35	24	20	14	0	0	0	0	0	0	0	0	0	0
Scammon Bay	68	19	38	19	5	2	0	0	4	3	0	0	0	0
Coastal District total	103	30	57	24	5	2	0	0	4	3	0	0	0	0
Nunam Iqua	6	3	0	0	96	71	0	0	4	2	0	0	0	0
Alakanuk	84	48	2	1	0	0	0	0	0	0	0	0	0	0
Emmonak	97	42	2	0	0	0	0	0	0	0	0	0	0	0
Kotlik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 1 total	187	64	4	1	96	69	0	0	4	2	0	0	0	0
Mountain Village	19	8	6	4	0	0	0	0	4	2	0	0	0	0
Pitkas Point	11	7	0	0	0	0	0	0	0	0	0	0	0	0
St. Mary's	0	0	42	27	15	9	0	0	0	0	0	0	0	0
Pilot Station	14	15	0	0	0	0	0	0	33	43	0	0	0	0
Marshall	56	39	0	0	0	0	0	0	0	0	0	0	0	0
District 2 total	101	43	49	27	15	8	0	0	37	43	0	0	0	0
Russian Mission	10	12	0	0	0	0	0	0	0	0	0	0	0	0
Holy Cross	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shageluk	5	7	0	0	0	0	0	0	0	0	0	0	0	0
District 3 total	16	14	0	0	0	0	0	0	0	0	0	0	0	0
Anvik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grayling	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kaltag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nulato	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Koyukuk	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ruby	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huslia/Hughes	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket/Alatna/Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4 total	0	0	0	0	0	0	0	0	0	0	0	0	0	0

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Appendix A5.–Page 2 of 2.

	Gillnet mesh size													
	4-inch or less		6-inch		7.5-inch		Fish wheel		Dip net		Beach seine		Other gear	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Tanana	16	21	27	29	0	0	0	0	0	0	0	0	0	0
Stevens Village	38	62	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/Birch Creek	4	6	0	0	0	0	0	0	0	0	0	0	0	0
Venetie/Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5 total	59	57	27	29	0	0	0	0	0	0	0	0	0	0
Survey total	465	101	137	46	116	69	0	0	45	43	0	0	0	0

Note: Estimates include only those fish harvested for subsistence purposes in surveyed communities and do not include fish retained from commercial catches, test fishery donations, or harvests from permit areas.

Appendix A6.–Estimated number (Est) of summer chum salmon harvested and 95% confidence intervals (CI) by gear type in surveyed communities, Yukon Area, 2022.

	Gillnet mesh size													
	4-inch or less		6-inch		7.5-inch		Fish wheel		Dip net		Beach seine		Other gear	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Hooper Bay	1,574	696	425	210	0	0	0	0	0	0	0	0	0	0
Scammon Bay	986	218	60	15	11	3	0	0	81	54	0	0	0	0
Coastal District total	2,560	725	484	210	11	3	0	0	81	53	0	0	0	0
Nunam Iqua	139	77	0	0	0	0	0	0	48	28	0	0	0	0
Alakanuk	310	184	0	0	0	0	0	0	28	16	0	0	0	0
Emmonak	1,039	896	29	25	0	0	0	0	0	0	0	0	0	0
Kotlik	57	91	0	0	0	0	0	0	0	0	0	0	0	0
District 1 total	1,545	917	29	24	0	0	0	0	76	31	0	0	0	0
Mountain Village	59	42	0	0	0	0	0	0	6	6	0	0	0	0
Pitkas Point	18	16	0	0	0	0	0	0	0	0	0	0	0	0
St. Mary's	71	45	22	17	0	0	0	0	0	0	0	0	0	0
Pilot Station	3	3	0	0	0	0	0	0	87	113	0	0	0	0
Marshall	137	86	0	0	0	0	0	0	0	0	0	0	0	0
District 2 total	288	105	22	16	0	0	0	0	93	112	0	0	0	0
Russian Mission	50	36	0	0	0	0	0	0	0	0	0	0	0	0
Holy Cross	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Shageluk	9	12	0	0	0	0	0	0	0	0	0	0	0	0
District 3 total	59	37	0	0	0	0	0	0	0	0	0	0	0	0
Anvik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Grayling	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Kaltag	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Nulato	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Koyukuk	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Galena	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ruby	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Huslia/Hughes	141	228	0	0	0	0	0	0	0	0	0	0	0	0
Allakaket/Alatna/Bettles	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 4 total	141	219	0	0	0	0	0	0	0	0	0	0	0	0

-continued-

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	Gillnet mesh size													
	4-inch or less		6-inch		7.5-inch		Fish wheel		Dipnet		Beach seine		Other gear	
Community	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI	Est	CI
Tanana	3	4	0	0	0	0	0	0	0	0	0	0	0	0
Stevens Village	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/Birch Creek	4	6	0	0	0	0	0	0	0	0	0	0	0	0
Venetie/Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5 total	7	7	0	0	0	0	0	0	0	0	0	0	0	0
Survey total	4,599	1,189	535	210	11	3	0	0	250	127	0	0	0	0

Note: Estimates include only those fish harvested for subsistence purposes in surveyed communities and do not include fish retained from commercial catches, test fishery donations, or harvests from permit areas.

Appendix A7.–Estimated total number of households in surveyed communities, by harvest level, including community and district totals, Yukon Area, 2022.

	Unknown				Do not fish				Light harvester				Medium harvester				Heavy harvester			
Community	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*
Hooper Bay	14	14	4	29	62	62	19	31	91	91	37	41	67	67	35	52	1	1	1	100
Scammon Bay	7	7	5	71	23	23	12	52	43	43	25	58	41	41	32	78	–	–	–	–
Coastal District total	21	21	9	43	85	85	31	36	134	134	62	46	108	108	67	62	1	1	1	100
Nunam Iqua	1	1	0	0	8	8	5	62	14	14	12	86	14	14	12	86	–	–	–	–
Alakanuk	10	10	6	60	29	29	11	38	57	57	28	49	45	45	29	64	2	2	2	100
Emmonak	11	11	5	45	49	49	29	59	78	78	49	63	58	58	35	60	1	1	0	0
Kotlik	9	9	1	11	15	15	8	53	50	50	16	32	47	47	31	66	1	1	1	100
District 1 total	31	31	12	39	101	101	53	52	199	199	105	53	164	164	107	65	4	4	3	75
Mountain Village	6	6	3	50	43	43	15	35	55	55	28	51	51	51	36	71	–	–	–	–
Pitkas Point	–	–	–	–	3	3	3	100	9	9	8	89	11	11	7	64	–	–	–	–
St. Mary's	4	4	2	50	20	20	8	40	51	51	23	45	52	52	29	56	2	2	0	0
Pilot Station	3	3	2	67	36	36	19	53	54	54	32	59	34	34	24	71	1	1	1	100
Marshall	4	4	4	100	15	15	6	40	40	40	20	50	34	34	19	56	1	1	1	100
District 2 total	17	17	11	65	117	117	51	44	209	209	111	53	182	182	115	63	4	4	2	50
Russian Mission	3	3	1	33	14	14	7	50	38	38	19	50	16	16	13	81	–	–	–	–
Holy Cross	1	1	1	100	13	13	8	62	22	22	12	55	15	15	8	53	–	–	–	–
Shageluk	2	2	1	50	7	7	3	43	15	15	9	60	5	5	3	60	–	–	–	–
District 3 total	6	6	3	50	34	34	18	53	75	75	40	53	36	36	24	67	0	0	0	–
Anvik	1	1	1	100	6	6	6	100	11	11	11	100	6	6	5	83	1	1	0	0
Grayling	3	3	3	100	7	7	3	43	24	24	9	38	15	15	9	60	–	–	–	–
Kaltag	1	1	0	0	10	10	6	60	26	26	11	42	11	11	3	27	–	–	–	–
Nulato	1	1	0	0	13	13	7	54	44	44	15	34	18	18	14	78	–	–	–	–
Koyukuk	–	–	–	–	8	8	3	38	22	22	9	41	6	6	3	50	2	2	2	100
Galena	3	3	1	33	42	42	25	60	66	66	38	58	13	13	5	38	3	3	1	33
Ruby	1	1	1	100	22	22	12	55	11	11	6	55	8	8	7	88	1	1	1	100
Huslia	4	4	2	50	40	40	17	42	20	20	7	35	8	8	4	50	4	4	3	75
Hughes	3	3	0	0	13	13	5	38	7	7	3	43	4	4	1	25	1	1	0	0
Allakaket	5	5	2	40	20	20	6	30	14	14	8	57	6	6	3	50	2	2	0	0
Alatna	1	1	0	0	4	4	1	25	3	3	1	33	1	1	1	100	–	–	–	–
Bettles	3	3	1	33	14	14	10	71	–	–	–	–	–	–	–	–	–	–	–	–
District 4 total	26	26	11	42	199	199	101	51	248	248	118	48	96	96	55	57	14	14	7	50

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	Unknown				Do not fish				Light harvester				Medium harvester				Heavy harvester			
Community	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*	*N*	*S*	*n*	*%S*
Tanana	6	6	2	33	26	26	14	54	32	32	20	62	13	13	5	38	10	10	7	70
Stevens Village	6	6	2	33	4	4	1	25	6	6	4	67	–	–	–	–	3	3	3	100
Birch Creek	1	1	0	0	10	10	6	60	2	2	1	50	–	–	–	–	–	–	–	–
Beaver	–	–	–	–	6	6	5	83	20	20	9	45	3	3	2	67	–	–	–	–
Fort Yukon	8	8	3	38	96	96	41	43	55	55	21	38	19	19	9	47	11	11	4	36
Venetie	8	8	2	25	38	38	20	53	10	10	4	40	12	12	5	42	2	2	1	50
Chalkyitsik	2	2	2	100	18	18	8	44	5	5	2	40	1	1	0	0	–	–	–	–
District 5 total	31	31	11	35	198	198	95	48	130	130	61	47	48	48	21	44	26	26	15	58
Survey totals	132	132	57	43	734	734	349	48	995	995	497	50	634	634	389	61	49	49	28	57

Note: The following notations were used in the above table: *N* = the total number of households, *S* = the number of households selected, *n* = the number of households contacted, and *%S* = the percent of the selected households that were contacted in each harvest group in surveyed communities. Dashes indicate indefinable values. The estimated total number of people includes a 95% confidence interval (CI).

Appendix A8.–Estimated 95% CI (in parentheses) of subsistence harvest of salmon species by fishing location in surveyed districts, Yukon Area, 2022.

		Harvest districts/subdistricts													Harvest river drainages					
												5D [a]								Total by
Species	District	Coastal	1	2	3	4A	4B	4C	5A	5B	5C	down	up	6	Innoko	Koyukuk	Teedriinjik	Porcupine	Draanjik	district
Chinook	Coastal	(40)	(38)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(55)
	1	0	(98)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(98)
	2	0	(6)	(72)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(72)
	3	0	0	0	(12)	0	0	0	0	0	0	0	0	0	(7)	0	0	0	0	(14)
	4	0	0	0	0	(38)	(32)	0	0	0	0	0	0	0	0	0	0	0	0	(50)
	5	0	0	0	0	0	0	0	0	(39)	0	(56)	(6)	0	0	0	0	0	0	(69)
Survey totals		(40)	(105)	(72)	(12)	(38)	(32)	0	0	(39)	0	(56)	(6)	0	(7)	0	0	0	0	(159)
Summer chum	Coastal	(909)	(166)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(924)
	1	0	(960)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(960)
	2	0	(22)	(161)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(163)
	3	0	0	0	(35)	0	0	0	0	0	0	0	0	0	(11)	0	0	0	0	(37)
	4	0	0	0	0	0	(46)	0	0	0	0	0	0	0	0	(223)	0	0	0	(227)
	5	0	0	0	0	0	0	0	0	(4)	0	(6)	0	0	0	0	0	0	0	(8)
Survey totals		(909)	(975)	(161)	(35)	0	(46)	0	0	(4)	0	(6)	0	0	(11)	(223)	0	0	0	(1,362)
Fall chum	Coastal	(129)	(38)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(134)
	1	(5)	(367)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(367)
	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	3	0	0	0	0	0	0	0	0	0	0	0	0	0	(11)	0	0	0	0	(11)
	4	0	0	0	0	(19)	0	0	0	0	0	0	0	0	0	(90)	0	0	0	(92)
	5	0	0	0	0	0	0	0	0	(29)	0	(7)	0	0	0	0	(575)	0	0	(576)
Survey totals		(129)	(369)	0	0	(19)	0	0	0	(29)	0	(7)	0	0	(11)	(90)	(575)	0	0	(702)

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		Harvest districts/subdistricts [a]													Harvest river drainages					
												5D								Total by
Species	District	Coastal	1	2	3	4A	4B	4C	5A	5B	5C	down	up	6	Innoko	Koyukuk	Teedriinjik	Porcupine	Draanjik	district
Coho	Coastal	(123)	(37)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(129)
	1	(5)	(102)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(102)
	2	0	0	(141)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(141)
	3	0	0	0	0	(6)	0	0	0	0	0	0	0	0	0	0	0	0	0	(6)
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(134)	0	0	0	(134)
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey totals		(123)	(109)	(141)	0	(6)	0	0	0	0	0	0	0	0	0	(134)	0	0	0	(255)
Pink	Coastal	(921)	(171)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(937)
	1	(816)	(640)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(1,037)
	2	0	(48)	(623)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(624)
	3	0	0	0	(2,953)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(2,953)
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Survey totals		(1,231)	(664)	(623)	(2,953)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	(3,326)

[a] Harvest near Fort Yukon was divided according to whether harvest occurred downriver (5D-down) or upriver (5D-up) of the confluence of the Porcupine and Yukon Rivers.

APPENDIX B: 2022 DATA COLLECTION INSTRUMENTS

Appendix B1.–Example subsistence harvest calendar, Yukon Area, 2022.

2022 SUBSISTENCE SALMON HARVEST CALENDAR AND LOTTERY

The Alaska Department of Fish and Game requests your assistance in assessing the Yukon River subsistence salmon harvest. You can help by recording the number of salmon you harvest for subsistence. Please include all salmon caught even those fed to dogs. Do not include salmon given to you by another fishermen or a test fishery, or salmon that were sold commercially. HAI'! QUYANA! THANK YOU!

DID YOU FISH IN 2021? (please circle one) YES NO

CIRCLE FISHING LOCATION DISTRICT (map on back): COASTAL 1 2 3

WHAT GEAR DID YOU USE? (circle gear/s) SET GILLNET DRIFT GILLNET DIP NET BEACH SEINE OTHER: _______

2022 May

SUN	MON	TUE	WED	THU	FRI	SAT
01	02	03	04	05	06	07
08	09	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	01	02	03	04
05	06					

2022 June

SUN	MON	TUE	WED	THU	FRI	SAT
29	30	31	01	02	03	04
05	06	07	08	09	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	01	02
03	04					

2022 July

SUN	MON	TUE	WED	THU	FRI	SAT
26	27	28	29	30	01	02
03	04	05	06	07	08	09
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30
31	01					

In the **Lower Yukon**, summer season ends on **July 15**. Chum entering the river after that date are considered to be **fall chum**.

2022 August

SUN	MON	TUE	WED	THU	FRI	SAT
31	01	02	03	04	05	06
07	08	09	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	01	02	03
04	05					

2022 September

SUN	MON	TUE	WED	THU	FRI	SAT
28	29	30	31	01	02	03
04	05	06	07	08	09	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	01
02	03					

WIN $50!!!

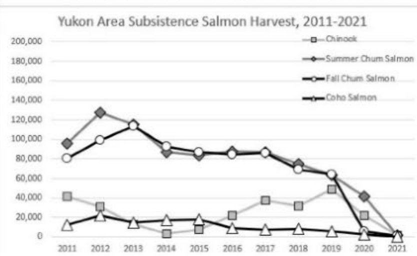
Return this calendar to be entered into a drawing for one of the $50 cash prizes.

To be eligible to win a prize, answer the questions at the top of this page and mail your calendar back before **December 31, 2022.** GOOD LUCK!

@YukonRiverFishingADFG

Date of Harvest	Chinook (Kings)	Chum (Summer or Fall)	Coho Salmon	Pink Salmon and Other Fish Species or Harvest Note (Fish Quality, River Conditions)
May 15	1	10	0	(example) 1 pink, 3 sheefish, 12 cisco)

If you run out of space and would like to be mailed another calendar, please call us! 907-459-7274



Congratulations to last year's calendar lottery winners!

Lower River Winners: Felicity Demers, Kotlik; Clarence Johnson, St. Mary's; Isaac Prince, St. Mary's; Stephen Dauphinee, St. Mary's; Lawrence Carl, Hooper Bay; Ben Alick, Pilot Station.

Upper River Winners: Bruce Cosgrove, Fort Yukon; Carrie Given, Galena; Tim Pavlick, Huslia; William McCarty, Ruby; Carol Lowe, Galena; Sue Ann Nicholi, Grayling.

RECORDED FISHERY SCHEDULES AND UPDATES: 1-866-479-7387

Note: Area-specific versions of the calendar were used for lower and upper portions of the drainage. Different versions highlighted specific fishing areas and gear.

Appendix B2.–Yukon Area postseason subsistence salmon harvest survey mailed to households, 2022.

«Pass_Code»

2022 ADF&G Annual Subsistence Salmon Harvest Survey

This survey is CONDIFENTIAL and is used to estimate salmon harvests in your community

The estimate is used to understand the Yukon River salmon population, amounts needed for subsistence and to reconstruct the run size.

Your Information (Please update if necessary)

Name: «Name»

Address: «Address»
«Mail_Community», «State», «Zip_Code_4»

Phone Number: «Phone_Numben»

1. How many people live in your household?

   _____

2. Did anyone in your household subsistence fish or cut salmon this year? ☐ Yes | ☐ No

   If NO skip to question 7.

3. How many salmon did your household harvest? Please include in this total number:

   - Salmon cut for your family
   - Salmon cut for dogs
   - Kept from commercial fishing
   - Shared with other families
   - Lost (to flies, birds, weather or disease)

Chinook Salmon:
King, Taryakvak, Liuk Choo, Tagayukpuk _____

Summer Chum Salmon:
Teggmaarrluk, Qalugruaq), Iqalluk _____

Fall Chum Salmon: Silvers
Teggmaarrluk, Qalugruaq, Iqalluk _____

Coho Salmon: *Qakiiyaq, Needlii, Qalugruaq* _____

Pink Salmon:
Cuqpeg, Amaqtuq, Neeghan _____

4. What gear(s) did you use to harvest salmon?

☐ Set Net ☐ Drift Net ☐ Fishwheel

☐ Dipnet ☐ Beach Seine

☐Hook and Line ☐Other_____

2022 ADF&G Annual Subsistence Salmon Harvest Survey

5. What mesh size did you use?

   ☐ Whitefish net *(4 inch or smaller)*

   ☐ Chum net *(bigger than 4 inch up to 6 inch)*

   ☐ King net *(bigger than 6 inch up to 7.5 inch)*

   ☐ I don't know

6. Where do you fish?

☐ Coastal Area ☐ District 1 ☐ District 2
☐District 3 ☐ Subdistrict 4A ☐ Subdistrict 4B
☐ Subdistrict 4C ☐ Subdistrict 5A ☐ Subdistrict 5B
☐ Subdistrict 5C
☐ Subdistrict 5D-downstream of Ft. Yukon
☐ Subdistrict 5D-upstream of Ft. Yukon
☐ Innoko River ☐ Koyukuk River
☐ Porcupine River ☐ Black River/Draanjik (Chalkyitsik)
☐ Tanana River ☐ Near my community
☐ Chandalar (Teedriinjik) ☐ Other_____

7. Did your household catch any OTHER FISH besides salmon? ☐ Yes | ☐ No

   If NO skip to question 8

Broad Whitefish:
Qaurtuq, Akakiik, Chiishoo _____
Humpback Whitefish:
Nuukegglig,Neeghan,Cingiikegleq _____
Cisco:
Imarpinraq, Ch'ootsik, Quptik _____
Sheefish:
Cii, Sii, Sigruaq _____
Burbort:
Lush, Lushfish _____
Northern Pike:
Jukefish _____
Blackfish:
Circle units (#, lbs., or gal) _____
Arctic Grayling
_____
Lamprey *(eels)*
Circle units (#, lbs., or gal) _____
Tomcod
Circle units (#, lbs., or gal) _____
Herring
Circle units (#, lbs., or gal) _____
Roe on Kelp
Circle units (#, lbs., or gal)

-continued-

Appendix B2.–Page 2 of 2.

«Pass_Code»

Yukon Area Salmon Harvest Survey

8. Do you have any dogs?
☐ Yes | ☐ No

If NO, skip to comments Question 10.

- How many dogs do you own?
_____

Do you feed any salmon to your dogs?

☐ Yes, Whole fish ☐ Only scraps
☐ No, none at all

Yukon Area Salmon Harvest Survey

- How many whole salmon did you catch for dog food?
- Chinook _____
- Summer Chum _____
- Fall Chum _____
- Coho _____
- Pink _____

10. Please include questions, comments, or concerns for the managers:

Would you like to be contacted by the Alaska Department of Fish and Game? ☐ Yes | ☐ No

Quyana, Dogedinh', Ana Baasee', Mahsi Choo', Massee, Thank you!

Appendix B3.–Yukon Area postseason subsistence salmon harvest survey questions from electronic app, 2022.

Primary question	Level 1 relevant question	Level 2 relevant question
Is your address and phone number still...?		
How many people live in your household?		
Did anyone in your household subsistence fish or cut salmon this year?		
	How many households helped to catch these fish?	
	How many total salmon did you or your fishing GROUP catch?	
	What District/Area did you fish?	
	How many fish did you keep for your household from this Harvest Area?	Enter number of household harvest by species
	What is our household's main fishing GEAR?	Select gear from drop down menu
	Secondary fishing GEAR?	Select gear from drop down menu
	Of the X number of Chinook you harvested, what gear did you use?	Enter Chinook harvest by gear type.
	Of the X number of summer chum you harvested, what gear did you use?	Enter summer chum harvest by gear type.
	Of your household harvest did you share any salmon with family or friends outside your household?	Enter number of shared salmon by species.
	Or did you lose any whole salmon?	Enter number of lost salmon by species.
Was your household GIVEN any salmon from a subsistence or commercial fisher, or ADF&G test fish?		
	Subsistence received	Enter number of subsistence salmon received.
	Commercial received	Enter number of commercial salmon received.
	ADF&G received	Enter number of test fish salmon received.
	Outside Yukon Area	Enter number of salmon received from outside the Yukon Area.

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Primary question	Level 1 relevant question	Level 2 relevant question
Did your household catch any OTHER FISH besides salmon?		
	Select all that apply (Asked each species and surveyor selects harvested species)	Enter number of other fish harvest by species.
	What was the main gear used to catch OTHER fish species (not salmon)?	Select gear from drop down menu
Does your household have any dogs?		
	How many dogs does your household own?	
	Does your household feed any WHOLE salmon to dogs?	
		How many WHOLE salmon did your household feed to dogs?
	Do you plan on fishing for more salmon this year?	
Comments and/or concerns	We know that you don't have the salmon that you would like to have to get through the winter. Does your area harvest moose or caribou? Will you do more fishing under the ice for whitefish, pike and sheefish? We know that this was a difficult year with the salmon not returning, do you have any questions or comments for the managers?	
Do you have a calendar to return?		

Appendix B4.–Example subsistence harvest application and permit, Yukon Area, 2022.

Household Application

Yukon Area Subsistence and Personal Use Fishing

Alaska Department of Fish and Game, Division of Commercial Fisheries
1300 College Road, Fairbanks, AK 99701 Telephone (907) 459-7274

Issuing officer use only
Permit Number:_____
Date Issued:_____
Issuing Officer:_____

Alaska Residents Only

First Name:_____ Middle Initial: _____ Last Name:_____ Suffix:_____

Date of Birth:_____ (mm/dd/yyyy) Driver's License State:_____ Number:_____ Gender:_____

What month and year did Alaska Residency begin? _____ Or Nonresident Military (Y/N):_____

Telephone:_____ Email:_____

Mailing Address:_____
☐ Same as mailing address City State Zipcode

Physical Address: _____
City State Zipcode

Total Household Member(s): _____ (Include yourself)

Names of Other Household Member(s):_____ (Names of other household members authorized to fish this permit)

SALMON

Select permit area (check one box):

Tanana River

- ☐ SA- Subsistence, Manley
- ☐ SB- Subsistence, Minto, Nenana
- ☐ SK- Subsistence, Kantishna River
- ☐ PC- Personal Use, Fairbanks, North Pole

PC requires Alaska Sport Fish License Number:_____

Yukon River

- ☐ SR- Subsistence, Rampart*
- ☐ SY- Subsistence, Bridge Area*
- ☐ SE- Subsistence, Circle to Canadian border*

**contact Fairbanks office if fishing year-round (salmon and non-salmon)*

Number of dogs in household:_____ Do you feed whole salmon to dogs? (Y/N):_____

Primary Fishing Gear (check one box):

- ☐ Set gillnet greater than 2 to 4 inch mesh
- ☐ Set gillnet greater than 4 to 6 inch mesh (chum)
- ☐ Set gillnet greater than 6 and up to 7.5 inch mesh (king)
- ☐ Fish wheel

Secondary Fishing Gear (check one box):

- ☐ Set gillnet greater than 2 to 4 inch mesh
- ☐ Set gillnet greater than 4 to 6 inch mesh (chum)
- ☐ Set gillnet greater than 6 and up to 7.5 inch mesh (king)
- ☐ Fish wheel

NON-SALMON

Select permit area (check one box):

- ☐ ST- Subsistence, Tolovana River drainage Pike (Minto, lower Chatanika)
- ☐ SU- Subsistence, Upper Tanana River drainage (Tok area)
  Number of dogs in household:_____ Do you feed whole salmon to dogs? (Y/N):_____
- ☐ SF- Subsistence, Koyukuk (South, Middle forks)
  Number of dogs in household:_____ Do you feed whole salmon to dogs? (Y/N):_____
- ☐ PW- Personal Use Whitefish and Sucker, Tanana River drainage (Fairbanks, North Pole, Delta Junction) *not available online, contact Fairbanks office for application*

Primary Fishing Gear (check one box):

- ☐ Set gillnet 2 inch mesh or less
- ☐ Set gillnet greater than 2 to 4 inch mesh
- ☐ Fyke nets (hoop traps)
- ☐ Jigging gear – ice fishing only
- ☐ Dip net
- ☐ Fish wheel
- ☐ Other:_____

Secondary Fishing Gear (check one box):

- ☐ Set gillnet 2 inch mesh or less
- ☐ Set gillnet greater than 2 to 4 inch mesh
- ☐ Fyke nets (hoop traps)
- ☐ Jigging gear – ice fishing only
- ☐ Dip net
- ☐ Fish wheel
- ☐ Other:_____

Submit a permit application to ADF&G office in Fairbanks, Tok, Delta, or Anchorage to receive a permit. Permits are also available online at the Fish and Game Online Store at www.adfg.alaska.gov/Store . Household permits are free of charge and available to Alaska Residents.

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Alaska Department of Fish & Game
2022 Household Subsistence Fishing Permit
Yukon River (Circle/Eagle)

This permit is valid through October 15th, 2022

Permit Number

☐ Alaska Resident

Last Name | First Name | M.I. | Sport Fishing License #

Mailing Address

(Required for Personal Use or Proxy Fishing)

City | State | Zip Code | Phone Number | Driver's License # | State

E-Mail Address

Names of other household members authorized to fish this permit:

Subsistence Permit Area: Under authority of this permit, fish may be taken from the Yukon River drainage from the mouth of Twenty-two Mile Slough upstream to the US/Canada border. This includes the communities of Circle and Eagle. See closed waters listed in regulation.

Fishing Schedule Hotline: 459-7387 (in Fairbanks) or 1-866-479-7387 (Toll free)

Fishermen must abide by the current fishing schedule and allowable gear. Advisory Announcements are available at the Fairbanks office or at www.cfnews.adfg.alaska.gov, or you can sign up to receive announcements by email at this website.

Permit Conditions:

- All regulations pertaining to subsistence fishing in the area must be followed. See regulation summary.
- Anyone fishing this household's gear must be named above and carry this permit on their person during any fishing activity. Household members participating in fishing must be Alaska Residents.
- Fish taken under authority of this permit must be recorded on the catch form provided before leaving the fishing site on the same day the fish are landed.

Permit expires October 15. Final harvest must be reported within 10 days after expiration. Even if you did not fish, you must complete a report. Reporting can be completed by returning permit to ADF&G 1300 College Road, Fairbanks, AK 99701. You may also visit www.adfg.alaska.gov/harvest to **report final harvest** or select '**mark permit as not fished**'. Failure to report this household's harvest information may result in denial of a household permit next year.

For questions, call the Fairbanks office (907) 459-7274

This permit is not valid unless signed and dated. By completing this permit application I am agreeing to allow ADF&G to publish the number of fish reported using this permit. No names or addresses will be published.

I hereby claim I am a resident of Alaska and that the information I have provided on this permit is true as witnessed by my signature. I have read and will abide by all conditions of this permit.

Signature of Permittee | Date

Revised 12/2021

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APPENDIX C: HISTORICAL HARVEST INFORMATION

Appendix C1.–Chinook salmon subsistence harvest totals by fishing district and community of residence, and personal use harvest total for District 6, Yukon Area, 2012–2022.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Hooper Bay	1,090	1,210	455	534	284	314	456	784	436	13	55	715	401
Scammon Bay	1,014	332	108	432	602	747	666	1,233	1,040	17	116	498	741
Coastal District total	2,104	1,542	563	966	886	1,061	1,122	2,017	1,476	30	171	1,212	1,141
Nunam Iqua	195	12	62	210	190	235	78	470	381	78	106	134	255
Alakanuk	1,081	275	214	436	465	838	414	1,818	1,394	229	87	494	967
Emmonak	1,864	553	463	612	939	1,731	1,203	2,419	1,033	346	208	886	1,360
Kotlik	1,173	794	617	661	1,158	1,767	1,556	2,333	912	78	0	881	1,340
District 1 subtotal	4,313	1,634	1,356	1,919	2,752	4,571	3,251	7,040	3,720	731	401	2,395	3,922
Mountain Village	1,789	266	178	370	809	1,060	1,021	1,238	1,025	152	35	682	921
Pitkas Point	261	37	79	44	156	492	365	1,096	249	13	11	115	443
St. Mary's	2,344	215	68	261	1,032	919	1,172	2,735	1,500	220	59	784	1,347
Pilot Station	1,078	258	163	382	652	818	581	1,919	1,034	321	251	507	940
Marshall	1,409	328	128	128	512	1,554	914	1,261	924	14	56	501	932
District 2 subtotal	6,881	1,104	616	1,185	3,161	4,843	4,053	8,249	4,732	720	412	2,589	4,583
Russian Mission	1,711	236	16	365	321	1,368	1,043	1,561	432	29	10	530	890
Holy Cross	576	204	0	68	557	822	580	1,483	192	ND	ND	281	769
Shageluk	75	4	32	14	23	86	181	262	90	ND	5	30	155
Other District 3 [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	9	0	NA	NA
District 3 subtotal	2,362	444	48	447	901	2,276	1,804	3,306	714	38	15	840	1,631
Lower Yukon River total	13,556	3,182	2,020	3,551	6,814	11,690	9,108	18,595	9,166	1,489	828	5,825	10,136
Anvik	435	121	0	58	241	709	566	655	242	ND	0	171	543
Grayling	1,081	226	3	22	370	749	888	1,446	264	ND	ND	340	837
Kaltag	1,346	348	10	119	1,358	1,959	570	1,225	577	ND	ND	636	1,083
Nulato	1,955	602	0	33	1,957	2,132	1,260	2,396	1,748	ND	ND	909	1,884
Koyukuk	614	898	52	26	612	648	859	1,088	268	ND	ND	440	716
Galena	742	275	1	372	993	2,224	1,262	2,895	695	7	ND	477	1,416
Ruby	1,316	357	6	68	344	568	1,126	1,036	562	ND	ND	418	823
Other District 4 [b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	12	75	NA	NA
District 4 subtotal	7,489	2,827	72	698	5,875	8,989	6,531	10,741	4,356	19	75	3,392	6,125
Huslia/Hughes	165	68	51	38	94	454	170	871	186	0	0	83	336
Allakaket/Alatna/Bettles	8	6	9	35	46	31	48	134	176	0	0	21	78
Koyukuk River subtotal	173	74	60	73	140	485	218	1,005	362	0	0	104	414
District 4 total (incl. Koyukuk R.)	7,662	2,901	132	771	6,015	9,474	6,749	11,746	4,718	19	75	3,496	6,539

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Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Tanana	2,100	1,200	88	141	2,129	2,961	5,108	3,408	1,905	142	196	1,132	2,718
Rampart/Stevens Village	520	274	0	1	228	155	284	446	485	5	86	205	275
Fairbanks (FNSB) [c]	558	610	14	263	1,318	2,521	1,475	2,479	1,623	315	277	553	1,683
Beaver	71	107	0	69	165	585	332	1,413	304	18	0	82	532
Fort Yukon/Birch Creek	2,141	1,561	93	480	1,225	4,224	4,704	4,563	757	5	4	1,100	2,851
Circle/Central	346	178	0	185	260	744	683	694	175	5	0	194	460
Eagle	167	175	76	395	864	1,730	1,011	790	280	38	52	335	777
Other District 5 [d]	477	125	0	7	306	830	474	944	368	22	73	183	528
District 5 subtotal	6,380	4,230	271	1,541	6,495	13,750	14,071	14,737	5,897	550	688	3,783	9,823
Venetie/Chalkyitsik	86	311	17	308	586	780	443	660	32	0	0	262	383
Teedriinjik/Draanjik R. subtotal	86	311	17	308	586	780	443	660	32	0	0	262	383
District 5 total [e]	6,466	4,541	288	1,849	7,081	14,530	14,514	15,397	5,929	550	688	4,045	10,206
Manley	174	165	92	121	230	103	210	94	33	ND	ND	156	88
Minto	99	60	0	23	35	101	ND	35	5	ND	ND	43	35
Nenana/Healy	296	87	139	263	464	309	181	404	230	6	0	250	225
Fairbanks (FNSB) [f]	58	49	41	33	87	144	53	82	140	1	1	54	84
Other District 6 [g]	0	6	11	0	0	0	49	9	17	0	1	3	15
District 6 Tanana R. total	627	367	283	440	816	657	493	624	425	7	2	507	441
Upper Yukon River total	14,755	7,809	703	3,060	13,912	24,661	21,756	27,767	11,072	576	765	8,048	17,166
Yukon Area total [h]	30,415	12,533	3,286	7,577	21,612	37,412	31,986	48,379	21,714	2,095	1,764	15,085	28,317
Personal use (District 6) [i]	71	42	1	5	57	125	206	244	112	0	0	35	137
Yukon Area total with personal use	30,486	12,575	3,287	7,582	21,669	37,537	32,192	48,623	21,826	2,095	1,764	15,120	28,455

Note: Subsistence harvest data were estimated from postseason survey, returned permits, and test fishery projects. NA indicates not applicable. ND indicates not available.

[a] Other District 3 included residents of District 3 combined due to confidentiality of low number of households fished.

[b] Other District 4 included residents of District 4 combined due to confidentiality of low number of households fished.

[c] Harvests by subsistence permit holders who resided in Fairbanks North Star Borough (FNSB) and fished in District 5 near the Yukon River bridge crossing.

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

[e] Included Teedriinjik (formerly Chandalar River) and Draanjik (formerly Black River).

[f] Harvests by subsistence permit holders who resided in FNSB and fished in the Tanana River.

[g] Other permit holders who fished in District 6 but did not reside in the communities listed, or harvests from communities with less than 3 participants.

[h] Area total includes Coastal District; historically Yukon River total consisted of Lower and Upper Yukon Areas, which were used in assessing border passage objectives under the Yukon Salmon Agreement.

[i] Harvest from the personal use fishing area on the Tanana River near Fairbanks. Not included in communities or totals above.

Appendix C2.–Summer chum salmon subsistence harvest totals by fishing district and community of residence, and personal use harvest total for District 6, Yukon Area, 2012–2022.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Hooper Bay	15,799	13,629	13,236	11,870	6,324	7,818	8,346	2,999	3,450	290	1,999	12,172	4,581
Scammon Bay	7,442	9,506	6,068	8,598	5,520	6,033	6,850	4,037	3,929	13	1,142	7,427	4,172
Coastal District total	23,241	23,135	19,304	20,468	11,844	13,851	15,196	7,036	7,379	303	3,141	19,598	8,753
Nunam Iqua	1,977	2,651	2,010	2,239	2,130	1,759	1,549	1,105	1,071	16	187	2,201	1,103
Alakanuk	9,012	7,520	9,120	4,469	6,527	4,993	5,448	6,276	3,924	66	402	7,330	4,153
Emmonak	15,829	8,209	7,143	9,973	8,976	6,933	7,036	8,404	5,463	170	1,811	10,026	5,604
Kotlik	8,552	10,136	5,621	4,960	8,925	8,776	7,007	6,994	4,831	102	60	7,639	5,562
District 1 subtotal	35,370	28,516	23,894	21,641	26,558	22,461	21,040	22,779	15,289	354	2,460	27,196	16,421
Mountain Village	9,031	11,861	7,059	6,063	8,782	7,230	5,414	4,320	3,180	39	135	8,559	4,043
Pitkas Point	1,153	2,186	1,588	1,225	1,485	1,489	1,390	1,103	478	21	18	1,527	896
St. Mary's	10,763	9,167	5,570	8,216	7,379	4,967	4,486	7,349	4,087	74	97	8,219	4,206
Pilot Station	5,716	5,299	5,728	4,702	4,796	4,952	4,015	6,871	3,881	344	453	5,248	4,019
Marshall	5,903	3,986	6,189	4,351	5,180	5,166	3,311	2,703	2,009	61	137	5,122	2,641
District 2 subtotal	32,566	32,499	26,134	24,557	27,622	23,804	18,616	22,346	13,635	539	840	28,676	15,805
Russian Mission	2,508	3,967	3,181	2,626	1,798	2,645	2,245	1,483	574	49	50	2,816	1,409
Holy Cross	1,147	262	97	421	991	242	306	199	174	ND	ND	584	230
Shageluk	5,035	463	470	80	275	804	495	673	113	ND	9	1,265	521
Other District 3 [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	32	0	NA	NA
District 3 subtotal	8,690	4,692	3,748	3,127	3,064	3,691	3,046	2,355	861	81	59	4,664	2,017
Lower Yukon River total	76,626	65,707	53,776	49,325	57,244	49,956	42,702	47,480	29,785	974	3,359	60,536	34,243
Anvik	1,371	830	2,052	777	1,117	330	437	223	123	ND	0	1,229	278
Grayling	2,616	618	1,617	509	878	738	779	879	58	ND	ND	1,248	614
Kaltag	186	67	954	216	467	185	25	180	228	ND	ND	378	155
Nulato	254	401	158	6	1,001	1,588	241	157	39	ND	ND	364	506
Koyukuk	828	4,459	300	0	119	96	150	21	24	ND	ND	1,141	73
Galena	718	179	377	1,059	1,689	1,228	349	1,223	58	2	ND	804	572
Ruby	3,891	681	29	88	678	107	970	464	0	ND	ND	1,073	385
Other District 4 [b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	56	NA	NA
District 4 subtotal	9,864	7,235	5,487	2,655	5,949	4,272	2,951	3,147	530	2	56	6,238	2,180
Huslia/Hughes	7,734	4,070	3,214	4,609	4,764	9,295	4,726	3,915	1,804	2	146	4,878	3,948
Allakaket/Alatna/Bettles	3,957	2,456	1,280	2,513	3,015	2,857	4,844	472	1,705	0	0	2,644	1,976
Koyukuk River subtotal	11,691	6,526	4,494	7,122	7,779	12,152	9,570	4,387	3,509	2	146	7,522	5,924
District 4 total (incl. Koyukuk R.)	21,555	13,761	9,981	9,777	13,728	16,424	12,521	7,534	4,039	4	202	13,760	8,104

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Appendix C2.–Page 2 of 2.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Tanana	4,333	9,565	2,612	3,162	3,685	3,086	2,733	530	338	18	3	4,671	1,345
Rampart/Stevens Village	259	55	70	0	629	10	1	0	3	0	0	203	3
Fairbanks (FNSB) [c]	172	1,350	300	575	461	1,413	521	179	65	10	15	572	438
Beaver	27	12	0	0	23	98	8	27	0	0	0	12	27
Fort Yukon/Birch Creek	0	225	19	0	12	98	44	12	0	0	4	51	31
Circle/Central	0	66	0	0	0	0	0	0	0	0	0	13	0
Eagle	0	50	0	0	0	0	0	0	0	0	0	10	0
Other District 5 [d]	101	94	91	8	180	321	37	55	17	5	0	95	87
District 5 subtotal	4,892	11,417	3,092	3,745	4,990	5,026	3,344	803	423	33	22	5,627	1,929
Venetie/Chalkyitsik	0	0	16	0	0	0	114	0	0	0	0	3	23
Teedriinjik/Draanjik R. subtotal	0	0	16	0	0	0	114	0	0	0	0	3	23
District 5 total [e]	4,892	11,417	3,108	3,745	4,990	5,026	3,458	803	423	33	22	5,630	1,952
Manley	58	45	182	9	32	16	78	3	7	ND	ND	65	21
Minto	64	258	24	0	4	234	ND	0	1	ND	ND	70	59
Nenana/Healy	370	642	275	60	19	603	440	409	23	4	36	273	295
Fairbanks (FNSB) [f]	114	143	237	183	41	271	82	31	84	0	0	144	94
Other District 6 [g]	72	6	13	0	0	7	5	0	0	0	0	18	2
District 6 Tanana R. total	678	1,094	731	252	96	1,131	605	443	115	4	36	570	460
Upper Yukon River total	27,125	26,272	13,820	13,774	18,814	22,581	16,584	8,780	4,577	41	260	19,961	10,513
Yukon Area total [h]	126,992	115,114	86,900	83,567	87,902	86,388	74,482	63,296	41,741	1,318	6,760	100,095	53,445
Personal use (District 6) [i]	321	138	235	220	176	438	515	294	67	0	0	218	263
Yukon Area total with personal use	127,313	115,252	87,135	83,787	88,078	86,826	74,997	63,590	41,808	1,318	6,760	100,313	53,708

Note: Subsistence harvest data were estimated from postseason survey, returned permits and test fishery projects. NA indicates not available. ND indicates data not available due to confidentiality.

[a] Other District 3 included residents of District 3 combined due to confidentiality of low number of households fished.

[b] Other District 4 included residents of District 4 combined due to confidentiality of low number of households fished.

[c] Harvests by subsistence permit holders who resided in Fairbanks North Star Borough (FNSB) and fished in District 5 near the Yukon River bridge crossing.

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

[e] Included Teedriinjik (formerly Chandalar River) and Draanjik (formerly Black River).

[f] Harvests by subsistence permit holders who resided in FNSB and fished in the Tanana River.

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

[h] Area total includes Coastal District.

[i] Harvest from the personal use fishing area on the Tanana River near Fairbanks. Not included in communities or totals above.

Appendix C3.–Fall chum salmon subsistence harvest totals by fishing district and community of residence, and personal use harvest total for District 6, Yukon Area, 2012–2022.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Hooper Bay	1	91	137	79	105	137	158	210	407	28	130	83	188
Scammon Bay	10	58	115	119	657	416	364	605	245	11	106	192	328
Coastal District total	11	149	252	198	762	553	522	815	652	39	236	274	516
Nunam Iqua	210	93	128	210	111	52	188	102	16	3	14	150	73
Alakanuk	449	328	593	1067	743	424	510	352	108	22	165	636	285
Emmonak	5,890	2,165	2,465	3,244	2,501	2,735	2,208	1,868	1,331	117	948	3,253	1,652
Kotlik	1,073	1,087	886	1,356	1,217	1,370	759	1,929	139	1	81	1,124	840
District 1 subtotal	7,622	3,673	4,072	5,877	4,572	4,581	3,665	4,251	1,594	143	1,208	5,163	2,849
Mountain Village	685	2,174	1,484	1,398	1,210	1,560	872	1,180	259	137	143	1,390	802
Pitkas Point	9	65	400	172	232	172	112	139	72	0	0	176	99
St. Mary's	1,423	1,009	2,037	1,611	1,088	753	470	844	125	2	0	1,434	439
Pilot Station	1,031	777	796	1,346	903	1,065	1,116	997	468	296	369	971	790
Marshall	184	853	1,100	1,731	1,106	532	415	644	13	0	0	995	321
District 2 subtotal	3,332	4,878	5,817	6,258	4,539	4,082	2,985	3,804	937	435	512	4,965	2,450
Russian Mission	282	804	365	449	235	671	349	469	0	0	16	427	298
Holy Cross	339	855	1,840	763	583	324	176	171	26	ND	ND	876	174
Shageluk	16	105	252	176	179	289	174	114	0	ND	9	146	144
Other District 3 [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	NA	NA
District 3 subtotal	637	1,764	2,457	1,388	997	1,284	699	754	26	0	25	1,449	553
Lower Yukon River total	11,591	10,315	12,346	13,523	10,108	9,947	7,349	8,809	2,557	578	1,745	11,577	5,852
Anvik	569	763	1,028	680	527	296	500	45	222	ND	12	713	266
Grayling	804	471	1,451	1,184	499	272	750	45	54	ND	ND	882	280
Kaltag	2,830	583	2,828	1,255	680	142	66	103	0	ND	ND	1,635	78
Nulato	2,729	2,995	3,839	2,248	2,681	1,762	869	662	0	ND	ND	2,898	823
Koyukuk	1,331	5,308	998	2,838	297	166	295	287	0	ND	ND	2,154	187
Galena	2,947	602	3,368	2,542	3,319	4,760	1,401	1,129	19	0	0	2,556	1,462
Ruby	4,408	2,505	972	713	526	97	842	242	0	ND	ND	1,825	295
Other District 4 [b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	12	NA	NA
District 4 subtotal	15,618	13,227	14,484	11,460	8,529	7,495	4,723	2,513	295	0	24	12,664	3,005
Huslia/Hughes	1,911	1,257	927	1,226	954	543	859	420	28	0	62	1,255	370
Allakaket/Alatna/Bettles	526	707	525	588	551	1,535	362	1,299	42	0	0	579	648
Koyukuk River subtotal	2,437	1,964	1,452	1,814	1,505	2,078	1,221	1,719	70	0	62	1,834	1,018
District 4 total (incl. Koyukuk R.)	18,055	15,191	15,936	13,274	10,034	9,573	5,944	4,232	365	0	86	14,498	4,023

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Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Tanana	20,465	31,546	14,131	19,627	21,261	21,952	16,731	12,039	1,158	59	23	21,406	10,400
Rampart/Stevens Village	467	940	6,700	186	4,500	0	1,417	98	20	4	15	2,559	308
Fairbanks (FNSB) [c]	793	1,160	1,406	2,454	2,143	3,075	2,077	4,104	568	1	132	1,591	1,965
Beaver	174	21	323	76	228	0	141	17	0	0	0	164	32
Fort Yukon/Birch Creek	12,659	16,453	8,025	6,257	7,728	4,523	3,487	7,153	133	7	0	10,224	3,061
Circle/Central	161	1,397	1,277	1,652	1,306	2,182	2,877	2,069	9	0	0	1,159	1,427
Eagle	18,731	18,871	17,450	17,185	15,765	19,126	16,539	16,738	0	0	41	17,600	10,481
Other District 5 [d]	443	121	222	229	17	12	175	52	21	0	0	206	52
District 5 subtotal	53,893	70,509	49,534	47,666	52,948	50,870	43,444	42,270	1,909	71	211	54,910	27,725
Venetie/Chalkyitsik	457	5,589	1,663	2,594	5,883	10,574	2,544	2,804	43	0	497	3,237	3,193
Teedriinjik/Draanjik R. subtotal	457	5,589	1,663	2,594	5,883	10,574	2,544	2,804	43	0	497	3,237	3,193
District 5 total [e]	54,350	76,098	51,197	50,260	58,831	61,444	45,988	45,074	1,952	71	708	58,147	30,918
Manley	2,164	1,539	2,579	1,697	414	809	3,645	2,457	172	ND	ND	1,679	1,417
Minto	2	593	472	140	40	18	ND	13	0	ND	ND	249	8
Nenana/Healy	9,260	3,852	4,545	3,981	3,544	2,640	4,937	1,801	19	17	12	5,036	1,883
Fairbanks (FNSB) [f]	3,876	5,651	5,190	3,496	884	1,137	822	658	10	0	0	3,819	525
Other District 6 [g]	0	5	12	31	0	18	0	3	1	0	7	10	4
District 6 Tanana R. total	15,302	11,640	12,798	9,345	4,882	4,622	9,404	4,932	202	17	19	10,793	3,835
Upper Yukon River total	87,707	102,929	79,931	72,879	73,747	75,639	61,336	54,238	2,519	88	813	83,439	38,764
Yukon Area total [h]	99,309	113,393	92,529	86,600	84,617	86,139	69,207	63,862	5,728	705	2,794	95,290	45,128
Personal use (District 6) [i]	410	383	278	80	283	626	505	408	37	0	0	287	315
Yukon Area total with personal use	99,719	113,776	92,807	86,680	84,900	86,765	69,712	64,270	5,765	705	2,794	95,576	45,443

Note: Subsistence harvest data were estimated from postseason survey, returned permits and test fishery projects. NA indicates not available. ND indicates data not available due to confidentiality.

[a] Other District 3 included residents of District 3 combined due to confidentiality of low number of households fished.

[b] Other District 4 included residents of District 4 combined due to confidentiality of low number of households fished.

[c] Harvests by subsistence permit holders who resided in Fairbanks North Star Borough (FNSB) and fished in District 5 near the Yukon River bridge crossing.

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

[e] Included Teedriinjik (formerly Chandalar River) and Draanjik (formerly Black River).

[f] Harvests by subsistence permit holders who resided in FNSB and fished in the Tanana River.

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

[h] Area total includes Coastal District.

[i] Harvest from the personal use fishing area on the Tanana River near Fairbanks. Not included in communities or totals above.

Appendix C4.–Coho salmon subsistence harvest totals by fishing district and community of residence, and personal use harvest total for District 6, Yukon Area, 2012–2022.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Hooper Bay	7	73	118	95	121	218	119	342	150	41	94	83	174
Scammon Bay	86	214	86	79	234	206	746	462	189	9	197	140	322
Coastal District total	93	287	204	174	355	424	865	804	339	50	291	223	496
Nunam Iqua	18	83	153	229	58	20	184	21	19	4	31	108	50
Alakanuk	252	167	443	581	183	199	190	380	123	8	88	325	181
Emmonak	2,660	517	613	852	717	723	329	379	331	21	178	1,072	358
Kotlik	420	457	573	438	273	102	264	1,182	79	3	4	432	327
District 1 subtotal	3,350	1,224	1,782	2,100	1,231	1,044	967	1,962	552	36	301	1,937	917
Mountain Village	256	271	202	723	436	729	267	273	126	37	85	378	286
Pitkas Point	53	41	123	72	22	224	54	0	10	0	5	62	58
St. Mary's	141	124	408	391	128	213	37	10	37	0	0	238	59
Pilot Station	329	136	568	305	136	91	121	147	174	74	70	295	121
Marshall	567	508	468	1511	409	139	112	212	147	15	112	693	128
District 2 subtotal	1,346	1,080	1,769	3,002	1,131	1,396	591	642	494	126	272	1,666	653
Russian Mission	319	152	124	154	6	483	123	104	7	0	26	151	143
Holy Cross	237	0	103	246	134	0	23	63	6	ND	ND	144	23
Shageluk	0	219	113	28	0	14	8	65	7	ND	4	72	24
Other District 3 [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	NA	NA
District 3 subtotal	556	371	340	428	140	497	154	232	20	0	30	367	181
Lower Yukon River total	5,252	2,675	3,891	5,530	2,502	2,937	1,712	2,836	1,066	162	603	3,970	1,750
Anvik	214	97	197	46	184	11	15	55	23	ND	24	148	26
Grayling	26	34	403	212	35	0	0	75	52	ND	ND	142	32
Kaltag	928	306	514	18	53	3	34	1	0	ND	ND	364	10
Nulato	41	125	454	48	0	85	220	27	0	ND	ND	134	83
Koyukuk	62	3,267	50	416	1	6	22	38	0	ND	ND	759	17
Galena	276	170	718	654	201	136	216	120	13	0	ND	404	97
Ruby	1,806	345	335	185	226	22	26	32	0	ND	ND	579	20
Other District 4 [b]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	NA	NA
District 4 subtotal	3,353	4,344	2,671	1,579	700	263	533	348	88	0	24	2,529	246
Huslia/Hughes	165	360	282	310	93	171	1020	80	45	0	84	242	263
Allakaket/Alatna/Bettles	38	236	109	52	33	92	27	69	5	0	0	94	39
Koyukuk River subtotal	203	596	391	362	126	263	1,047	149	50	0	84	336	302
District 4 total (incl. Koyukuk R.)	3,556	4,940	3,062	1,941	826	526	1,580	497	138	0	108	2,865	548

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Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Tanana	3,060	1,135	1,788	2,434	639	874	1,355	82	120	8	0	1,811	489
Rampart/Stevens Village	0	0	0	2	52	0	11	7	12	21	12	11	10
Fairbanks (FNSB) [c]	0	0	0	0	101	112	72	506	32	2	15	20	145
Beaver	2	0	2	0	0	0	0	0	0	0	0	1	0
Fort Yukon/Birch Creek	4	7	201	2	1	7	0	4	0	0	0	43	2
Circle/Central	5	150	0	0	38	0	0	0	0	0	0	39	0
Eagle	0	0	1	0	0	0	0	0	0	0	0	0	0
Other District 5 [d]	21	0	0	0	0	1	11	1	16	0	0	4	6
District 5 subtotal	3,092	1,292	1,992	2,438	831	994	1,449	600	180	31	27	1,929	652
Venetie/Chalkyitsik	0	6	38	24	30	18	0	12	16	0	0	20	9
Teedriinjik/Draanjik R. subtotal	0	6	38	24	30	18	0	12	16	0	0	20	9
District 5 total [e]	3,092	1,298	2,030	2,462	861	1,012	1,449	612	196	31	27	1,949	662
Manley	1,374	447	1,177	1,263	323	750	918	381	330	0	ND	917	476
Minto	0	266	37	270	0	0	ND	0	0	0	ND	115	0
Nenana/Healy	6,664	1,962	3,002	3,359	2,970	1,392	1,622	475	180	49	47	3,591	744
Fairbanks (FNSB) [f]	1,502	2,576	3,689	3,108	978	362	121	213	81	0	0	2,371	155
Other District 6 [g]	0	6	6	0	0	11	0	0	0	4	12	2	3
District 6 Tanana R. total	9,540	5,257	7,911	8,000	4,271	2,515	2,661	1,069	591	53	59	6,996	1,378
Upper Yukon River total	16,188	11,495	13,003	12,403	5,958	4,053	5,690	2,178	925	84	194	11,809	2,586
Yukon Area total [h]	21,533	14,457	17,098	18,107	8,815	7,414	8,267	5,818	2,330	296	1,088	16,002	4,825
Personal use (District 6) [i]	100	109	174	145	266	200	131	68	79	0	0	159	96
Yukon Area total with personal use	21,633	14,566	17,272	18,252	9,081	7,614	8,398	5,886	2,409	296	1,088	16,161	4,921

Note: Subsistence harvest data were estimated from postseason survey, returned permits and test fishery projects. NA indicates not available. ND indicates data not available due to confidentiality.

[a] Other District 3 included residents of District 3 combined due to confidentiality of low number of households fished.

[b] Other District 4 included residents of District 4 combined due to confidentiality of low number of households fished.

[c] Harvests by subsistence permit holders who resided in Fairbanks North Star Borough (FNSB) and fished in District 5 near the Yukon River bridge crossing.

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

[e] Included Teedriinjik (formerly Chandalar River) and Draanjik (formerly Black River).

[f] Harvests by subsistence permit holders who resided in FNSB and fished in the Tanana River.

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

[h] Area total includes Coastal District.

[i] Harvest from the personal use fishing area on the Tanana River near Fairbanks. Not included in communities or totals above.

Appendix C5.–Estimated pink salmon subsistence harvest by residents of surveyed communities, with community and district totals, Yukon Area, 2012–2022.

Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Even years Average	Odd years Average	All years Average
Hooper Bay	1,101	302	712	451	4,007	315	635	2,393	1,758	1,079	1,596	1,643	908	1,304
Scammon Bay	1,343	507	1,923	1,414	2,490	988	2,427	1,322	2,259	724	1,297	2,088	991	1,636
Coastal District total	2,444	809	2,635	1,865	6,497	1,303	3,062	3,715	4,017	1,803	2,893	3,731	1,899	2,940
Nunam Iqua	1,051	0	670	352	352	484	377	269	592	260	612	608	325	480
Alakanuk	174	92	970	15	713	99	7	190	143	155	392	401	141	318
Emmonak	199	0	588	7	228	0	31	23	125	141	823	234	62	282
Kotlik	195	23	1,064	14	502	159	29	398	29	0	671	364	119	341
District 1 subtotal	1,619	115	3,292	388	1,795	742	444	880	889	556	2,498	1,608	647	1,421
Mountain Village	207	0	233	57	93	152	92	270	292	11	684	183	100	253
Pitkas Point	2	2	45	288	48	0	122	0	11	205	67	46	99	72
St. Mary's	643	0	614	18	104	171	35	80	136	75	676	306	84	300
Pilot Station	23	131	27	0	8	5	0	1	13	0	0	14	27	19
Marshall	5	7	1	0	5	44	53	1	2	0	20	13	10	14
District 2 subtotal	880	140	920	363	258	372	302	352	454	291	1,447	563	321	658
Russian Mission	76	12	8	0	0	0	0	0	0	0	2,088	17	2	388
Holy Cross	0	0	0	0	2	1	0	0	0	ND	ND	0	0	0
Shageluk	24	0	3	0	9	1	0	2	25	ND	0	12	1	6
Other District 3 [a]	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	NA	NA	NA
District 3 subtotal	100	12	11	0	11	2	0	2	25	0	2,088	29	3	394
Lower Yukon River total	2,599	267	4,223	751	2,064	1,116	746	1,234	1,368	847	6,033	2,200	971	2,474
Anvik	0	0	0	0	0	0	0	0	5	ND	0	1	0	1
Grayling	0	0	39	0	33	0	16	0	0	ND	ND	18	0	10
Kaltag	0	0	0	0	73	0	0	0	0	ND	ND	15	0	8
Nulato	0	0	8	0	0	0	0	0	0	ND	ND	2	0	1
Koyukuk	0	0	0	0	0	0	0	0	0	ND	ND	0	0	0
Galena	3	0	6	16	11	8	0	0	0	0	ND	4	5	4
Other District 4 [b]	0	0	13	0	0	0	0	0	0	ND	ND	3	0	1
Ruby	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	0	NA	NA	NA
District 4 subtotal	3	0	66	16	117	8	16	0	5	0	0	41	5	21
Hughes/Huslia	101	0	0	0	0	5	20	82	0	0	0	24	17	19
Allakaket/Alatna/Bettles	0	0	0	0	0	0	5	0	0	0	0	1	0	0
Koyukuk River subtotal	101	0	0	0	0	5	25	82	0	0	0	25	17	19
District 4 total (incl. Koyukuk R.)	104	0	66	16	117	13	41	82	5	0	0	67	22	40

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Community	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Even years Average	Odd years Average	All years Average
Tanana	3	0	8	13	34	0	0	0	0	0	0	9	3	5
Rampart/Stevens Village	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/Birch Creek	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Venetie/Chalkyitsik	0	0	0	0	0	0	0	0	0	0	0	0	0	0
District 5 total	3	0	8	13	34	0	0	0	0	0	0	9	3	5
Survey totals	5,150	1,076	6,932	2,645	8,712	2,432	3,849	5,031	5,390	2,650	8,926	6,007	2,895	5,459
CI (95%)	1,155	387	1,356	612	2,064	748	1,299	1,210	1,433	713	3,291	1,461	734	1,297
Test fishery [c]	216	0	120	0	9	8	65	2	15	1	33	85	2	43

Note: CI (95%) is the annual survey total 95% confidence interval. Subsistence harvest data were estimated from postseason survey, returned permits and test fishery projects. NA indicates not applicable. ND indicates data not available due to confidentiality. Included test fishery catch. Confidence intervals were calculated from subsistence estimates and did not include donations of test fishery to communities. Pink salmon harvested and distributed from test fishery projects were not always recorded.

[a] Other District 3 included residents of District 3 combined due to confidentiality of low number of households fished.

[b] Other District 4 included residents of District 4 combined due to confidentiality of low number of households fished.

[c] Number from test fishery catch added to community harvest estimates.

Appendix C6.–Households with dogs, number of dogs, and salmon fed to dogs, as estimated in surveyed communities, or reported in permit areas, Yukon Area, 2012–2022.

Year	Number of households with dogs	Number of dogs	Salmon fed to dogs				
			Summer chum	Fall chum	Coho	Unknown species [a]	Total
2012	1,655	6,171	28,054	37,302	2,572	30,970	98,898
2013	1,770	5,007	18,890	51,427	4,257	24,873	99,447
2014	1,759	5,388	5,105	28,218	1,946	31,419	66,688
2015	1,795	5,175	7,848	24,184	3,654	29,259	64,945
2016	2,058	5,371	9,241	36,286	1,027	19,021	65,575
2017	1,965	5,615	18,071	32,162	1,241	24,039	75,513
2018	1,918	5,318	12,095	24,500	2,217	21,318	60,130
2019	1,870	4,906	3,724	23,180	51	23,843	50,798
2020	1,557	4,543	4,223	1,223	353	1,214	7,013
2021	1,115	3,102	77	612	0	10	699
2022	2,258	5,555	117	628	107	163	1,015
5-year average 2012–2016	1,807	5,422	13,828	35,483	2,691	27,108	79,111
5-year average 2017–2021	1,685	4,697	7,638	16,335	772	14,085	38,831

Note: The estimated number of salmon included those retained from subsistence and commercial related harvests. Duplicate permit household information removed. Typically Districts 4–6 harvest ~98% of total salmon fed to dogs.

[a] Permit areas only reported combined salmon species (summer and fall chum and coho salmon) fed to dogs.

Appendix C7.–Subsistence harvests taken under authority of a permit in the Rampart Area and Yukon River Bridge Area of District 5, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Yukon River Rampart Area subsistence salmon fishery [a]													
2012	32	32	29	635	397	1,411	21	395	2	13	7	11	0
2013	23	23	18	474	579	300	0	27	2	0	0	0	5
2014	18	18	9	11	240	797	0	398	60	0	6	0	0
2015	17	17	8	73	104	629	2	66	36	3	4	0	0
2016	24	24	18	557	252	659	2	213	1	0	0	0	0
2017	23	23	19	1,015	155	650	0	85	1	0	1	0	0
2018	21	21	19	463	23	465	21	54	0	0	1	0	0
2019	36	34	23	1,300	42	196	7	66	1	10	0	0	50
2020	29	29	22	530	21	40	29	448	52	1	0	0	0
2021	26	26	9	27	1	4	23	121	20	0	5	0	0
2022	22	21	3	7	0	10	12	40	4	0	0	1	0
2012–2016 Average	23	23	16	350	314	759	5	220	20	3	3	2	1
2017–2021 Average	27	27	18	667	48	271	16	155	15	2	1	0	10
Yukon River Bridge Area subsistence fishery [b]													
2012	63	62	26	629	147	259	0	75	35	3	19	0	0
2013	47	47	21	359	1,020	1,055	0	56	5	4	16	0	0
2014	42	42	21	3	221	798	0	142	16	2	27	0	0
2015	39	39	16	158	466	2,212	0	281	85	5	51	0	0
2016	62	62	40	996	518	1,449	101	329	15	3	42	1	0
2017	63	63	46	2,392	1,605	1,803	113	565	83	15	50	0	0
2018	82	81	59	1,627	600	2,088	73	646	53	32	38	3	0
2019	90	87	46	2,440	182	3,961	507	927	35	12	66	6	1
2020	98	95	46	1,473	64	568	31	2,266	193	17	192	4	1
2021	62	61	17	273	10	1	0	624	29	2	10	13	0
2022	53	50	16	327	15	132	15	437	21	14	198	2	0
2012–2016 Average	51	50	25	429	474	1,155	20	177	31	3	31	0	0
2017–2021 Average	79	77	43	1,641	492	1,684	145	1,006	79	16	71	5	0

Note: Data may have been updated from previous annual reports.

[a] That portion of the Yukon River drainage from Garnett Island to Hess Creek.

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

Appendix C8.–Subsistence fish harvests taken under authority of a permit in the Circle–Eagle Area of District 5, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subsistence salmon fishery below mainstem Yukon sonar project near Eagle [a]													
2012	42	42	18	454	0	7,215	5	66	19	4	3	0	28
2013	30	27	16	198	0	7,718	150	130	22	3	7	1	70
2014	24	22	11	8	0	5,185	0	87	16	1	2	0	2
2015	30	29	17	220	0	6,338	0	69	11	4	19	0	31
2016	36	36	25	520	0	4,108	38	71	5	3	7	0	3
2017	31	31	26	1,117	0	7,832	0	126	19	4	1	4	17
2018[b]	61	61	46	967	0	7,824	0	115	15	5	0	0	17
2019[b]	62	61	41	875	0	8,140	0	285	13	4	5	4	22
2020[b]	59	57	19	385	0	10	0	2	8	2	0	0	0
2021[b]	45	43	4	47	0	0	0	11	0	0	0	1	0
2022[b]	34	33	3	1	0	0	0	1	2	0	0	0	0
2012–2016 Average	32	31	17	280	0	6,113	39	85	15	3	8	0	27
2017–2021 Average	52	51	27	678	0	4,761	0	108	11	3	1	2	11
Subsistence salmon fishery above mainstem Yukon sonar project near Eagle [c]													
2012	26	24	12	91	0	11,681	0	166	44	1	2	7	16
2013	21	20	15	152	50	12,642	0	64	8	2	0	13	7
2014	15	15	11	55	0	13,575	1	102	109	2	2	2	47
2015	19	19	13	341	0	12,540	0	67	11	2	2	7	33
2016	23	23	17	762	0	13,015	0	53	32	3	3	8	33
2017	38	38	28	1,498	0	14,110	0	91	11	0	1	2	25
2018	–	–	46	602	0	11,715	0	86	22	1	3	2	20
2019	–	–	41	742	0	10,631	0	125	19	0	5	2	8
2020	–	–	7	220	0	0	0	1	0	0	0	0	28
2021	–	–	5	38	0	0	0	43	6	14	0	12	46
2022	–	–	4	2	0	41	0	36	29	1	7	0	6
2012–2016 Average	–	–	14	280	10	12,691	0	90	41	2	2	7	27
2017–2021 Average	–	–	25	620	0	7,291	0	69	12	3	2	4	25

-continued-

Note: Lower table is used to show harvest above mainstem Yukon sonar project operated near Eagle for determining border passage. The number of permits includes multiple permits issued to households that fished both above and below the sonar site. An en dash indicates the values are not comparable to prior years' data, due to changes in permits reporting by location.

[a] That portion of the Yukon River drainage from Twenty-Two Mile Slough, located downstream of the community of Circle, to the mainstem Yukon sonar project near Eagle.

[b] The number of permits issued and returned included households that fished above and below the sonar site.

[c] Harvest occurred between the Yukon River mainstem sonar site located downstream from the community of Eagle and the U.S./Canada border.

Appendix C9.–Harvest from permits in Subdistrict 6-A of the Tanana River and the Kantishna River, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subdistrict 6-A subsistence salmon fishery [a]													
2012	23	22	11	228	58	2,166	1,374	77	2	14	5	0	2
2013	19	19	11	218	88	1,478	421	18	2	1	6	0	0
2014	22	22	16	104	179	3,450	1,420	100	3	1	1	0	0
2015	17	17	9	136	9	1,656	1,151	12	2	0	3	0	0
2016	17	16	10	264	36	593	486	24	0	0	1	0	0
2017	13	13	8	105	34	865	784	8	0	0	10	0	0
2018	24	23	12	210	78	3,872	1,076	135	1	4	2	0	0
2019	28	28	10	101	56	2,639	547	18	0	4	26	0	0
2020	28	27	8	52	22	172	330	37	0	0	25	0	0
2021	18	18	2	0	0	0	0	0	0	0	6	0	0
2022	12	12	1	0	0	0	0	3	0	0	15	0	0
2012–2016 Average	20	19	11	190	74	1,869	970	46	2	3	3	0	0
2017–2021 Average	22	22	8	94	38	1,510	547	40	0	2	14	0	0
Kantishna River subsistence fishery [b]													
2012	3	3	3	0	0	285	51	2	0	1	4	1	0
2013	3	3	2	0	0	314	144	13	0	0	0	0	0
2014	5	5	3	0	0	70	129	10	0	0	6	0	0
2015	2	2	1	0	0	127	11	0	0	1	2	3	1
2016	3	3	1	0	0	115	67	20	0	2	5	0	1
2017	2	2	1	0	0	20	3	0	0	0	0	0	0
2018	8	8	1	0	0	0	0	0	0	0	0	0	0
2019	24	24	0	0	0	0	0	0	0	0	0	0	0
2020	26	22	1	0	0	1	0	970	2	31	110	36	0
2021	11	10	1	0	0	0	0	852	1	36	120	9	0
2022	11	8	1	1	0	1	0	1,284	0	30	134	37	0
2012–2016 Average	3	3	2	0	0	182	80	9	0	1	3	1	0
2017–2021 Average	14	13	1	0	0	4	1	364	1	13	46	9	0

[a] Portion of the Tanana River drainage from Yukon River confluence to the upstream edge of Kantishna River confluence.

[b] Kantishna River drainage upstream of Tanana River confluence. A waiver is on file to report the harvest of less than 3 participants in the fishery.

Appendix C10.–Harvest from permits in Subdistrict 6-B and the Tolovana River drainage, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subdistrict 6-B subsistence salmon fishery [a]													
2012	85	79	39	375	436	10,428	6,674	550	37	16	62	44	12
2013	92	87	38	148	1,006	9,573	4,583	1,026	7	28	10	11	2
2014	81	78	38	168	533	8,381	5,977	1,241	8	15	64	28	16
2015	71	71	30	220	225	7,457	6,652	880	17	6	28	13	0
2016	66	62	25	372	60	2,992	2,495	586	16	3	18	8	0
2017	69	69	35	552	700	3,524	1,727	353	8	7	47	7	0
2018	83	82	31	283	228	5,361	1,585	433	5	2	0	0	0
2019	76	72	33	519	329	2,059	522	376	47	1	11	5	0
2020	67	65	25	372	88	29	261	295	1	0	92	40	0
2021	52	52	8	1	0	17	53	49	8	1	8	1	0
2022	37	35	6	0	0	18	59	97	2	1	12	34	1
2012–2016 Average	79	81	38	230	658	9,461	5,745	939	17	20	45	28	10
2017–2021 Average	69	68	26	345	269	2,198	830	301	14	2	32	11	0
Tolovana River drainage subsistence fishery [b]													
2012	73	68	35	0	0	2	0	130	8	6	525	0	0
2013	77	74	44	0	0	60	42	15	1	3	231	9	0
2014	106	105	57	0	0	1	0	3	0	0	478	1	0
2015	120	119	66	0	0	0	0	48	2	0	765	0	0
2016	201	196	129	0	0	0	0	10	0	1	1,020	0	0
2017	93	93	41	0	0	0	0	133	5	0	137	0	0
2018	175	175	103	0	0	0	0	14	3	0	1,040	0	0
2019	245	243	155	4	0	2	0	1,088	48	4	1,633	0	0
2020	329	323	191	0	1	0	0	776	53	2	2,005	0	0
2021	425	418	266	0	0	0	0	523	9	7	3,092	4	0
2022	349	344	209	1	0	0	0	113	9	3	3,299	0	0
2012–2016 Average	85	82	45	0	0	21	14	49	3	3	411	3	0
2017–2021 Average	253	250	151	1	0	0	0	507	24	3	1,581	1	0

[a] Portion of the Tanana River drainage from the mouth of the Kantishna River upstream to the mouth of the Wood River, including the Wood River drainage.

[b] Includes the Tolovana River drainage outside of the Fairbanks Nonsubsistence Area.

Appendix C11.–Harvest from permits in the upper Tanana River drainage and Koyukuk River, Yukon Area, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Upper Tanana River drainage subsistence fishery [a]													
2012	58	49	21	0	0	0	0	2,522	0	10	199	97	31
2013	52	46	17	0	0	0	0	1,314	0	20	130	170	98
2014	15	15	10	0	0	0	0	1,510	0	3	62	62	0
2015	38	38	14	0	0	33	1	2,064	1	2	16	12	33
2016	24	24	16	0	0	1	0	1,980	0	28	87	15	0
2017	22	22	7	0	0	10	1	899	0	5	30	1	0
2018	23	23	11	0	0	0	0	1,014	0	25	72	31	19
2019	31	29	11	0	0	4	0	621	0	2	199	8	23
2020	44	41	15	1	4	0	0	1,159	0	76	294	88	5
2021	32	30	9	0	0	0	0	858	0	30	318	5	9
2022	43	42	10	0	0	0	0	1,314	0	41	252	1	16
2012–2016 Average	37	34	16	0	0	7	0	1,878	0	13	99	71	32
2017–2021 Average	30	29	11	0	1	3	0	910	0	28	183	27	11
Upper South and Middle Forks of the Koyukuk River subsistence fishery permit area [b]													
2012	1	1	1	0	0	0	0	11	0	0	1	3	15
2013	1	1	1	0	0	0	0	8	0	6	0	25	25
2014	1	1	1	0	0	0	0	9	0	3	0	8	18
2015	1	1	1	0	0	0	0	4	0	0	0	0	32
2016	1	1	1	0	0	0	0	5	0	0	0	1	19
2017	1	1	1	0	0	0	0	3	0	0	0	0	7
2018	6	5	1	0	0	0	0	2	0	0	0	0	5
2019	19	18	1	0	0	0	0	0	0	0	0	0	0
2020	18	17	1	0	0	0	0	0	0	0	0	0	5
2021	12	11	1	0	4	0	0	0	0	0	0	0	0
2022	8	7	1	0	0	0	0	1	0	5	0	12	14
2012–2016 Average	1	1	1	0	0	0	0	7	0	2	0	7	22
2017–2021 Average	11	10	1	0	1	0	0	1	0	0	0	0	3

[a] That portion of the Tanana River drainage from the mouth of the Volkmar River, including the Volkmar River drainage, and the mouth of the Johnson River, including the Johnson River drainage, upstream to the Tanana River drainage headwaters.

[b] That portion of the 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 River. A waiver is on file to report the harvest of less than 3 participants in the fishery.

Appendix C12.–Harvest from personal use permit areas in the Tanana River drainage, Yukon Area, 2012–2022.

Year	Number of permits issued	Number of permits returned	Number reporting harvest	Chinook	Summer chum	Fall chum	Coho	Whitefish	Sheefish	Burbot	Northern pike	Longnose sucker	Arctic grayling
Subdistrict 6-C personal use salmon fishery [a]													
2012	60	59	29	71	321	410	100	3	0	0	0	0	0
2013	53	52	29	42	138	363	124	24	1	0	0	0	3
2014	50	50	23	1	235	278	174	39	3	0	0	0	0
2015	42	42	15	5	220	80	145	26	1	0	1	1	0
2016	57	57	29	57	176	273	265	12	1	0	3	0	0
2017	82	82	40	125	438	626	200	6	1	1	4	1	0
2018	99	99	57	206	515	505	131	7	0	0	0	0	1
2019	92	90	49	244	294	408	68	88	10	0	73	66	0
2020	82	81	30	112	67	37	79	4	5	0	0	0	0
2021	45	45	0	0	0	0	0	0	0	0	0	0	0
2022	24	24	1	0	0	0	0	0	0	0	0	0	0
2012–2016 Average	52	52	25	35	218	281	162	21	1	0	1	0	1
2017–2021 Average	80	79	35	137	263	315	96	21	3	0	15	13	0
Upper Tanana River personal use whitefish/sucker fishery [b]													
2012	12	11	3	0	0	0	0	19	0	0	0	233	0
2013	14	14	7	0	0	20	8	65	0	1	3	118	0
2014	21	21	10	0	0	0	0	106	0	0	0	270	0
2015	22	22	13	0	0	0	0	254	0	0	0	322	1
2016	21	21	10	0	0	10	1	259	0	0	4	181	6
2017	14	14	9	0	0	0	0	111	0	0	0	164	0
2018	16	16	9	0	0	0	0	93	0	0	0	113	0
2019	15	14	2	0	0	0	0	11	0	0	0	38	0
2020	28	28	5	0	0	0	0	71	0	0	0	21	0
2021	25	24	2	0	0	0	0	2	0	0	0	30	0
2022	12	12	3	0	0	0	0	38	0	0	0	44	0
2012–2016 Average	18	18	9	0	0	6	2	141	0	0	1	225	1
2017–2021 Average	20	19	5	0	0	0	0	58	0	0	0	73	0

[a] Portion of the Tanana River drainage from the upstream edge of the mouth of the Wood River, not including the Wood River drainage, to the upstream edge of the mouth of the Salcha River, including the Salcha River drainage.

[b] Portion of the Tanana River drainage from the upstream edge of the mouth of the Wood River, not including the Wood River drainage, to the mouth of the Volkmar River on the north bank of the Tanana River and upstream to the Johnson River on the south bank of the Tanana River. This permit is issued for the harvest of whitefish species and longnose suckers but requires reporting incidental fish harvests and live release of nonpermitted species if gear allows.

Appendix C13.–Estimated and reported subsistence and personal use harvest of miscellaneous fish species, Yukon Area, 2012–2022.

Reporting groups	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2012–2016 Average	2017–2021 Average
Survey estimates [a]													
Northern pike	18,450	11,264	14,852	20,109	24,580	22,060	20,776	15,703	26,352	9,760	28,833	17,851	18,930
Sheefish	17,094	15,553	12,583	12,828	14,451	12,768	11,728	14,838	9,165	4,960	8,738	14,502	10,692
Whitefish [b]	70,486	64,766	84,889	79,740	69,578	64,202	57,780	66,074	47,122	17,293	29,284	73,892	50,494
Survey reported [c]													
Alaska blackfish	62,731	63,235	92,080	97,586	90,207	109,888	61,896	88,009	30,383	16,669	23,165	81,168	61,369
Arctic grayling	2,674	1,435	1,772	1,832	1,518	1,572	1,833	744	228	283	439	1,846	932
Arctic lamprey [d]	1,657	2,608	19,888	42,237	17,609	19,357	1,027	4	0	0	12	16,800	4,078
Burbot	2,422	2,115	2,016	3,364	2,501	2,811	2,975	1,946	812	780	965	2,484	1,865
Herring [e]	10,449	9,082	17,164	24,591	15,959	16,508	28,907	12,267	8,032	5,289	5,718	15,449	14,201
Tomcod	4,023	5,221	10,020	4,697	5,795	6,741	5,243	10,006	1,872	707	2,658	5,951	4,914
Permit reported													
Arctic grayling	104	210	83	131	62	49	62	104	39	55	37	118	62
Burbot	68	68	27	23	43	32	69	37	129	90	95	46	71
Longnose suckers	396	347	371	358	214	179	149	129	189	75	131	337	144
Northern pike	827	403	648	891	1,190	281	1,156	2,018	2,718	3,559	3,917	792	1,946
Sheefish	147	48	215	166	70	128	99	173	314	73	67	129	157
Whitefish [b]	4,016	2,766	3,747	3,771	3,562	2,380	2,547	3,605	6,029	3,083	3,364	3,572	3,529
Total harvest of species from survey and permits													
Arctic grayling	2,778	1,645	1,855	1,963	1,580	1,621	1,895	848	267	338	476	1,964	994
Burbot	2,490	2,183	2,043	3,387	2,544	2,843	3,044	1,983	941	870	1,060	2,529	1,936
Northern pike	19,277	11,667	15,500	21,000	25,770	22,341	21,932	17,721	29,070	13,319	32,750	18,643	20,877
Sheefish	17,241	15,601	12,798	12,994	14,521	12,896	11,827	15,011	9,479	5,033	8,805	14,631	10,849
Whitefish [b]	74,502	67,532	88,636	83,511	73,140	66,582	60,327	69,679	53,151	20,376	32,648	77,464	54,023
Total	116,288	98,628	120,832	122,855	117,555	106,283	99,025	105,242	92,908	39,936	75,739	115,232	88,679

Note: Dashes indicated information was not collected. Due to the nature of nonsalmon harvest and the timing of the survey, this table included fish harvest 12 months prior to the survey (e.g., 2022 is harvest from winter 2021 to fall 2022).

[a] Subsistence harvests of northern pike, sheefish, and whitefish from surveyed communities were estimated with methods developed for salmon harvest estimates.

[b] Included various Coregonus species and round whitefish (*Prosopium cylindraceum*). Categories of large (greater than 4 pounds) and small (less than 4 pounds) whitefish were combined. See individual annual reports for the breakdown of large and small whitefish.

[c] Total number of each species reported by households in surveyed communities. Harvest totals for these species are not expanded to estimate for all households.

[d] Harvest of Arctic lamprey reported in each year occurred from October–December of the previous year. Harvests from 2010–2015 included Arctic lamprey reported on postcards. Household surveys were compared to avoid double counting.

[e] Reports of smelt were included in herring harvest.